THE RELATIONSHIP BETWEEN THE STRUCTURE OF THE BOARD OF DIRECTORS AND FIRM PERFORMANCE IN FAMILY VERSUS NON-FAMILY FIRMS

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ABSTRACT

This paper investigates the impact of four characteristics of the board of directors (board size, board independence, leadership structure, board meetings) on firm performance (Tobin's Q). Accordingly, four hypotheses have been developed. The analysis is based on data (objective variables) form 221 firms operating in three countries (Spain, Portugal, Italy) and differentiates between non-family-controlled businesses (NFCBs) and family-controlled businesses (FCBs). Considering the cross-sectional (three countries) and the time series (six years) nature of the data, we used a panel data estimation approach. Our findings show that, although corporate governance recommendations advocate larger, more independent and proactive boards, as well as structures that ensure the separation of the chairperson and CEO roles, these board features do not always result in more effective boards. Indeed, smaller, less independent and less active boards and dual leadership structures are tied to better performance by the FCBs in our sample as compared with the NFCBs.

Keywords: corporate governance; board of directors; family ownership structure; firm performance.

1. Introduction

Despite advances made in research on Corporate Governance (CG) over the last three decades, board compositions and their effectiveness remain at the centre of policy debates and CG research. Inadequate corporate governance structures in general, and poor oversight by boards of directors in particular, have largely been blamed for worldwide financial scandals and major corporate collapses (Dalton & Dalton, 2005). In recent years, several recommendations have been made with regard to the board structures of public corporations, and some recommendations have been written into codes of good governance with the aim to reduce risk taking in company decisions and to improve performance. In accordance with much of the literature on boards of directors, these recommendations are usually based on the agency theory (Jensen & Meckling, 1976), which seeks to strengthen the monitoring role of boards of directors so as to align the interests of managers and shareholders. However, empirical evidence on the effect of governance variables on firm performance is far from conclusive (Boivie *et al*., 2016), which makes it difficult for policy makers to define effective governance practices (Finegold *et al*., 2007). Despite the amount of research on boards of directors, there is still a need for a greater understanding of how to improve the quality of the board of directors (Ahrens *et al.*, 2011; McNulty *et al.*, 2013; Acero & Alcalde, 2014; Pugliese *et al.*, 2014).

Based on a sample of 221 non-financial European listed firms, the research goal is to determine whether the effect of several measures of board efficiency on firm performance is different for family-controlled businesses (FCBs) and non-family-controlled businesses (NFCBs). We contribute to the literature in several ways.

First, although governance recommendations and the vast majority of previous empirical literature on boards of directors have primarily focused on agency issues (Boivie *et al.*, 2016), in this study we respond to recent calls for multitheoretical approaches (Bammens *et al.*, 2011) and integrate three theoretical perspectives: the agency, stewardship and resource dependence theories. The relationship between boards of directors and firm performance is more varied and complex than can be covered by any single theory (Hillman *et al.*, 2009; Pugliese *et al.*, 2014; Maseda *et al*., 2015), and the agency theory should be complemented by the stewardship theory (Donaldson & Davis, 1994) and the resource dependency theory (Pfeffer, 1972). The agency theory strengthens the board's role as a monitor. It assumes that there is a principal–agent relationship between owners and managers, where "agents are viewed solely as opportunistic, self-serving, economic utility-maximizers" (Purkayastha et al., 2019, 52), Therefore, "agency theory has been faulted for adopting a narrow, utility-maximizing, economic model of man"

(Purkayastha et al., 2019, 52) that could not be representative of all realities. Unlike agency theory, stewardship theory assumes that managers are stewards whose behaviours are aligned with the objectives of their shareholders and, thus, managers are viewed as loyal to the company and interested in achieving high performance. Resource dependency theory focuses on the role of directors as resource providers, and views their business knowledge and expertise as a resource. By combining these three theoretical approaches, we are consistent with earlier work by Hillman & Dalziel (2003) that asserts that boards of directors serve two important functions: monitoring management on behalf of shareholders and providing advice and resources. Integrating these two board tasks allows studies not only to more accurately reflect the real world, but also to overcome theoretical weaknesses associated with choosing one approach over another.

Second, most previous empirical research has analysed the effect of individual board features on firm performance in isolation (Boivie *et al*., 2016). Because the individual study of each board characteristic is not realistic – rather, all their attributes should be analysed in relation to one another (Cuadrado-Ballesteros *et al.*, 2017, p. 1) - we make an integrated analysis of four board features, these being board size, board independence, leadership structure and board activity.

Third, recommendations in governance codes are also limited by not taking into account the identity of large shareholders in the enterprise. In this paper, we expand the knowledge on corporate governance by considering the different effect of boards of director's features on firm performance depending on the identity of large shareholders. The identity of large shareholders (family versus non-family) has also become relevant for corporate governance (Shleifer & Vishny, 1997; La Porta *et al*., 1999; Chrisman *et al.*, 2010; Botero *et al.*, 2015). The congruence of family and business interests inherent in family firms suggests that corporate governance needs are different in large family firms compared to non-family firms (Dick *et al.*, 2017). Family businesses tend to be complex because, in addition to dealing with common business opportunities and requirements, they must consider the needs and desires of the owning family, managing risk in order to achieve long-term supervision (Brenes *et al.*, 2011; Dick *et al.*, 2017; Chrisman *et al.*, 2018). In this context, the role of the board as a provider of advice and resources is especially relevant (Gómez-Mejía *et al.*, 2011).

This paper is structured as follows. In Section 2 we present the theoretical framework for the impact of board structure on firm performance and develop our hypothesis. In Section 3 we describe the sample and research method, based on panel data estimation considering the cross-sectional (three countries) and the time series (six years) nature of the data. In sections 4 and 5 we present the results and their discussion, practical implications and limitations. Finally, Section 6 provides concluding remarks.

