**Corporate governance compliance of family and non-family listed firms in Latin American emerging markets**

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**ABSTRACT**

Based on agency theory, this study analyzes whether family firms are more compliant with corporate governance recommendations than non-family firms in the context of emerging markets. Using a unique sample of 826 observations of the highest ranked companies on the stock exchange indices of Argentina, Brazil, Chile and Mexico during the period 2004-2010, we hypothesize that family firms may adopt better corporate governance practices to substitute for the absence or inefficiency of a regulatory system and to mitigate the agency problem between majority and minority shareholders. Additionally, we propose a corporate governance compliance index considering the legal and institutional framework of the region. The empirical results indicate that family firms report a higher corporate governance index. We find that board composition (independence, size and COB-CEO duality) does not moderate corporate governance compliance of family firms but rather such variables have a direct effect on the corporate governance index.

**KEYWORDS:** Family Firms, Corporate Governance, Board Composition, Agency Theory, Latin America

1. **INTRODUCTION**

Family firms represent a major engine of economic growth and wealth creation and constitute an important form of business around the world (Spanos, Tsipouri, & Xanthakis, 2008). In emerging markets, family companies account for a significant proportion of the gross national product (Claessens et al. 2002) and are characterized by controlling family owner(s) and concentrated ownership (Lubatkin, Ling, & Schulze, 2007). In Latin America, most companies are controlled by its founders, and the involvement of family members in key executive positions is very common (Bertrand & Schoar, 2006). Similar to other emerging economies, Latin American listed firms are controlled by a family where corporate control is enhanced through various mechanisms such as pyramidal structures, dual class shares or multiple control chains, which might create an agency problem when their interests are not aligned to those of the firm (González et al., 2014).

Bammens, Voordeckers and Van Gils (2011) identified four main sources of agency problems in family firms: First, the extraction of firms’ resources through special dividends, excessive compensation and tunneling activities (Anderson & Reeb, 2004; Setia-Atmaja et al. 2009); second, the misalignment of interest of the controlling family with the firm that results from non-financial aims such as the preservation of the firm for future generations (Gómez-Mejía et al., 2007; Jones et al., 2008; Voordeckers et al., 2007); third, altruism towards other family members, such as setting up independent departments for each heir, rewarding employed family members equally regardless of effort and performance, and lavishing them with excessive perquisites and privileges (Schulze et al., 2001); fourth, intra-familial conflict, which creates rivalry among family members and results in underperformance (Schulze at al., 2003).

To mitigate agency problems, family firms have a strong incentive to increase compliance with corporate governance (hereafter CG) recommendations and promote board structures, which limit the expropriation of firms’ wealth (Brunello et al., 2003). One important role of the board of directors as a monitor is to ensure that the company complies with applicable laws and regulations (Carter et al., 2010). Prior research indicates that independent members are included on the board of family firms as a response to pressures from non-family stakeholders, such as investors and banks, attempting to safeguard their financial interests (Fiegener et al., 2000). Therefore, family firms recognize the importance of good governance practices to retain investors’ confidence and as a substitute for the weaknesses of the legal environment (Poletti-Hughes, 2009; Su & Lee, 2013; Brenes, Madrigal, & Requena 2011).

Although family firms represent a significant part of publicly listed companies in Latin America, little research has been done on aspects of their CG. Most of the prior literature has been focused on Anglo-Saxon, European and Asian countries. A strand of literature has studied the relationship between family firms and CG as a strategic choice to explain performance differentials between family and non-family firms (van Essen, Carney, Gedajlovic, & Heugens, 2015; Goh, Rasli, & Khan, 2014; Lee, Cho, & Kang, 2011; Bartholomeusz & Tanewski, 2006; Klein, Shapiro, & Young, 2005).

In this paper, we consider the agency problem that arises from the relationship of controlling and minority shareholders and aim to study whether CG compliance is higher in family firms in comparison with non-family firms. We extend this research by investigating whether board characteristics (board size, board independence and COB-CEO duality) have an impact on CG compliance. The adoption of CG practices by family firms in markets where there is absence of a strong institutional system increases the confidence of external shareholders. Particularly, listed firms are highly visible and therefore are encouraged to increase transparency as bad practices may be broadly noticed and penalized (Baum & Powell, 1995). We hypothesize a moderating effect of board composition (size, independence and COB-CEO non-duality) on the relationship of family firms and CG compliance since the board of directors constitutes the linchpin of CG and one of its main functions is to ensure continuous CG compliance (Gillan, 2006). It is common that family members are involved in the management and board positions, and therefore, board structure might promote or limit CG compliance of family firms. The incidence of large family ownership and the incentives that the family have to benefit from control raises the question of whether the effectiveness of the board of directors might act as a mechanism to keep the family from expropriating minority shareholders' wealth (Anderson and Reeb, 2004). Therefore, consistent with agency theory, more independent and larger boards balance family board representation and consequently might enhance board monitoring and increase compliance with CG practices. To achieve our aim, we compiled a unique cross-country data of 826 non-financial firms of the four most important emerging countries in the Latin American region (Argentina, Brazil, Chile and Mexico) during the period 2004 and 2010.

This paper contributes in several ways to the family firm literature. First, we approach this study from the principal-principal agency conflict since Latin America is characterized by highly concentrated ownership structures where major shareholders may take advantage of weak shareholder protection to the detriment of minority investors. Second, we construct a unique regional CG rating (hereafter CGR) that reflects the regulatory and institutional framework of Latin America contributing to a better understanding of the CG of family firms. CG compliance may constitute a strategic tool to align the interests of controlling and minority shareholders; therefore, Latin American family firms may be more willing to increase CG ratings to increase market confidence. Third, as advocated by Kabbach de Castro, Crespí-Cladera, & Aguilera (2013), we provide empirical evidence on the relationship between family firms and CG compliance, and the effect of board composition on the CG compliance where research has been limited.

This paper is structured as follows. Section 2 develops the hypotheses. Section 3 describes the sample and empirical methods. Section 4 presents the empirical results. Section 5 presents the discussion and conclusions of this research.

1. **RESEARCH HYPOTHESES**

**2.1. Family-controlled firms and corporate governance compliance**

In emerging economies, there is a strong link between CG structures and the institutional framework. Family ownership concentration is the response to the absence or inefficiency of the legal system and institutional weaknesses (Heugens, van Essen, & van Oosterhout, 2009; Peng et al., 2009; North, 2005). The institutional context promotes the effectiveness in monitoring and resource allocation in family firms (Li et al., 2006) and reduces the risk of wealth expropriation to minority shareholders (Barontini & Caprio, 2006). This conflict, better known as type II agency problem, describes the use of controlling mechanisms by larger shareholders to expropriate minority shareholders (Villalonga & Amit, 2006). Family firms tend to maintain their wealth for several generations, investing their economic resources in a single firm or business group, and holding the strategic positions to pursue their private interests to the detriment of outside investors (Anderson & Reeb, 2004; Gómez-Mejía et al., 2003; Braun & Sharma, 2007). Schulze, Lubatkin, & Dino (2003) state that family-owned firms could favor family interests over the firm’s interests at a loss to minority shareholders and have incentives to be engaged in opportunistic behavior, as a response to family loyalty. Therefore, to preserve investors’ confidence and as a signal of protection against expropriation to potential new investors, family firms might be encouraged to higher compliance with CG recommendations. Good governance practices in family firms aim to reconcile the interest of majority shareholders with minority investors in countries where the institutional system is weak. In this way, family firms may respond to institutional pressures in a more substantive manner to maintain a good reputation and project a positive family image (Liu, Valenti, & Chen, 2016).