2. Theoretical background

2.1. Board size and firm performance

From a theoretical point of view, board size depends on the level of goal alignment between owners and managers (Jaskiewicz & Klein, 2007). According to the agency theory, when shareholders cannot effectively control managers, agency settings involve boards of a relatively large size that primarily provide a monitoring role. However, although having a greater number of directors increases supervision, oversized boards lead to increased costs associated with free-rider conflicts and problems of coordination, control and flexibility in decision making (Lipton & Lorsch, 1992; Jensen, 1993), which hamper the effectiveness of board monitoring and result in poorer firm performance. According to resource dependency theory, by incorporating the role of the board as a resource provider into the analysis, an additional director brings more human and social capital to a company (Pfeffer, 1972) and increases board information and specific knowledge about the business, thus improving the quality of those strategic decisions that ultimately impact firm performance (Hillman & Dalziel, 2003).

Considering both theoretical approaches and in keeping with recent contributions to the theory of corporate boards (Coles *et al.*, 2008, Link *et al.*, 2008) suggesting that the optimal board structure balances the costs and benefits of these two tasks (monitoring and providing resources), we postulate the existence of a nonlinear relationship between board size and firm performance. The relationship will be positive up to an optimum size, beyond which the advantages of greater board capital and capacity for monitoring as provided by an additional director will be offset by problems of coordination, control and flexibility in decision making, resulting in worse overall performance. Our first general hypothesis, which will be tested for both NFCBs and FCBs, is as follows:

Hypothesis 1a: There is an inverted u-shaped relationship between board size and firm performance.

For FCBs, however, Lane *et al.* (2006) suggest that small boards are more desirable because larger boards may inhibit full-time participation and individual board responsibility. The smaller size of the boards at many FCBs may support this idea (Navarro & Ansón, 2009). Family control of a board may not be as easy as board size increases, and consequently, families may be reluctant to increase the number of directors because they wish to retain control (McVey *et al.*, 2005; Thomsen & Pedersen, 2000). Moreover, according to stewardship theory, board size should be smaller in firms in which there is greater alignment between the interests of owners and managers, as happens more in FCBs than in NFCBs (Purkayastha et al., 2019). In this context, the pro-organisational behaviour of family owners may be threatened by any form of direct or indirect control which may lower their stewards' motivation (Corbetta & Salvato, 2004a). Larger boards in FCBs will be associated with lesser cohesion among directors and therefore worsen their ability to monitor and provide resources. Consequently, our second hypothesis is stated as follows:

Hypothesis 1b: The optimum size of FCB boards of directors is smaller than that of NFCB boards of directors.

2.2. Board independence and firm performance

From the agency theory perspective, independent outside directors have greater capacity to provide a more critical assessment of management's performance (Daily & Dalton, 2015) because they face fewer potential conflicts of interest (Fama, 1980). Executive directors, however, are characterised by their lack of independence from the Chief Executive Officer of the company (CEO) and by having their own motivations (Dalton *et al.*, 1999). Therefore, independent outside directors are more likely to support shareholder interests, exert control and monitor the execution of company responsibilities (Huang, 2010). Thus, based on this monitoring function, we expect a positive relationship between firm performance and board independence. Stewardship theory potentially offers an alternative explanation for this relationship between outside directors and firm performance (Anderson & Reeb, 2004) due to the valuable counsel and advice that outside directors offer.

The resources theory states that independent outside director appointments can also be relevant to the provision of resources by the board as they provide valuable linkages to important external resources (Hillman & Dalziel, 2003; Daily & Dalton, 2015). Comprehensive and complementary knowledge provided by outside directors, obtained through university training and external prior work experience, can be used by managers to formulate and implement business strategies (Huang & Hilary, 2018). However, it must be noted that if only independent directors were sitting on the board, the board could not efficiently perform its roles because it would lack experience and knowledge of key aspects of the firm and its environment and would have difficulty acquiring this necessary firm-specific knowledge (McVey *et al.*, 2005). Therefore, it is necessary to have executive directors on the board. As these directors spend their working lives at the company they help to manage, they are considered a valuable source of experience in business operations and firm-specific knowledge related to the operation of the company. This experience makes them able to provide resources efficiently (Carpenter & Westphal, 2001; Raheja, 2005). Moreover, executives are also important to favour the transmission of information between directors and managers. Thus, based on this resource provision function, we expect a negative relationship between firm performance and board independence.

In order to maximise firm performance, the board of directors should perform all of its roles effectively. The idea that an appropriate mix of executive and outside directors may be the best composition for a board flows from this argument (Baysinger & Butler, 1985). Bearing in mind the arguments exposed above, the following general hypothesis, which will be tested for both NFCBs and FCBs, has been formulated:

Hypothesis 2a: There is an inverted u-shaped relationship between board independence and firm performance.

Focusing on FCBs, what works well to control or motivate an opportunistic manager may not work well to control or motivate a steward (Jaskiewicz & Klein, 2007; Samara & Berbegal-Mirabent, 2018). From this point of view, independent directors, as they are perceived by family members as a control mechanism, may negatively affect the motivation of stewards, lowering their pro-organisational behaviour. Therefore, we expect independent directors to be less effective in their monitoring role in FCBs than in NBCBs.

Moreover, as previous research notes (Bammens *et al.*, 2011; Leung *et al.*, 2014), family managers are expected to have more specific knowledge of the business than outsiders have (Cabrera-Suárez *et al.*, 2001; Miller & Le Breton-Miller, 2006). Controlling family members are usually characterized by being very committed to their company (Dick *et al.*, 2017; Chrisman *et al.*, 2018; Williams *et al.*, 2019) and may be unwilling to share information with outside board members, thereby reducing the cooperative interaction between family members and independent directors (Leung *et al.*, 2014). Therefore, it is not surprising that the transfer of specific knowledge about the firm to outsiders would be expensive (Lane *et al.*, 2006). As a result, it might be advisable for these companies to appoint into their boards of directors a majority of executive directors.

Overall, we expect independent outside directors to be less effective at monitoring and providing external resources at FCBs than they are at NFCBs, and we expect executive directors to be more effective at providing firms with specific resources at FCBs than they are at NFCBs. This expectation is tested by the following hypothesis:

Hypothesis 2b: The optimum level of independence for boards of directors at FCBs is lower than for those at NFCBs.

2.3. Leadership structure and firm performance

The agency theory perspective stipulates that the CEO and board chairperson positions must be held by two different individuals. If the same person performs both roles (CEO duality), the board of directors may be ineffective in identifying management opportunistic behaviour (Daily & Dalton, 1993; Jensen, 1993), and CEO entrenchment can increase. From this theoretical view, duality reflects lower board oversight and stronger CEO power, while non-duality reflects higher board oversight and weaker CEO power (Finkelstein & D'Aveni, 1994; Krause *et al.*, 2014). On the basis of these arguments, the relationship between CEO duality and firm performance is expected to be negative.

Nevertheless, from an empirical point of view, CEO duality has not been shown conclusively either to promote or to hinder firm performance (Krause *et al.*, 2014; Duru *et al.*, 2016). We follow good governance recommendations in formulating our hypothesis for NFCBs, which is consistent with the notion exposed above that non-duality may represent an important control check and reflects a desire to limit the power of board leaders. It reads as follows:

Hypothesis 3a: In NFCBs, there is a negative relationship between CEO duality and firm performance.

As Boyd (1995) first pointed out, an important question is in which situations the potential benefits of CEO duality will outweigh its disadvantages. In FCBs, CEO duality is usually very common. One possible explanation is the desire of family owners to protect their family's interests (Gomez-Mejia et al, 2011; García-Ramos *et al.*, 2017). Moreover, as Braun & Sharma (2007) point out, non-duality as a governance mechanism may be superfluous in firms in which the family exerts de facto control over resources. In this context, outside shareholders may benefit from the clear and unambiguous leadership afforded by a combined CEO-chairperson (Finkelstein & D'Aveni, 1994). Moreover, in FCBs, benefits deriving from CEO duality may be even greater. First, relationships characterised by trust and commitment within these organisations tend to reduce monitoring requirements (Schulze *et al.*, 2001). Within stewardship theory, control is viewed as potentially counterproductive, and organisational structures that enhance the power of managers are preferred over those designed to constrain managerial power (Donaldson & Davis, 1994). Non-CEO duality could reduce the stewardship behaviour of FCBs because it represents a control mechanism (Jaskiewicz & Klein, 2007). Second, family managers feel personally invested in the firm, which creates specific advantages related to the acquisition of specific knowledge about the business, its strategic direction, its investment opportunities and so forth, which will help them to optimise decision making (Miller & Le Breton-Miller, 2006). As Adams & Ferreira (2007) suggest, if the CEO is also the chairperson of the board, he/she will make his/her knowledge available to directors, allowing them to provide resources more effectively. Otherwise, splitting the CEO and board chair positions would lead to CEO-chair information asymmetries (Brickley *et al.*, 1997; Krause *et al.*, 2014), and this problem would be even more prevalent in FCBs (Braun & Sharma, 2007).

From this perspective, the expected relationship between performance and CEO duality will be positive (Coles *et al.*, 2001).

Therefore, our hypothesis is as follows:

Hypothesis 3b: In FCBs, there is a positive relationship between CEO duality and firm performance.

2.4. Board meetings and firm performance

A board meeting is considered a key instrument for directors to collect information, make decisions and monitor management (Chou *et al.*, 2013). The frequency of board meetings can be regarded as a measure of board effectiveness in carrying out the tasks of monitoring and providing resources, and therefore as positively influencing firm performance (Vafeas, 1999; Andrés *et al.*, 2005; Brick & Chindambaran, 2010; Zattoni *et al.*, 2015). Meetings provide directors with an opportunity to exchange and discuss their views on how they want to supervise managers and handle strategic issues for the firm (Tuggle *et al.*, 2010). As Liu *et al.* (2016) pointed out, because board meetings gather and present information from various sources (investors, managers, and other independent directors), this broad level of information enables independent directors to make more informed decisions. However, board members cannot be expected to monitor a firm, address strategic issues or reach effective decisions if not given sufficient time in board meetings to discuss and evaluate various alternatives (Huse, 2009).

In the view of the arguments exposed above, and following general good governance recommendations claiming that boards should meet often enough to discharge board duties effectively, we expect that the frequency of board meetings, which is defined as a board behaviour variable (Huybrechts *et al.*, 2016), can enhance the corporate governance of a firm.

The following hypothesis is therefore proposed:

Hypothesis 4a: In NFCBs, there is a positive relationship between the frequency of board meetings and firm performance.

Another argument is especially relevant in FCBs. One explanation of the usefulness of board meetings is the existence of other complementary or substitute governance mechanisms (Vafeas, 1999), such as family councils, family assemblies, family constitutions, and regular family meetings (Zattoni *et al.*, 2015). In this sense, family councils are generally studied and discussed as a family governance mechanism for very large FCBs (Ward, 1991), and family meetings are one of the best practices most often suggested to FCBs (Dana & Smyrnios, 2010). They may increase perceived family agreement because they create a proper mechanism for knowledge-sharing among relatives and address issues related to the operation of the business. Family meetings are advocated as a way of minimising agency issues and reducing agency costs as well as increasing the willingness of family members to provide resources to the firm (Aronoff & Ward, 1996). Due to the overlap of the family, business and ownership dimensions of the firm, FCBs are less likely to actively use board meetings to discuss relevant issues, but they usually prefer informal discussions among insiders only (Bettinelli, 2011; Kallmuenzer *et al.*, 2018). As previously noted by Zattoni *et al.* (2015), family members are said to prefer to manage potential conflicts among them outside the board meetings in order to avoid the potential embarrassment of exposing nonfamily directors to conflicts within the family.