CG in family firms aligns and organizes the ownership and management functions, through different mechanisms such as general meetings, board of directors, supporting committees and management teams (Brenes, Madrigal, & Requena, 2011). As a consequence, good governance practices are critical in family firms to prosper in an environment of intense competition. According to Chrisman et al. (2007), family firms tend to monitor and provide incentives to management, which improves performance. The complexity of the family firm relationships, such as nepotism, free riding, and entrenchment, which dissuades the alignment of goals and strategies, can be solved through formal monitoring and controlling mechanisms (Chua, Chrisman, & Bergiel, 2009). In this context, it is expected that the principal-principal agency conflict of family firms is likely to lead to higher CG compliance in comparison to non-family firms, as family firms have incentives to protect not only the firms’ reputation but also the wealth of the family. Thus, we set the following hypothesis.

*H1. Family-controlled firms show higher corporate governance compliance than non-family firms in Latin America.*

**2.2. Effect of board composition on corporate governance compliance**

In the context of family firms, the board of directors plays a relevant role in mitigating agency problems, not only between shareholders and managers (type I agency problem) but also between majority and minority shareholders (type II agency problem) (Acero & Alcalde, 2016). The board of directors constitutes an important control mechanism, as it is responsible for monitoring and preventing managers’ opportunistic behavior in protection of minority shareholders (Cueto, 2013). According to Gillan (2006) and Carter et al. (2010), board monitoring includes overseeing continuous compliance with CG regulations. In markets where disclosure is voluntary, board structure complements or substitutes for other CG practices (Brown et al., 2011). Moreover, the board of directors serves as an advisor to the family firm, ensures fluent communication with all the company’s stakeholders, maximizes corporate performance and lowers uncertainty (Su & Lee, 2013; Jensen & Meckling, 1976). We hypothesize that there is a differential in the monitoring activities from the boards of directors in family and non-family firms, which might have an impact on CG compliance. As described in Anderson and Reeb (2004), an effective board protects from resource expropriation by controllers. Therefore, the composition of the board of directors might alleviate the conflict between controlling and minority investors.

**2.2.1. Independent directors**

According to agency theory, independent directors play a vital role in monitoring management performance and limiting managerial opportunism (Fama and Jensen, 1983). The presence of independent members on the board promotes the ability to monitor managerial activity and committee effectiveness (Liu, Valenti, & Chen, 2016). Independent directors may mitigate the opportunistic behavior of controlling shareholders and improve the efficiency of corporate strategies, since their advisory role brings innovative knowledge (García-Ramos, & García-Olalla, 2011). Independent directors could help family firms to enhance the organizational capability since they hold specialized professional knowledge and more connections and networks compared with insider members (Su & Lee, 2013). The presence of independent directors on the board strengthens CG, enhances organizational capability, and reduces information asymmetry among investors, particularly in the context of emerging markets where institutions are weak (Kor & Misangyi, 2008). Outside directors play an important role in balancing the power of family firms, since they prevent the expropriation of firm resources and reduce type II agency conflicts improving firm performance (Shleifer & Vishny, 1997). As family firms have more representation of family members on boards and in management, independent directors could decrease the potential wealth expropriation by family controllers.

Based on agency theory, independent directors may have greater incentives than inside directors to encourage companies to disclose more information about their CG practices and hence have higher governance ratings (Hussainey & Al-Najjar, 2012). A firm that promotes independent directors demonstrates its willingness to implement better CG practices and reduces incentives to withhold information (Liu, Valenti, & Chen, 2016). Therefore, family firms’ compliance with CG practices moderated by the influence of independent directors can be expected to be greater. By contrast, at low levels of board independence, family firms might decrease CG compliance to the detriment of minority investors, leading to the following hypothesis:

*Hypothesis 2. The greater the independence of the board of a family firm is, the better is the compliance with corporate governance practices.*

**2.2.2. Size of the board**

In accordance with agency theory, large boards could play a determinant role in the monitoring function and in strategic decisions processes. A larger board of directors brings additional knowledge, increases specific firm information, contributes to the efficiency of its advisory role and, therefore, is less likely to be dominated by management or family members (Hussainey & Al-Najjar, 2012). Although some empirical results have shown that larger boards lead to higher costs and problems of coordination, control and flexibility in the decision-making process, reducing firms’ value (García-Ramos, & García-Olalla, 2011; Cheng, 2008), recent studies have shown that under certain contexts in which the advisory role is more relevant than the supervisory role, larger boards might be more effective (Adams & Ferreira, 2007; Linck et al, 2008). In the context of family firms, Laksmana (2008) found that larger boards might play a better advisory role, because they have a greater knowledge and promote greater CG compliance (Hussainey and Al-Najjar, 2012; Mallin & Ow-Yong, 2012). Hence, we set the following hypothesis:

*Hypothesis 3. The larger the board of a family firm is, the better is the compliance with corporate governance practices.*

**2.2.3. Duality of the chairman of the board (COB) and chief executive officer (CEO)**

Based on agency theory, the COB/CEO duality reduces the effectiveness of monitoring activities and could lead to expropriation of firm resources (Chen & Liu, 2010). Without appropriate monitoring, CEOs may abuse their power, put their own interests first and make decisions that are detrimental to the firm, such as hiring incompetent staff (Combs et al., 2007). In contrast, the separation of both positions could lead to better corporate performance by achieving an appropriate balance of power and supervision, which improves decision-making (Ferrero, Fernández, & Muñoz, 2012). Corporations where the COB/CEO functions are separated have better corporate practices and performance. For instance, Carcello and Nagy (2004) and Gul and Leung (2004) provide evidence that companies with CEO duality affect negatively the CG transparency. The lack of independent leadership in a firm with COB/CEO duality reduces board monitoring and hence decreases disclosure to outside stakeholders (Liu, Valenti, & Chen, 2016). Executive management positions in family firms are often limited to family members (Chen, Hsu, & Chen, 2014), increasing the opportunity for private benefit, which negatively affects the quality of CG. Therefore, our fourth hypothesis is formulated as follows:

*Hypothesis 4. The COB-CEO duality in a family firm decreases the positive relationship between family control and corporate governance compliance.*

**3. METHODOLOGY OF THE STUDY**

**3.1. Dataset**

The data in this paper are based on publicly listed firms belonging to the most liquid indices on the stock exchanges in Argentina [Merval], Brasil [Bovespa], Chile [IPSA] and Mexico [IPyC] (Su & Lee, 2013). From the initial sample of 155 publicly listed firms, we eliminated those firms with incomplete data, generating a final sample of 125 companies (30, 10, 32 and 53 for Mexico, Argentina, Chile and Brazil, respectively). The panel dataset comprises 826 firm-year observations during the period of 2004 to 2010. Financial data were collected from the DataStream database. We compiled CG information from annual reports by using content analysis methodology. Companies are classified by the Industry Classification Benchmark (ICB), and the CGR is mean adjusted to control for the industry effect. Financial variables are winsorized at the 98th percentile to account for the effect of extreme values (Shumway, 2001).