With these considerations in mind, we expect board meetings to be less effective in FCBs than they are in NFCBs, where these complementary meetings do not occur. Moreover, more frequent board meetings could be perceived by a steward as a control mechanism and could therefore damage cohesion and commitment within the FCBs, leading to less effective monitoring and resource provision. On the basis of all of these arguments, our hypothesis is as follows:

Hypothesis 4b: The frequency of board meetings has a lower positive impact on firm performance in FCBs than in NFCBs.

3. Research methodology

3.1. Sample

To test our hypotheses we used a sample of 221 non-financial, listed firms from three countries of Southern Europe, Spain, Portugal and Italy, for the period 2001-2007 (García-Ramos *et al.*, 2017). All three countries employ French *civil law*, characterised by a lower level of protection of shareholder interests, firms with higher ownership concentration and a greater proportion of family controlling shareholders than in Common-law countries (La Porta *et al.*, 1999).

The first challenge was to select an initial database of FCBs and NFCBs operating in these three European countries. To that end, we used information provided by Amadeus Database on ownership structures and public information on significant shareholders available from stock market regulators and/or on company websites. As in La Porta et al. (1999), we used control chain methodology to identify the firms' owners. It should be noted that our aim was to account for differences among firms due to the identity of the large shareholders and not to the level of ownership concentration (Calabrò et al., 2016). Because of that fact, we select a sample as homogeneous as possible and we only included firms with an ultimate owner. We considered a company to have an ultimate owner if the main shareholder directly or indirectly held a percentage of the company greater than or equal to 25% (Ampenberger et al., 2013). We chose this threshold for two reasons (García-Ramos et al., 2017). First, whereas the existing literature on the USA used levels of 10% and 20%, we tried to adjust to the more concentrated ownership structures in most European countries. Second, we sought to maintain consistency with the official definition of a family business in Europe as approved in 2008 by two international institutions representing family businesses, the European Group of Owner Managed and Family Enterprises (GEEF) and the Board of the Family Business Network. By applying this method, we obtain a sample of firms with concentrated ownership structure (Calabrò et al., 2016). After that, for a business to qualify as a family firm, we required family members not only to control at least 25% of the property rights together, but also to be actively involved in the board of directors and/or management of the firm (Chrisman et al., 2018). Information on top management teams and boards of directors were extracted from corporate governance reports by manual examination for each firm and for each of the seven years under consideration. On the one hand, we require the presence of at least a family member in the board of directors and/or in the management team. On the other hand, there must necessarily be at least two different relatives involved in firm ownership, management and/or board of directors. We established that a family relationship among the main shareholders, managers and directors exists by detecting common surnames. With the application of these criteria, we guaranteed that our sub-sample of family firms was of a family nature in terms of management control and the existence of family ties in the highest responsibility management positions.

Finally, we divided the sample into two groups, FCBs and NFCBs. We only included those firms for which information was available on all of the variables considered for at least four consecutive years within the 2001-2007 period, as required to test the second order serial correlation (Blundell & Bond, 1998), which is a necessary condition to assure that the estimations made via GMM System methodology are robust. Thus, we have 81 FCBs (33 from Spain, 5 from Portugal and 43 from Italy) and 140 NFCBs (50 from Spain, 13 from Portugal and 77 from Italy).

3.2. Variables

Different sources of information were used to construct the variables for the empirical analysis. Information on management and boards was collected from the firms' financial and corporate reports. For financial and market data, we used the Amadeus Database, the financial reports released by firms and the data from the stock exchanges in the three countries.

Dependent variable

The dependent variable is firm *performance* as a proxy for board effectiveness. In keeping with previous research (e.g., Andrés *et al.*, 2005; García-Ramos *et al.*, 2017), we used *Tobin's q* as a measure of *performance* to assess the relationship between firm performance and governance. We measured this variable using each firm's market to book value ratio (Q), which we calculated as the book value of total assets minus the book value of common equity plus the market value of common equity divided by the book value of total assets.

Independent variables

Tobin's q is regressed against the following variables:

- *Board size:* The total number of directors on the board of each company.
- *Board independence:* The number of independent directors divided by the total number of directors on the board of each company.
- *Leadership structure*: A dummy variable that takes a value of 1 when the CEO and the chairperson of the board are the same person and a value of 0 otherwise.
- *Board meetings:* The natural logarithm of the number of meetings held each year by the board of each company.

Control variables

Control variables that influence firm performance are included to avoid any bias in the results, consistent with prior studies of corporate governance and performance (Andrés *et al.*, 2005; García-Ramos et al., 2017):

- *Firm size*: The natural logarithm of the value of total assets. Previous studies have found that organisation size is related to firm performance for various reasons, including diversification, economies of scale, access to less expensive sources of funds, and so forth, suggesting that size be included as a control variable.
- *Firm debt*: The ratio of total firm debt to total assets. This figure was included because firm debt provided a mechanism for curbing agency costs.
- *Firm age:* The natural logarithm of the number of years since the firm was founded. This figure was included to control for the company's life cycle and its growth options.
- $Sector_z$: Dummy variables (with z ranging from 1 to 7, adopting the Standard Industrial Classification of Economic Activities (2003), and excluding the financial sector because of particular specificities and own regulation of its corporate governance) that take a value of 1 when the firm belongs to sector z and 0 otherwise. These variables were included to monitor industry-level factors such as economies of scale and competitive intensity, which may account for variation in firm performance across broad industries.
- $Year_x$: Dummy variables (with x ranging from 1 to 6) that take a value of 1 when the sample observation corresponds to year x and 0 otherwise. They were included to take into account macroeconomic effects.
- $Country_y$: Dummy variables (with y ranging from 1 to 2) that take a value of 1 when the firm is based in country y and 0 otherwise. They were included to take into account differences among countries, as there is evidence to suggest that there are country-specific factors that may affect corporate governance relationships.