**3.2. Variables**

**3.2.1. Corporate Governance Transparency Index (Dependent variable)**

Most studies have adopted governance indices to measure the quality of governance (Bhagat, Bolton, & Romano, 2008). Although there is no standardized system, prior research has developed several CGRs, mostly for Anglo-Saxon and continental European countries (Klapper & Love, 2004; Gompers, Ishii, & Metrick, 2003). The main aim of the rating is to compare and evaluate the companies’ governance scores regarding the accepted standards issued by regulatory bodies in a particular institutional context (Al-Malkawi, Pillai, & Bhatti, 2014). In Latin America, several ratings have been developed by prior studies. For instance, Leal and Carvalhal (2005) proposed an un-weighted CGR for Brazilian companies comprising 15 questions classified under four governance dimensions: disclosure, board composition, ownership and control, and shareholder rights. Garay and Gonzalez (2008) utilized a binary scale to integrate governance attributes related to board structure, responsibility of the board, conflicts of interest, shareholder rights and transparency in Venezuela.

The CGR proposed in this study comprises the most important dimensions contained in each code and law, but for the sake of comparison, we excluded the items that are not common or established by the four countries. The CGR is constructed using 30 items of CG information that are grouped in four specific sub-indices that have been suggested in previous literature: i) board functioning and support committees (6 items) capture board remuneration, selection, removal or re-election procedures and identifies the presence of supporting committees (nominating, remuneration, corporate governance, auditing); ii) shareholders’ rights and conflicts of interest (5 items) have the purpose of identifying the mechanisms that align board and managers interests with those of shareholders; iii) other CG practices (4 items) measure a company’s public commitment to good corporate practices; and iv) transparency on CG practices (15 items), captures whether firms disclose CG practices with regards to board composition, leadership, and remuneration of the board members, among others.

We determine whether companies comply with each practice by comparing the recommendations of the four codes and developing a regional indicator that reflects the institutional framework. With the use of corporate annual reports, we assess whether the company complies with each of the 30 items of the index and add one point when compliance is determined. We then scale the value of the 30 items to 100, giving weights according to the number of items in each sub-index (20, 17, 13 and 50 percent, respectively). (For more detail see Table 1 in the appendix).

Based on the analytical methodology of Berglöf and Pajuste (2005), the index allows each element to be equally important and does not distinguish subjective selection of the most influential corporate governance characteristics.

**3.2.2. Key explanatory variable (Family firm)**

Prior literature on the definition of family firms is extensive (Chrisman, Chua, & Litz, 2004). González et al. (2014) and Chrisman and Patel (2012) adopted a binary variable to classify family firms on the basis of ownership family involvement. They established a dummy variable that equals one when the founding family was the largest shareholder of the firm, and otherwise zero. La Porta et al. (1999) found that owners extend their control through pyramiding and management appointments, where ultimate controllers’ ownership accumulated beyond a critical level may have a significant power to affect corporate practices. Claessens, Djankov and Lang (2000) and La Porta et al. (1999) suggested that corporate control can also be acquired indirectly through the use of pyramids, control chains and dual class shares, and suggest that significant control of a firm can be obtained with at least 20% of the voting rights. In this paper, a family firm is measured with a dummy variable that equals one when the largest shareholder with at least 20% of the shareholding is an individual; otherwise zero (Chi et al., 2015). To ensure that a firm is a family firm, we performed a matching between the founders’ surname and major shareholders’ surnames. The information was manually extracted from the annual reports identifying the shareholders related to the owning family. Non-family firms include widely held companies at the 20% threshold and companies in which the largest shareholder is a financial institution, a corporation or the state (Chrisman & Patel, 2012).

**3.2.3. Moderating variables**

In our model, three variables are adopted to identify the moderating effect of board composition on the CGR of family firms: board size, independence and COB-CEO duality. Board size is represented with the number of directors on boards. We take the natural logarithm of this variable to normalize its distribution (Upadhyay & Sriram, 2011). Independence of the board is the number of independent directors-to-board size (Su & Lee, 2013). COB-CEO duality is a dichotomous variable that takes the value of one if both positions are held by the same person, and zero otherwise. We construct an interaction term between family firms and the mean centered board composition variables to account for the moderating impact of board characteristics of family firms on the CGR.

**3.2.4. Control variables**

We include a number of control variables in the model based on prior research: firm size (the natural logarithm of total assets), companies’ age (number of years since founding) and financial leverage (long term liabilities divided by total assets). We include ownership concentration (percentage of shares held by the largest shareholder at the end of the financial year) to account for the opportunity of the largest shareholder to divert firm resources at the expense of minority investors (e.g., Claessens et al., 2002). As stated by Bebchuk and Hamdany (2009), the impact of many key governance arrangements depends considerably on companies' ownership. The level of ownership of either family or non-family shareholders might act as an alignment effect in support of actions that benefit the firm. A controller with a large ownership stake might be more likely to follow good CG practices. Following Wintoki et al. (2012), we use Tobin’s Q (Total Assets - book value of equity + market value of equity, all divided by total assets) as a proxy for growth opportunities, which is likely to be a cause, rather than a consequence, of governance structures. Firms might adjust their corporate governance structures as a response to growth opportunities. For instance, Linck et al (2008) find that board size/insider representation are negatively/positively related to growth opportunities. Brick and Chidambaran (2010) find that poorly performing firms increase the board's monitoring activity measured by board meetings and the number of independent directors. Appendix 2 summarizes the definition, calculation and sources of all variables.

**3.3. Data analysis**

We apply panel data techniques of analysis. A pooled OLS method would be inappropriate, as it assumes that there are no differences between higher-level entities (i.e., countries and firms). Initially, it would be suitable to perform the Hausman test to determine which model is more adequate, i.e., fixed (FE) or random effects (RE). However, as our data present variables with small variation over time (i.e., family and the dependent variables), we consider that using the FE model would not be adequate. Therefore, we opt for the RE model for our estimation. The benefits of using the RE model in place of the FE model have been discussed in the literature (See Bell and Jones, 2015). The estimation from FE models includes only within effects, and so an effect of a variable that is stable over time (i.e., time in-variant) could lead to incorrect conclusions by inferring that there is no evidence for a within-effect of that variable. In particular, the RE model is superior to the FE when measured occurrences are nested within levels such as firms or countries, as the FE does not allow for the estimation of higher-level, time-invariant parameters or residuals (See Beck, 2007). The residuals in the RE model are calculated at each level, the higher-level residual being the so-called random effect. Bell and Jones (2015) reiterate that the Hausman test would not be an adequate technique to discriminate the use of FE versus RE when the variation on the observed variable is stable over time, but rather it would test the similarity of within and between effects, suggesting that the results of a RE model that properly specifies the within and between effects would at least be identical to the results from FE, regardless of the result of a Hausman test. Therefore, the application of the Hausman test to discriminate between FE or RE models is redundant, as this test is viewed in terms of fixed and random effects, and not in terms of what is actually going on in the data.

Country dummies are not included in the model, as the constructed measure for CGR is applicable for the entire Latin American region as opposed to one specific country. To control for a potential within-country correlation that could bias the analysis, we use a random effects specification that assumes that each sample has a common explanatory variable component that differs across countries (Claessens et al., 2002). The random effects model considers explicitly the correlated errors among the observations within a country and produces consistent standard errors. To corroborate such assumption, we run the Breusch and Pagan (1980) Lagrange multiplier test and reject the null hypothesis that the errors are independent within countries and thus supports our previous assumption. An exception might be for Chile in which compliance with the code is a legal requirement. Therefore, we consider this aspect in our sensitivity analysis and test the hypotheses by adding a dummy, which equals one when the firm is from Chile (See Table 5).

The regression analyses of the effect of family control on CGR are based on the following models:

[1]

[2]

CGRit measures the CG compliance. The CG index is increased by one point when a firm presents the corresponding information in each item and is scaled to 100.

Family equals one for family-owned firms, and zero otherwise. In board composition, we include board size, independence and COB-CEO duality and their respective interaction terms with the family dummy. The controls are size, leverage, Tobin’s Q, the natural logarithm of firms’ age and ownership concentration.

**4. RESULTS**

Table 1 presents the distribution of family and non-family firms per country and per industrial sector. We observe that of the 826 firm year observations, 380 (46.9%) are family firms. The industrial sectors of basic materials, consumer goods and consumer services present a larger proportion of family firms than non-family firms. The remainder of the industrial sectors, which are industrials, oil & gas, technology, telecommunications and utilities, presents more non-family than family firms. Panel B presents the distribution of family and non-family firms by country. We can observe that Chile and Mexico have a larger number of observations that are classified as family firms (52% and 68%, respectively). Non-family companies (corporation, financial institutions, voting trusts or the state) have a largest shareholder at the 20% threshold (89%, 83%, 89% and 60% for Argentina, Brazil, Chile and Mexico, respectively).

*Table 1 about here*

Table 2 presents the descriptive statistics and t-tests for the differences of mean values of the variables across the family and non-family firms. We can observe that family firms have more independent boards (0.39 vs. 0.33), are smaller in size (7.77 vs. 8.64), have less leverage (0.23 vs. 0.28), are younger (27.5 vs. 31.78), have higher market values as measured by Tobin’s Q (1.85 vs. 1.63), and have greater ownership concentration than the non-family firms (0.58 vs. 0.45). Additionally, in family firms, there is more CEO-COB duality than in non-family firms (0.34 vs. 0.17). We do not find a significant difference in the CGR of family and non-family firms, except for the subsection CGR2 of the index that refers to shareholder rights and conflict of interest (0.65 vs. 0.68), for which family firms present a lower rating than non-family firms. We find a significant difference in the CGR2 of family and non-family firms, which refers to shareholder rights and conflict of interest (0.65 vs. 0.68), for which family firms present a lower rating than non-family firms. In contrast, the non-significant difference of CGR, CGR1, CGR3 and CGR4 between family and non-family firms alleviates causality concerns with regard to the effect of the board composition/financial variables and the possibility that their impact on CGR is the result of such differential as opposed to a primary effect.

*Table 2 about here*

Table 3 presents the descriptive statistics per country. We observe that from all the countries in the analysis, Mexico presents the largest CGR (mean = 0.76). In addition, Mexico has the largest board size (mean = 13.3) and board independence (mean = 0.48). Chile presents the oldest companies by age (mean = 43.9) but the lowest ratios for TQ (mean = 1.52) and the smallest board size (mean = 7.73). The lowest CGR is in Argentina (mean = 0.52), which also presents the lowest board independence (mean = 0.27), and together with Mexico, the highest ratio of CEO-COB duality (mean = 0.45). All the countries present an average ownership concentration of >49%, being the largest in Chile (mean = 0.84).

*Table 3 about here*

In Table 4, a pairwise correlation matrix among different explanatory and dependent variables that have been used in the regression analyses is presented. The correlation matrix shows that there are no large correlation coefficients among the explanatory variables, i.e., in excess of -0.324 (significant at the 5% level).

*Table 4 about here*

In Table 5, we present the results of the regression for equation [1]. Column (1) reports the effect of family firms on the total CGR. We do not find that the CGR in family firms is significantly larger than in non-family firms. Columns (2) to (5) report the results of sub-indices of the CGR. We find that the rating on “transparency on corporate governance” is larger in family firms than in non-family firms. These results suggest that Latin American family firms strengthen the weakness of the institutional framework, through self-regulating strategies such as corporate transparency (Heugens, van Essen, & van Oosterhout, 2009; Peng et al., 2009). In contrast, the ratings on “board composition and functioning”, “shareholder rights and conflict of interests” and on “other corporate governance practices” are not significantly different between family and non-family firms.

The CGR improves with increases in firms’ age, size and leverage, whereas ownership concentration has a negative albeit not significant effect on the CGR (except for column 4, where such effect is significant). The impact of all the explanatory variables is consistent throughout the five models in Table 4, although the significance levels vary. The effect of the control variables remains consistent throughout the models specified in this paper. Note that although a significant relationship between the explanatory variables and the dependent variables is presented in most of the cases, the R-squares in the models from Table 5 are low, ranging from 0.0449 to 0.0901. This suggests that our model benefits from additional predictors that are relevant to explain the variability of the CGR, which we present in the following analyses. Variance inflation factors (VIF) were examined to investigate the possibility of multicollinearity of the variables in all models in Table 5. None of the VIF’s was above 1.23 (for the family variable), indicating that multicollinearity is unlikely to significantly influence our results.

*Table 5 about here*

In Table 6, we present the results based on equation [2] testing hypotheses 2 to 4, which are related to the moderating effect of board composition: board independence, board size and COB-CEO duality in columns (1), (2) and (3), respectively. Column (1) presents a positive but not significant interaction term of the family dummy with board independence (rejecting H2). This result indicates that the increase of independent directors in the board does not have an effect on the CGR in the presence of family firms. Similarly, we do not find a significant impact of a moderating effect of board size and CEO-COB duality in explaining the variability of the CGR in family firms (columns 2 and 3; rejecting H3 and H4). Note that the inclusion of the interaction term in columns (1) to (3) changes the interpretation of both the family dummy and the board characteristics (BI, BS and CEO-COB) in the sense that they are not being measured directly, but with respect to the interaction term. In other words, the estimator for the family variable measures its impact on CGR when BI, BS and CEO-COB are equal to zero. Therefore, the non-significant estimator of the family variable in columns (1) to (3) does not relate to hypothesis 1, which states that family-controlled firms have a higher corporate governance rating (CGR) than non-family firms in Latin American listed firms. In column (4), we test whether the effect of board independence, board size and COB-CEO is rather a direct effect as opposed to a moderating effect. Our results report that the CGR is larger in family firms. This finding might be the result of the wealth preservation agenda and profit maximization strategies. Furthermore, family-owning firms in pursuing socio-emotional wealth are more likely to comply with CG regulations to enhance their reputation with stakeholders (Miller, Breton-Miller, & Lester, 2013; Liu, Valenti, & Chen, 2016). As described in Bajo et al. (2009) and Barontini & Caprio (2006), family firms in Italian and other countries from continental Europe are more likely to comply with regulations because managers, being frequently from the controlling family, aim to establish long-term strategies that would be beneficial to shareholders. In contrast, in non-family firms, managers are professionals outside the controlling family whose objectives span only the period of employment. We find that CGR increases as boards are more independent as well as larger. In contrast, the CGR is lower in firms with COB-CEO duality. Although not reported, we test the model of column (4) by excluding the variable family from the regression and find that our results remain consistent in significance and impact. In column (5), we include a dummy variable that equals one when the firms belong to Chile. As explained above, the CG regulation in Chile differs from that on the other countries in our analysis. Chile uses hard laws and legal enforcement, whereas Argentina, Brazil and Mexico follow soft laws through the principle of “comply or explain”. The Chilean Securities and Exchange Commission has the responsibility of regulating and supervising CG practices in all the publicly held companies whose shares are traded on the stock exchange market. Specifically, the OPA law (law of tender offers and corporate governance) is the regulatory framework through which protection mechanisms for minority shareholders are established (Martínez, Stöhr, & Quiroga, 2007). In contrast, Mexico, Argentina and Brazil are not obliged to follow CG practices under a regulatory framework but Codes are established with recommended practices. For this reason, we control for this institutional difference with the inclusion of a dummy variable for only this country. We find that the CGR is lower albeit not significant in firms from Chile than from any of the other countries. We also note that the fitting of the model is improved in column (5) (R squared = 0.1837) in comparison to that from columns (1) to (3), which reported R-squares in the range of 0.0762 to 0.1485, suggesting a better fit with the inclusion of the variables for board composition. Note that the R squared values are presented excluding the fixed effect, which accounts from a large part of our model variation. Once the fixed effects are considered, the statistic of the adjusted R squared presents values higher than 0.800. Nevertheless, as our interest is to illustrate the improvement of the model without the fixed effects, we present unadjusted R squared values.