Table 1 shows the size of the sample by activity sector.

[Insert Table 1 about here]

3.3. Model estimation

We use panel data as the econometric approach to test our hypotheses, because it allows to account for individual unobservable heterogeneities between different companies and to eliminate the risk of obtaining biased results (García-Ramos *et al.*, 2017). The statistical package used is Stata (version 13.1). In particular, we used the two-step generalised method of moments system estimator (Blundell & Bond, 1998), in order to address the endogeneity problem that arises in our analysis (Hermalin & Weisbach, 2003; Adams & Ferreira, 2007;

Cheng, 2008; Coles *et al.*, 2008).

We propose a model that explains firm performance based on the explanatory variables related to the board of directors and the control variables considered. We also include the square variable for board size and board independence to test for the existence of the inverted u-shaped relationships proposed in our hypotheses[1]. To test whether there were any significant differences between the sub-samples of FCBs and NFCBs, separate models were estimated for each of them, where the subscripts *i* and *t* refer to the firm and time period, respectively:

$$FIRM\ PERFORMANCE_{it} = \alpha + \beta_1\ BOARD\ SIZE_{it} + \beta_2\ BOARD\ SIZE_{it}^2 + \beta_3\ BOARD\ INDEPENDENCE_{it} + \beta_4\ BOARD\ INDEPENDENCE_{it}^2 + \beta_5\ LEADERSHIP_{it} + \beta_6\ BOARD\ MEETINGS_{it} + \beta_7\ FIRM\ SIZE_{it} + \beta_8\ FIRM\ DEBT_{it} + \beta_9\ FIRM\ AGE_{it} + \sum \gamma_j\ YEAR_j + \sum \delta_k\ COUNTRY_k + \sum \lambda_m\ SECTOR_m + \eta_i + v_{it}$$

4. Results

The results of the model estimations are reported in Table 2 for both NFCBs and FCBs. For each model, we present estimated coefficients and indicate whether they are statistically different from zero (p-value). The joint Wald tests of the overall statistical significance of the model confirm the validity of our two models (25.44 for NFCBs and 73.38 for FCBs, both statistically significant at 1%). The AR2 tests confirm the absence of second-order serial correlation[2] and the Hansen tests confirm the validity of the instruments we used to avoid the endogeneity problem.

[Insert Table 2 about here]

The contribution of board size to Tobin's q is non-linear, as the positive and negative coefficients of *board size* and *board size*^{2} show. This result confirms that there exists, in both NFCBs and FCBs, an inverted u-shaped relationship between the variables, as stated in *hypothesis 1a*. In the aggregate, the value that maximises the objective function[3] is around 14[4] board members for NFCBs and around 7[5] board members for FCBs. Because this optimum board size is lower for FCBs than for NFCBs, we can accept *hypothesis 1b*.

The positive and negative coefficients of *board independence* and *board independence*^{2} for NFCBs confirm the inverted u-shaped relationship stated in *hypothesis 2a,* with an aggregate optimum level of independence[6] closed to 38%. However, the contribution of *board independence* to Tobin's q in FCBs is linear and negative, and thus, we reject the hypothesis of the inverted u-shaped relationship described in *hypothesis 2a*. As the non-linear relationship is not empirically observed for FCBs in our sample, we are not able to establish the optimum level of independence for these firms and, therefore, we cannot accept *hypothesis 2b,* which propose that the optimum will be lower for FCBs than for NFCBs.

The coefficient of *leadership* is not statistically significant for NFCBs and, therefore, we must reject *hypothesis 3a*, which proposes a negative contribution by this variable to firm performance. In FCBs the contribution of *leadership* to Tobin's q is positive, as proposed in *hypothesis 3b*.

Board meetings contributes significantly to Tobin's q, with a positive coefficient that confirms *hypothesis 4a* for NFCBs. The coefficient becomes negative for FCBs rejecting *hypothesis 4b*.

As for the remaining variables included in the model, our results are robust to the inclusion of control variables. For NFCBs, we have found that *firm size* has a negative and statistically significant effect on firm performance; year and sector effects are also significant as the joint Wald test results show. For FCBs, whereas the effect of *firm size* on firm performance is positive, the effect of *firm debt* is negative; year, country and sector effects are also significant as the joint Wald tests results show.

Table 3 summarises our hypotheses and results.

[Insert Table 3 about here]

5. Discussion

This paper investigates the relationship between internal governance structures and performance in a European context using three theories of corporate governance: the agency, stewardship and resource dependency theories. By addressing an integrated analysis of four board features, we have analysed whether family involvement in firms affects the relationship between corporate governance structures and firm performance in a sample of non-financial, publicly-traded Spanish, Portuguese and Italian companies during the 2001-2007 period.

The regression results show a nonlinear relationship between board size and firm performance in both FCBs and NFCBs. These results, consistent with those of Coles *et al.* (2008), imply that the optimal size of the board is defined by the trade-off between benefits (better monitoring and resource provision) and drawbacks (problems with coordination, communication and flexibility in decision making). Although the incorporation of new directors is positively related to firm performance, there is an optimal level beyond which the addition of new directors reduces performance. Since the value that maximises the objective function in NFCBs is higher than the value for FCBs, we can conclude that large boards are less effective in FCBs than in NFCBs, which supports the prevalence of stewardship issues over agency issues in the former. Therefore, an ideal board size that holds for all firms does not likely exist (Huybrechts *et al.*, 2016).