In summary, it is concluded that the characteristics of board structure have an impact in all firms irrespective of being family or non-family. That is, board independence, board size and CEO-COB duality are significant determinants of the CGR, although their effect is a direct as opposed to a moderating one as hypothesized. These results are supported by Hussainey and Al-Najjar (2012) and Liu, Valenti and Chen (2016), who found that high levels of board independence and board size have a direct and positive effect on CG ratings. We also conclude that the CGR is significantly larger in family firms than non-family firms. As in Table 5, variance inflation factors (VIF) were examined to investigate the possibility of multicollinearity of the variables in all models in Table 6. None of the VIF factors approached the critical value of 10 (Kennedy, 1992), 2 being the maximum value found, indicating that multicollinearity is unlikely to significantly influence our results.

*Table 6 about here*

**4.1. Robustness tests**

In Table 7, we follow a series of robustness tests with regards to the measure of the dependent variable, the method of analysis and the measure for family firms.

**4.1.1. Family involvement in firms with a high quality corporate governance index** Differentials between high and low disclosure of CG practices might be relevant in determining the influence of family firms. Arcot et al. (2010) divide companies by high and low compliers and find that their returns differ significantly according to the quality of explanations only for the group of non-compliers. They conclude that there are differences in the way that firms are governed according to whether companies are high or low compliers. Considering that disclosure of CG practices may depend on the level of compliance, which in turn varies according to how firms are governed, we test whether the effect of family control is still relevant for those companies that have high disclosure. For this purpose, we construct a new measure of the dependent variable by categorizing firms into two groups: i) high compliers of corporate governance practices and ii) other firms. We classify this distinction at two different levels: i) at the 75th-percentile level and ii) at the median level. Therefore, the dependent variable of CGR is of a binary nature which equals one if the firm has a CGR =>0.75 (column 1) and CGR=>0.67 (column 2). By performing a logit analysis, we support the conclusions of our previous findings. The CGR is more likely to be larger in family firms with more independent, and larger boards; in contrast, the CGR is more likely to be lower in companies where there is COB-CEO duality and if they belong to Chile. These results confirm the hypothesis that establishes that in countries with a weaker institutional framework and absence of hard laws, family firms may increase the compliance of CG voluntarily (La Porta et al., 1999).

**4.1.2. Family influence on the board of directors**

It is considered that decisions made by the board of directors can be influenced by family members when they hold the majority of seats in the boardroom. Under this view, the ability to enhance control by family members in the board is measured as opposed to the family control acquired by their shareholding. For this purpose, a dummy variable that measures family control is constructed and equals one when at least 50% of the board of directors are family members. In the Latin American region, where concentrated family ownership is common, the ability to influence board decisions through directorships might increase voluntary disclosure and more and better CG practices to the benefit of minority investors. The fact that ownership concentration is large can provide assurance to minority shareholders of not being expropriated (Gomes, 2000). Column (3) in Table 7 presents the results of this analysis. Consistent with our previous results, we find that family control (through holding the majority of directorships in the firm) is positive and significant in determining the CGR. The findings for board characteristics remain significant and consistent in sign as those in Table 6, with exception of board size, in which the significance level is reduced.

*Table 7 about here*

**5. DISCUSSION AND CONCLUSIONS**

This paper contributes to the debate of CG compliance in family firms and to the understanding of the composition of the board of directors as a mechanism that moderates such compliance in the Latin American region, which is characterized by the weakness of the institutional framework. This research compares CG compliance between family and non-family firms and examines the effect of board structure on CG ratings. Using a unique dataset comprising 826 firm-year observations during the period of 2004 to 2010, we found that family firms are more compliant in CG practices than non-family firms. In accordance with agency theory, family firms seem to pursue better CG practices to build confidence among minority shareholders, probably as a substitute for the weak institutional system. The importance of increasing compliance with CG in family firms also aims to maintain a healthy legal entity to pass to future generations, which is a common aim in Latin American firms where a “familial” culture is present.

The empirical results of this study support hypothesis 1, indicating that family firms are more likely to engage in CG than non-family firms in Latin America, possibly with the aim of increasing confidence from external institutions and investors. In accordance with agency theory, family firms have reputational concerns to attract external equity investment. Another important reason to promote higher CG compliance in family firms might be wealth preservation for the next generations. Family firms are emotionally connected to their family entity, which motivates the preservation of the family business over a long horizon, particularly in emerging markets, where legal systems are weak and hard laws ineffective.

Additionally, our empirical results showed a positive and direct effect of board size and board independence on CGR and a negative and direct effect of COB-CEO duality on CGR. Our results reject hypotheses 2, 3 and 4, which establish a moderating effect as opposed to a direct one. This finding implies that the effect of board characteristics on the CGR does not discriminate between family and non-family firms, which is consistent with Chapple and Truong (2015), who suggest that better-governed firms (family and non-family) depend on the strengths of CG mechanisms, particularly represented by larger and more independent boards. Family firms are more concerned with reputation than non-family firms as a result of institutional weaknesses, for which family firms improve CG compliance and transparency to enhance confidence of minority shareholders, independently of the influence of their board structure (Liu, Valenti, & Chen, 2016).

The positive and significant effect of board size might be the explained as in Mallin & Ow-Yong (2012), who state that larger boards promote greater corporate transparency because collective experience increases reporting and therefore reduces asymmetric information. Another relevant issue is the institutional and regulatory contexts that have a significant influence on the adoption of CG practices in family firms, since Latin American is characterized by a weak legal system, leading companies to adopt voluntary CG practices. For instance, our results showed that family influence is positive and significant on the sub-index “transparency on CG”. We confirm that in countries with hard laws to protect minority investors, such as Chile, the ratings are lower, because external regulation is stronger; thus, the incentives for compliance differ from the rest of the analyzed countries. Our findings have important practical implications for governance in family businesses. First, for those responsible to determine CG policies and legislation in the region, our results suggest that CG compliance is important for family firms, which could help to evaluate the current regulatory requirements in Latin America, and identify some opportunities to improve the enforcement for listed companies and promote the regional compliance with CG recommendations. Second, for a managerial perspective, family firms and non-family firms may optimize their board structure, appointing competent external directors that bring innovative perspectives to board processes and substitute institutional weaknesses through greater CG compliance and transparency. Third, family firms might benefit from CG compliance by preserving investors’ confidence and therefore increasing firms’ survival in line with the “familial” aim of passing the firm to heirs.

The limitations of this research provide some future research lines. First, all the index items are awarded the same importance; however, to the best of our knowledge there is no established methodology to assign specific weights to certain practices, so the application of the CGR as measured in this study reduces the problem of subjectivity. A further study could propose a weighting criterion according to the institutional framework considering the mandatory/voluntary GC compliance system. Second, this paper focuses on listed companies with the highest rankings in four Latin American stock markets, and omits companies in other indices and non-listed companies. For future research, this study can be extended to the total listed companies in these countries. Finally, future studies could integrate other CG mechanisms adopted by companies that could affect CG compliance, such as the composition of supporting committees, CEO and directors’ characteristics (e.g., age, experience, networks, etc.).

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**Appendix 1. Corporate Governance Rating in Latin American countries**

|  |
| --- |
| 1. **BOARD FUNCTIONING AND SUPPORT COMMITTEES** |
| 1. Does the firm promote selection, removal or re-election procedures? |
| 1. Is there a document that establishes the norms of conduct for the board members? |
| 1. Does the company have a nominating committee? 2. Does the company have a remuneration committee? 3. Does the company have a corporate governance committee? 4. Does the company have an auditing committee? |
| **II. SHAREHOLDERS RIGHTS AND CONFLICTS OF INTEREST** |
| 1. Does the company facilitate the voting process of the shareholders beyond that established by law? |
| 1. Are there mechanisms to reduce the concentration of control and promote the participation of minority shareholders (Agreements between major and minority shareholder)? |
| 1. Does the company list on other international markets? |
| 1. Is the company free of any penalty for breach of good governance rules in the stock market in the past year? |
| 1. Does the company declare the percentage of significant shareholdings? |
| **III. OTHER PRACTICES OF CORPORATE GOVERNANCE** |
| 1. Does the company use the international accounting principles? 2. Does the company use the services of a recognized auditing firm (Big 4)? |
| 1. Does the company apply sanctions against the management for breach of their CG practices? |
| 1. Does the company have developed and adopted its own code of good governance? |
| **IV. TRANSPARENCY ON CORPORATE GOVERNANCE** |
| 1. Does the company disclose the board composition (board size)? 2. Does the company disclose the board composition (independent directors)? 3. Does the company disclose the leadership structure (COB-CEO duality)? 4. Does the company disclose the rules of organization and operation of the board and its committees? 5. Are relationships and related transactions between directors and main shareholders disclosed? 6. Does the company disclose the shareholding of the directors? 7. Does the company disclose the profile and/or curriculum of the board members? 8. Does the company disclose whether any independent director occupies a steering position in other companies? 9. Does the firm disclose the remuneration of the CEO and board members? 10. Does the firm disclose the integration of support committees: Number of executive and independent members? 11. Does the company disclose the information and resolutions adopted at the last Annual General Meeting? 12. Does the company issue information related to conflicts of interest and related party transactions? 13. Does the company declare whether the directors hold other positions on boards in companies of the same group? 14. Is the corporate information provided in English? 15. Does the company disclose information regarding its financial situation and performance? |

Source: The authors based this on OECD (2004), Codes of Good Governance, Garay and González (2008), Leal and Carvalhal-da-Silva (2005), Gandía and Andrés (2005), and Lefort and Walker (2005).

**Appendix 2.** **Definition and measurement of the study variables**

|  |  |  |  |
| --- | --- | --- | --- |
| **Variable** | **Definition** | **Expected sign** | **Source** |
| ***Dependent variable*** | | | |
| **CGR** | CG compliance index (30 items) |  | Garay and González (2008); Leal and Carvalhal-da-Silva (2005); Chong and López-de-Silanes (2007); Pérez de Toledo and Pellicer (2007) |
| ***Independent variable*** | | | |
| **Family** | Dummy variable: it equals one if a firm is classified as family owned, otherwise zero. | **+** | Chi et al. (2015); Chrisman, Chua, & Litz (2014); Bajo et al. (2009) |
| ***Moderating variables*** | | | |
| **Board\_Independence (BI)** | Proportion of independent directors to total board members | **+** | Schulze, Lubatkin, & Dino (2003); Kor & Misangyi (2008); Su & Lee (2013) |
| **Board size (BS)** | Natural logarithm of the number of board members to the total number of board members | + | Laksmana (2008); Hussainey & Al-Najjar (2012); Mallin & Ow-Yong (2012) |
| **COB-CEO** | Dichotomous variable that takes the value 1 if both positions are held by the same person, and 0 otherwise | **-** | Chen & Liu (2010); Ferrero, Fernández, & Muñoz (2012); Chen, Hsu, & Chen (2014) |
| ***Control variables*** | | | |
| **TQ** | Tobin’s Q. Total Assets - book value of equity + market value of equity, all divided by total assets |  | Lin & Hu (2007) |
| **Size** | Size of the company: natural logarithm of total assets |  | Chi et al. (2015); Chapple & Truong (2015) |
| **Age** | Natural logarithm of the number of years since the company was founded |  | Chi et al. (2015); Chapple & Truong (2015) |
| **Leverage** | Level of indebtedness = long-term debt / total assets |  | Chi et al. (2015); Hussainey & Al-Najjar (2012) |
| **Own** | Ownership concentration. Percentage of shares held by the largest shareholder at the end of the financial year |  | Claessens et al. (2002); Liu, Valenti, & Chen (2016) |

**Table 1. Distribution of family and non-family firms per Industrial Sector and Country**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Panel A: Firm years (N = 826 observations)** | | | | | |
| Industrial sector | Family | Non-family | Total | % family | % Non-family |
| Basic Materials | 87 | 66 | 153 | 10.53 | 7.99 |
| Consumer goods | 91 | 71 | 162 | 11.02 | 8.60 |
| Consumer services | 80 | 33 | 113 | 9.69 | 4.00 |
| Industrials | 92 | 90 | 182 | 11.14 | 10.90 |
| Oil & Gas | 5 | 14 | 19 | 0.61 | 1.69 |
| Technology | 0 | 7 | 7 | - | 0.85 |
| Telecommunications | 16 | 52 | 68 | 1.94 | 6.30 |
| Utilities | 9 | 113 | 122 | 1.09 | 13.68 |
| Grand Total | 380 | 446 | 826 | 46.00 | 54.00 |
| **Panel B: Firm years (N = 826 observations)** | | | | | |
|  | Argentina | Brazil | Chile | Mexico | Total |
| Total | 65 | 349 | 208 | 206 | 826 |
| Family | 30(46%) | 101(29%) | 108(52%) | 141(68%) | 380(46%) |
| Non-family | 35(54%) | 246(71%) | 100(48%) | 65(32%) | 446(54%) |
| *Corporation* | *31(89%)* | *153(62%)* | *86(72%)* | *16(25%)* | *286(64%)* |
| *Miscellaneous* | *-* | *52(21%)* | *7(7%)* | *23(35%)* | *82(18%)* |
| *Widely held* | *4 (11%)* | *41(17%)* | *7(7%)* | *26(40%)* | *78(17%)* |

Note: Miscellaneous includes financial companies, voting trusts and the state as the largest shareholders.