Our study also highlights the different role played by board independence based on family involvement in the company. The inverted u-shaped relationship between board independence and firm performance found in NFCBs gives empirical support to the argument that an adequate mix of executives and independent outside directors is more efficient than excessive independence in order to achieve a better firm performance. These findings contradict claims that state that an ideal board should consist exclusively of independent directors (Ward, 1991). In contrast, the negative effect of independent outside directors on the performance of FCBs suggests that, in these firms, outside directors are not as effective in their roles of supervising and providing resources as they are in NFCBs (Samara & Berbegal-Mirabent, 2018). With regard to FCBs, in keeping with stewardship theory, capital markets appear to view more insiders on the board as positive (Muth & Donaldson, 1998; Sundaramurthy & Lewis, 2003). Within these firms, the knowledge and experience of executive directors is a key feature to the effective performance of boards in its role as resources providers.

Both independent outside directors and executive directors are necessary to the effective performance of boards in terms of both monitoring and resource provision. When the presence of independent directors has a negative effect, as in our subsample of FCBs occurs, this may simply suggest that there are more independent directors than is optimal, which would prevent the expected positive relationship from being empirically observed. One possible reason that boards may appointed excessive independent directors is to achieve the regulator´s recommended level of board independence (Aguilera & Cuervo-Cazurra, 2004; García-Ramos *et al.*, 2017; Kabbach *et al.*, 2017). Another possible explanation of this negative effect is, as Adams and Ferreira (2008) and Crespí-Cladera and Pascual-Fuster (2014) previously noted, that some firms are appointed into their boards non-strictly independent directors (friendly boards). In the particular case of FCBs in our sample, large family shareholders would be appointing independent directors who are not truly independent from the family to achieve both a desired low level of real board independence and the recommended level of board independence (Crespí-Cladera & Pascual-Fuster, 2014).

With respect to leadership structure, as previously noted by Krause *et al.* (2014) and as this study supports, it is necessary to expand our knowledge about under what circumstances the consolidation of power and decision-making afforded by duality outweigh the potential abuses described by the agency model. The positive effect of CEO duality on FCB performance indicates the validity of stewardship theory over agency theory. As Lane *et al.* (2006) have pointed out, the roles of chairperson and CEO should be combined only when a single person can do both jobs effectively, as seems to occur in our sample of FCBs. Therefore, the transparent and unambiguous leadership provided by the CEO when he/she is also the chairperson of the board sounds to be valuable by shareholders (Braun & Sharma, 2007). This result contradict the governance recommendation advocating non-CEO duality, and suggest that dominant families will exert some influence on the board' choice of CEO duality or nonduality (Anderson & Reeb, 2004; Krause *et al.*, 2014). The suggestion of separating the CEO and chairperson roles according to agency theory and governance prescriptions is also not supported by the data on NFCBs in this study. Bearing in mind our endogenous approach, this lack of a relationship between CEO duality and firm performance may indicate that, on the whole, the NFCBs in our sample are choosing their leadership structure to maximise profits. It may also be the case that in NFCBs, other internal and external control mechanisms are in place that render leadership status relatively unimportant (Chrisman *et al.*, 2018).

This study shows that active boards benefit the performance of NFCBs, giving support to the resource dependency and agency theories. Notice that under our endogenous approach, the positive relationship observed between the frequency of board meetings and firm performance may indicate that in the aggregate, NFCBs have fewer board meetings than necessary. Such evidence would suggest that increasing meeting frequency is one fairly inexpensive way for firms to increase value (Vafeas, 1999). This result may have important governance implications for both practitioners and regulators, because, at first, it seems cheaper for a firm to increase the frequency of board meetings to achieve better governance and to turn the firm around, than to change the composition of its board or its ownership structure (Qiu & Largay, 2011). In contrast, in FCBs, other family meetings aimed at ensuring family health and stability (Minichelli *et al.*, 2015) (for example, family councils, family assemblies, and family meetings) are expected to be used instead of formal board meetings, and this distinction lends some support to stewardship theory, consistent with the findings of Vafeas (1999). As Boivie et al. (2016: 28) assert, "much of the resource provision often occurs outside of the formal setting of board meetings and can take the form of informal advice". Another possible explanation of this negative relationship is that it is possible that the impetus behind board activity in these firms were simply the need to comply with regulation, so that increases in board activity have a negative impact on firm performance, as the increased activity would detract management from focusing on running the firm (Brick & Chicambaran, 2010). Moreover, this negative relationship could also suggest that higher meeting frequency leads to a lower attendance rate (Lin *et al.,* 2014). In the context of FCBs, it is also possible “that directors may be hesitant to speak up in board meeting because of social risk involved with voicing minority opinions” (Boivi *et al*., 2016: 22) which are contrary to those of the owning family, leading to a negative effect on the firm performance.

Overall, our results provides an overview of what the most suitable structures are for board of directors at both FCBs and NFCBs with large shareholders. Contrasting findings for FCBs and NFCBs confirm that some board structures are suitable to control an opportunistic manager, but they do not work well to motivate a steward (Samara & Berbegal-Mirabent, 2018). Besides the fact that corporate governance recommendations are currently based on agency theory, this study suggests that in FCBs, due to higher levels of goal alignment between owners and managers than in NFCBs that also have a large shareholder (Williams *et al.*, 2019), stewardship theory-based governance mechanisms lead to better firm performance. In this context, the role of the board as a provider of resources and advice takes greater importance than the monitoring board role. Therefore, most corporate governance recommendations considered in good governance codes are not suitable for FCBs.

5.1. Practical implications

Findings are of interest not only for FCB owners and board members, but also for practitioners, policy makers, and academics. As our results show that the relationship between four board characteristics and firm performance varies for FCBs and NFCBs, this fact may have implications for the development of good governance recommendations, which in our opinion should not be homogeneous but adaptable to the heterogeneous characteristics of listed companies, more specifically regarding their ownership structure. Although large firms are increasingly opting for operating under the guide of best practices, it is too idiosyncratic for all firms to adopt the same board structure, and the performance implications of such practices, which are contingent in an array of factors, only some of which are known, should be considered by governance advisors and institutional investors (Krause *et al.*, 2014). Some of the confusion surrounding recommended board of directors’ reforms may be the result of an exclusive focus on the largest corporations of USA (Daily & Dalton, 2015). In this sense, as Aguilera & Cuervo-Cazurra (2004) point out, reforms of corporate governance being discussed in *civil law* countries have been based on those developed in *common law* countries, without recognising that the separation of ownership and control only affects to a very small number of companies within the European context (Botero *et al.*, 2015). This fact has result in recommendations that does not fit to European firms with a concentrated ownership structure, and particularly to FCBs in our sample. Externally imposed regulation on board configuration can be costly and can have unintended consequences (Hermalin & Weisbach, 2003; Brick & Chicambaran, 2010; Chrisman *et al.*, 2018). In fact, some of the current recommendations not only do not improve the performance of FCBs, but even hurt it. The introduction of more formal monitoring settings into FCB structures can negatively affect the prevalent informal governance settings and business culture, reducing the goal alignment level (Corbetta & Salvato, 2004a).

Overall, this study shows that, in order to get a thorough understanding of corporate governance practices that result in more effective firm performance, it is important to consider the identity of the large shareholder. In this sense, the paper evidence the need for closer collaboration between academics and policy makers in order to ensure that consequences of the identity of large shareholders are understood and taken into consideration when drafting, amending and adopting new governance recommendations. There is a need to assess the effectiveness of corporate governance recommendations in order to develop future policy actions. Regulatory bodies overseeing corporate governance should continue working on corporate governance regulation to improve the effectiveness of governance recommendations. Developing the research in this field would contribute to a better understanding of how to formulate recommendations and the consequences of such recommendations. The analysis conducted here points to the need for researchers to further probe the differences between FCBs and NFCBs with regard to their practices and governance, and more attention is needed on how family firms respond to specific institutional pressures related to corporate governance (Chrisman *et al.*, 2018; Kabbach *et al.*, 2017).

5.2. Limitations and future research

This paper has some limitations that represent an opportunity for future research. Firstly, it must be noted that the analysis performed refers only to listed FCBs and NFCBs operating within the tradition of French *civil law*, all of which have a concentrated ownership structure. Deepen on this topic is necessary in order to test whether the same conclusions can be applied to other dataset from different countries and different legal systems. Secondly, it is plausible that the number of meetings alone does not fully capture the level of board activity, and that the time directors spend on monitoring is important. Moreover, the impact of board activity on firm performance could be moderated by the leadership structure of the company. In addition, there are important issues that were not explored in this study and that should be considered in future research, including director remuneration and training opportunities for board members. Moreover, FCBs may have other non-family shareholders with controlling shares that can influence the behaviour of shareholders and family directors and the creation of firm value. Future research should analyse the impact of the presence of institutional investors on the relationship between boards of directors and FCB performance.

Finally, it should be noted that we have analysed the effect of board features on the firm performance for the period just before the financial crisis. Therefore, results of this study are of interest in order to understand the state of the art before the crisis and to develop corporate governance recommendations avoiding all the possible biases that the financial crisis could have caused in an empirical analysis about the relationship between boards features and performance. Even, after the crisis, governance recommendations with regards the features of the boards analysed remain the same in the three countries considered and no recommendation has been done regarding family business. Therefore, our research and future studies with updated data will be relevant to support governance recommendations.

6. Concluding remarks

This paper investigates the relationship between internal governance structures and performance in a European context using three theories of corporate governance: the agency, stewardship and resource dependency theories. By addressing an integrated analysis of four board features, we have analysed whether family involvement in firms affects the relationship between corporate governance structures and firm performance in a sample of non-financial, publicly-traded Spanish, Portuguese and Italian companies during the 2001-2007 period. The identity of the large shareholder has been largely ignored in previous literature, a fact that hinders our understanding of how boards of directors function. The results of this research highlight the importance of considering the firms´ ownership structure when making assessments of the quality of the board of directors as a governance mechanism. Our research also emphasises the need to take into account not only the monitoring function of a board of directors, but also its role in providing external and internal resources. The contextual approach adopted allowed us to design the impact of the board of directors on firm performance as a relationship that varies depending on the family identity of the large shareholder. While much work clearly remains to be done, the question of the relevance of the two board roles, depending on the identity of the large shareholder, lead us to reconsider and reformulate the effects that the board of directors has on the performance of widely held firms, evidenced in the traditional corporate governance literature.

Although in academic literature heterogeneity has been suggested, the idea that there is not one superior governance type for all firms deserves more attention (Huybrechts *et al.*, 2016). Our findings show that besides corporate governance recommendations advocate larger, more independent and proactive boards, as well as structures that ensure the separation of the chairperson and CEO roles, these board features do not always result in more effective boards. Indeed, smaller, less independent and less active boards and dual leadership structures are tied to better performance by the FCBs in our sample as compared with NFCBs. These findings are important because, in some cases, firms may feature strong agency and stewardship characteristics in different contexts, and this may be challenging (Le Breton Miller & Miller, 2009). This detail makes it even more obvious that the relationship between corporate governance and performance cannot be explain by a single theory, but a multitheoretical approach is more suitable.