**Table 2. Descriptive statistics and mean comparisons of the variables used in estimations**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | *Full sample (N=826)* | |  | *Family (N=380)* | *Non-Family (N= 446)* |  |
|  | Mean | Std. dev. |  | Mean | Mean | *t-*value |
| *Dependent variables* |  |  |  |  |  |  |
| CGR | 0.64 | 0.16 |  | 0.64 | 0.64 | -0.09 |
|  |  |  |  |  |  |  |
| *Sub-indices of CGR* |  |  |  |  |  |  |
| CGR1 | 0.49 | 0.24 |  | 0.49 | 0.49 | 0.03 |
| CGR2 | 0.67 | 0.19 |  | 0.65 | 0.68 | 2.16\*\* |
| CGR3 | 0.64 | 0.23 |  | 0.63 | 0.65 | 1.25 |
| CGR4 | 0.69 | 0.19 |  | 0.71 | 0.69 | -1.48 |
| *Corporate governance characteristics* | | | | | | |
| Board size | 9.74 | 3.55 |  | 9.61 | 9.85 | 0.96 |
| Board Independence | 0.35 | 0.21 |  | 0.39 | 0.33 | -4.50\*\*\* |
| CEO-COB duality | 0.25 | 0.43 |  | 0.34 | 0.17 | -5.87\*\*\* |
| *Control variables* |  |  |  |  |  |  |
| Size | 8.24 | 1.34 |  | 7.77 | 8.64 | 9.83\*\*\* |
| Leverage | 0.26 | 0.15 |  | 0.23 | 0.28 | 5.35\*\*\* |
| TQ | 1.73 | 0.04 |  | 1.85 | 1.63 | -2.77\*\*\* |
| Age | 29.81 | 26.04 |  | 27.50 | 31.78 | 2.36\*\*\* |
| Ownership | 0.51 | 0.21 |  | 0.58 | 0.45 | -8.44\*\*\* |

This table reports the descriptive statistics of the dependent and independent variables used in the study. The statistics are provided for the entire sample, and family and non-family firms separately. The mean difference t-test compares the mean values of the variables between family and non-family firms under the null hypothesis that the mean values of the variables across the two sub-samples are equal. \*\*\*, \*\*, \* indicate that *t*-value is significant at 1%, 5%, and 10%, respectively. The definitions of variables are provided in Appendix 2. CGR: Corporate governance rating; CGR1: sub-index for board functioning and support committees; CGR2: sub-index for shareholders rights and conflicts of interest; CGR3: sub-index for other corporate governance practices; CGR4: sub-index for transparency.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Table 3. Descriptive statistics per country of the variables used in the estimations** | | | | | | | | | | | | | | | | | | | | |
|  | **Mexico (N=206)** | | | | | **Argentina (N=65)** | | | | |  | **Chile (N=208)** | | | |  | **Brazil (N=347)** | | | |
|  | **Mean** | **SD** | **Min** | **Max** |  | | **Mean** | **SD.** | **Min** | **Max** |  | **Mean** | **SD** | **Min** | **Max** |  | **Mean** | **SD** | **Min** | **Max** |
| ***Dependent variables*** |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CGR total | 0.76 | 0.10 | 0.33 | 0.90 |  | | 0.52 | 0.19 | 0.13 | 0.83 |  | 0.58 | 0.11 | 0.27 | 0.83 |  | 0.63 | 0.17 | 0.13 | 0.90 |
| CGR1 | 0.64 | 0.17 | 0 | 1.00 |  | | 0.40 | 0.11 | 0.17 | 0.50 |  | 0.29 | 0.16 | 0 | 0.67 |  | 0.53 | 0.24 | 0.00 | 1.00 |
| CGR2 | 0.73 | 0.17 | 0.20 | 1.00 |  | | 0.66 | 0.22 | 0.00 | 1.00 |  | 0.65 | 0.17 | 0.20 | 1.00 |  | 0.64 | 0.20 | 0.00 | 1.00 |
| CGR3 | 0.64 | 0.21 | 0.25 | 1.00 |  | | 0.48 | 0.29 | 0.00 | 1.00 |  | 0.63 | 0.28 | 0.25 | 1.00 |  | 0.67 | 0.20 | 0.00 | 1.00 |
| CGR4 | 0.85 | 0.11 | 0.33 | 1.00 |  | | 0.54 | 0.23 | 0.13 | 0.93 |  | 0.65 | 0.11 | 0.33 | 0.93 |  | 0.66 | 0.20 | 0.13 | 0.93 |
| ***Corporate governance characteristics*** | | | | | | | | | | | | | | | | | | | | |
| Board size | 13.30 | 3.81 | 6.00 | 21.00 |  | | 9.97 | 2.97 | 6.00 | 17.00 |  | 7.73 | 1.17 | 5.00 | 11.00 |  | 8.79 | 2.85 | 3.00 | 17.00 |
| Board independence | 0.48 | 0.15 | 0.20 | 0.77 |  | | 0.27 | 0.18 | 0.00 | 0.55 |  | 0.35 | 0.22 | 0.00 | 0.77 |  | 0.30 | 0.19 | 0.00 | 0.77 |
| CEO-COB duality | 0.45 | 0.50 | 0.00 | 1.00 |  | | 0.45 | 0.50 | 0.00 | 1.00 |  | 0.05 | 0.21 | 0.00 | 1.00 |  | 0.22 | 0.41 | 0.00 | 1.00 |
| ***Other variables*** | | | | | | | | | | | | | | | | | | | | |
| Size | 8.19 | 0.98 | 5.17 | 10.81 |  | | 7.57 | 1.10 | 5.97 | 9.63 |  | 7.76 | 1.16 | 4.97 | 10.68 |  | 8.68 | 1.50 | 4.85 | 12.78 |
| Leverage | 0.18 | 0.13 | 0.00 | 0.60 |  | | 0.19 | 0.13 | 0.02 | 0.47 |  | 0.27 | 0.10 | 0.06 | 0.63 |  | 0.31 | 0.15 | 0.00 | 0.66 |
| TQ | 1.75 | 0.84 | 0.50 | 5.64 |  | | 1.97 | 1.75 | 0.50 | 7.32 |  | 1.52 | 0.59 | 0.59 | 4.90 |  | 1.81 | 1.35 | 0.50 | 7.32 |
| Age | 19.58 | 14.62 | < 1 | 63.00 |  | | 32.86 | 30.90 | 1.00 | 102.00 |  | 43.90 | 34.98 | 0.00 | 160.00 |  | 26.87 | 19.75 | 0.00 | 69.00 |
| Ownership | 0.52 | 0.22 | 0.07 | 0.86 |  | | 0.52 | 0.17 | 0.10 | 0.75 |  | 0.54 | 0.20 | 0.08 | 1.00 |  | 0.49 | 0.22 | 0.01 | 0.89 |

This table reports the descriptive statistics of the dependent and independent variables used in the study per country. The definitions of variables are provided in Appendix 2. CGR: Corporate governance rating; CGR1: sub-index for board functioning and support committees; CGR2: sub-index for shareholders rights and conflicts of interest; CGR3: sub-index for other corporate governance practices; CGR4: sub-index for transparency.

**Table 4. Correlation matrix**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | CGR | CGR adjusted | TQ | Size | Age | Leverage | Ownership | Family | COB/  CEO | Board independence |
| CGR adjusted | 0.9917\* |  |  |  |  |  |  |  |  |  |
| TQ | 0.0393 | 0.0202 |  |  |  |  |  |  |  |  |
| Size | 0.2959\* | 0.3036\* | -0.0334 |  |  |  |  |  |  |  |
| Age | 0.0902\* | 0.1025\* | -0.0904\* | 0.1978\* |  |  |  |  |  |  |
| Leverage | 0.0936\* | 0.0956\* | -0.1896\* | 0.2721\* | 0.1060\* |  |  |  |  |  |
| Ownership | -0.1201\* | -0.1212\* | 0.0636 | -0.067 | 0.0423 | -0.1216\* |  |  |  |  |
| Family | -0.0189 | -0.0290 | 0.0965\* | -0.3240\* | -0.0774\* | -0.1833\* | 0.2973\* |  |  |  |
| COB/CEO | 0.0820\* | 0.0861\* | 0.0369 | -0.0556 | -0.1955\* | -0.0819\* | -0.1452\* | 0.2005\* |  |  |
| Board independence | 0.2587\* | 0.2486\* | 0.0599 | -0.0509 | 0.0518 | -0.0795\* | -0.2351\* | 0.1548\* | 0.2148\* |  |
| Board size | 0.4022\* | 0.4448\* | 0.0572 | 0.1450\* | 0.033 | -0.0673 | -0.1302\* | -0.0192 | 0.2139\* | 0.1995\* |

\* Correlation is significant at the 0.05 level. Definitions of the variables are presented in Appendix 2. CG rating is the dependent variable that represents the industry adjusted corporate governance rating for compliance. CGR: Corporate governance rating; CGR adjusted is an alternative dependent variable that represents the corporate governance rating for compliance adjusted by excluding three items of this rating, namely, COB/CEO duality, board independence and board size.