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TABLE 1

Distribution of the sample by country and by activity sector, and descriptive statistics

Distribution of the sample by country and by activity sector			
	Total	**NFCBs**	**FCBs**
Country classification			
Spain	83	50	33
Portugal	18	13	5
Italy	120	77	43
Total	221	140	81
Sectorial classification. Primary SIC codes			
S1 Agriculture, forestry and fishing and S2 mining	3	3	0
S3 Construction	20	11	9
S4 Manufacturing	90	59	31
S5 Transportation, communication and public services	29	24	5
S6 Wholesale trade	9	6	3
S7 Retail trade	5	2	3
S8 Insurance and real state	37	21	16
S9 Services	28	14	14

Descriptive statistics				
Variable	**Min**	**Max**	**Mean**	**Std. Dev.**
Q-Tobin	0,10	16,20	1,50	1,14
Board size	1,00	22,00	9,64	3,78
Board independence	0,00	1,00	0,31	0,19
Leadership	0,00	1,00	0,36	0,48
Board meetings[a]	1,00	47,00	8,70	4,41
Firm size (billions of €)	6,32	20,56	13,29	2,21
Firm debt	0,02	1,00	0,59	0,19
Firm age[b]	1,00	154,00	37,81	30,49

[a] The *Board meetings* variable in this table is the number of meetings per year, although in the model the natural logarithm of this variable is used.

[b] The *Firm age* variable in this table is expressed in years, although in the model the natural logarithm of this variable is used.

TABLE 2
Empirical analysis results: NFCBs and FCBs models

	NFCBs		FCBs	
[ab]	**Coefficient**	**p-value**	**Coefficient**	**p-value**
Board size	0,22	0.00	0,13	0.03
Board size ^{2}	-0,01	0.00	-0,01	0.00
Board independence	4,13	0.00	-1,01	0.00
Board independence ^{2}	-5,40	0.00	0,05	0.43
Leadership	-0,11	0.40	0,22	0.01
Board meetings	0,31	0.00	-0,13	0.02
Firm size	-0,04	0.08	0,16	0.00
Firm debt	-0,23	0.36	-1,06	0.00
Firm age	-0,08	0.20	-0,07	0.32
year (6)		0.00		0.00
country (2)		0.17		0.08
sector (7)		0.00		0.00
Optimum Board Size	**13.65**		**6.94**	
Optimum Board independence	**0.38**		**-**	
JOINT-test	**25.44**	**0.00**	**76.38**	**0.00**
Hansen test X2	**50.51**	**0.34**	**33,79**	**0.38**
AR(1)	**0.08**	**0.94**	**-1,10**	**0.27**
AR(2)	**-0.70**	**0.49**	**-0,92**	**0.36**

[a]The dependent variable is Tobin's q
[b] The interpretation of the significance tests follows the following scheme: JOINT: Wald's test of the overall significance of the explicative and control variables; YEAR: Wald's test of the joint significance of the year's dummy variables; COUNTRY: Wald's test of the joint significance of the countries' dummy variables; SECTOR: Wald's test of the JOINT significance of the sector's dummy variables. Distributed as a chi-square under the null hypothesis of lack of relationship. AR(1) and AR(2) are the 1st and 2nd order serial correlation statistics using residuals in first differences, distributed as N(0,1) under the null hypothesis of non-serial correlation. Hansen: over-identifying restriction test, distributed as a chi-square under the null hypothesis of no relation between the instruments and the error term.

TABLE 3
Summary of hypothesis and empirical results

Variables		Hypothesis related to firm performance	Results
	H1a	Inverted U-shape	Accepted for NFCBs Accepted for FCBs
Board size	**H1b**	Optimum board size: FCBs < NFCBs	Accepted Optimum board size: - NFCBs: 14 - FCBs: 7
Board independence	**H2a**	Inverted U-shape	Accepted for NFCBs Rejected for FCBs (Negative relationship)
	H2b	Optimum board independence: FCBs < NFCBs	Rejected Optimum board independence: - NFCBs: 38.3% - FCBs: Non-existent (Negative relationship)
Leadership structure	**H3a**	Negative effect of CEO duality in NFCBs	Rejected (non significant)
	H3b	Positive effect of CEO duality in FCBs	Accepted
Board meetings	**H4a**	Positive effect of board meetings frequency in NFCBs	Accepted
	H4b	Lower positive effect of board meetings frequency in FCBs than in NFCBs	Rejected (negative relationship)

[1] The endogenous approach implies that no single optimal board structure will fit all firms (Hermalin & Weisbach, 2003). With its own governance needs, each firm will choose the board structure that maximises its efficiency. If firms choose a board structure that maximises firm value, if there are no transaction costs to alter board structure, and if suitable control variables are included in the regression specification, then there should be no observable relationship between board structure and firm performance (Coles *et al.*, 2008). However, if transaction costs are significant, board structure may deviate from the optimum structure. The closer a board's structure is to its optimum value, the better the firm's performance will be.

[2] Given the use of first-difference transformations, we expected some degree of first-order serial correlation (test AR1), and this correlation does not invalidate our results. However, the presence of second-order serial correlation does signal omitted variables.

[3] To calculate the optimum value of board size, we solved the first derivative of performance with respect to board size. Note that this is the inflection point at which the relation between board size and firm performance turns from positive to negative.

$$\frac{\partial y}{\partial x} = \frac{\partial(firm\ performance)}{\partial(board\ size)} = \frac{-(\beta_1)}{2(\beta_2)}$$

[4] The mathematical value obtained has been 13.65. The value has been rounded because board members are indivisible.

[5] The mathematical value obtained has been 6.94. The value has been rounded because board members are indivisible.

[6] To calculate the optimum value of board independence, we solved the first derivative of performance with respect to board independence. Note that this is the inflection point at which the relation between board independence and firm performance turns from positive to negative.

$$\frac{\partial y}{\partial x} = \frac{\partial(firm\ performance)}{\partial(board\ independence)} = \frac{-(\beta_3)}{2(\beta_4)}$$