**Table 5. Corporate Governance Compliance (CGR) in family firms**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | (1) | (2) | (3) | (4) | (5) |
| VARIABLES | CGR | CGR1 | CGR2 | CGR3 | CGR4 |
| Family | 0.031 | 0.031 | 0.035 | 0.033 | 0.040\*\* |
|  | (0.108) | (0.170) | (0.161) | (0.413) | (0.046) |
| TQ | 0.009 | 0.014\* | 0.005 | 0.015\*\* | 0.008 |
|  | (0.120) | (0.057) | (0.494) | (0.042) | (0.189) |
| Size | 0.076\*\*\* | 0.074\*\*\* | 0.066\*\*\* | 0.075\*\*\* | 0.075\*\*\* |
|  | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Age | 0.021\*\* | 0.002 | 0.020\* | 0.037\*\*\* | 0.021\*\* |
|  | (0.015) | (0.794) | (0.053) | (0.001) | (0.041) |
| Leverage | 0.116\*\* | 0.093 | 0.177\*\* | 0.148\* | 0.101\* |
|  | (0.024) | (0.182) | (0.012) | (0.073) | (0.078) |
| Ownership | -0.049 | -0.058 | -0.037 | -0.193\*\* | -0.003 |
|  | (0.370) | (0.399) | (0.499) | (0.014) | (0.966) |
| Constant | -0.718\*\*\* | -0.646\*\*\* | -0.652\*\*\* | -0.695\*\*\* | -0.726\*\*\* |
|  | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Wald chi test | 127.04\*\*\* | 52.55\*\*\* | 70.75\*\*\* | 136.08\*\*\* | 93.08\*\*\* |
| R-squared | 0.0842 | 0.0753 | 0.0505 | 0.0840 | 0.0444 |
| Observations | 818 | 818 | 818 | 818 | 818 |
| Number of firms | 125 | 125 | 125 | 125 | 125 |

Robust pval in parentheses (\*\*\* p<0.01, \*\* p<0.05, \* p<0.1). Definitions of the variables are provided in Appendix 2. The dependent variables in each column are: CGR: Corporate governance rating; CGR1: sub index for board composition and functioning; CGR2: sub index for shareholders rights and conflicts of interest; CGR3: sub index for other corporate governance practices; CGR4: sub index for transparency.

**Table 6. The effect of board characteristics on Corporate Governance Compliance**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Variables | (1)  CGR | (2)  CGR | (3)  CGR | (4)  CGR | (5)  CGR |
|  |  |  |  |  |  |
| TQ | 0.009 | 0.008 | 0.009 | 0.008\* | 0.008 |
|  | (0.105) | (0.117) | (0.107) | (0.096) | (0.106) |
| Size | 0.074\*\*\* | 0.070\*\*\* | 0.075\*\*\* | 0.068\*\*\* | 0.066\*\*\* |
|  | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Age | 0.020\*\* | 0.018\*\* | 0.021\*\* | 0.017\*\* | 0.019\*\* |
|  | (0.020) | (0.035) | (0.015) | (0.042) | (0.028) |
| Leverage | 0.109\*\* | 0.114\*\* | 0.113\*\* | 0.105\*\* | 0.107\*\* |
|  | (0.034) | (0.022) | (0.022) | (0.030) | (0.027) |
| Ownership | -0.025 | -0.046 | -0.049 | -0.022 | -0.020 |
|  | (0.666) | (0.369) | (0.365) | (0.682) | (0.710) |
| Family | 0.024 | 0.096 | 0.030 | 0.031\* | 0.033\*\* |
|  | (0.575) | (0.462) | (0.212) | (0.069) | (0.048) |
| Board independence | 0.138\*\*  (0.038) |  |  | 0.133\*\*\*  (0.009) | 0.136\*\*\*  (0.008) |
| Fam\* Board independence | 0.006  (0.949) |  |  |  |  |
| Board size |  | 0.099\*\* |  | 0.074\*\* | 0.068\* |
|  |  | (0.038) |  | (0.032) | (0.058) |
| Fam\* Board size |  | -0.027 |  |  |  |
|  |  | (0.616) |  |  |  |
| CEO/Chair duality |  |  | -0.032  (0.252) | -0.032\*  (0.066) | -0.035\*\*  (0.044) |
| Fam\* CEO/Chair duality |  |  | 0.006  (0.858) |  |  |
| Dummy Chile |  |  |  |  | -0.049 |
|  |  |  |  |  | (0.103) |
| Constant | -0.752\*\*\* | -0.880\*\*\* | -0.701\*\*\* | -0.849\*\*\* | -0.817\*\*\* |
|  | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
|  |  |  |  |  |  |
| Wald chi test | 145.99\*\*\* | 132.77\*\*\* | 136.63\*\*\* | 147.56\*\*\* | 195.91\*\*\* |
| R-squared | 0.1189 | 0.1485 | 0.0762 | 0.1679 | 0.1837 |
| Observations | 818 | 818 | 818 | 818 | 818 |
| Number of firms | 125 | 125 | 125 | 125 | 125 |

Robust pval in parentheses. All regressions have been estimated with the random effects model. Definitions of the variables are provided in Appendix 2. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. CGR: Corporate governance rating; CGR adjusted is an alternative dependent variable that represents the corporate governance rating for compliance adjusted by excluding three items of this rating, namely, COB/CEO duality, board independence and board size.

**Table 7. Corporate Governance compliance and family ownership. Sensitivity analysis**

|  |  |  |  |
| --- | --- | --- | --- |
|  | (1) | (2) | (3) |
| VARIABLES | logit: CGR75 | logit: CGR67 | RE: CGR |
| TQ | -0.005 | -0.013 | 0.008 |
|  | (0.948) | (0.851) | (0.116) |
| Size | 0.510\*\*\* | 0.539\*\*\* | 0.065\*\*\* |
|  | (0.000) | (0.000) | (0.000) |
| Age | 0.215\*\* | 0.114 | 0.020\*\* |
|  | (0.016) | (0.154) | (0.020) |
| Leverage | 0.048 | 0.668 | 0.105\*\* |
|  | (0.938) | (0.262) | (0.031) |
| Own | -0.441 | -0.283 | -0.007 |
|  | (0.384) | (0.566) | (0.899) |
| Family | 0.481\*\* | 0.414\*\* |  |
|  | (0.031) | (0.049) |  |
| Family on the board |  |  | 0.044\*\* |
|  |  |  | (0.029) |
| COB-CEO | -0.381\* | -0.506\*\* | -0.037\*\* |
|  | (0.079) | (0.027) | (0.045) |
| Board independence | 1.907\*\*\* | 2.804\*\*\* | 0.219\*\*\* |
|  | (0.000) | (0.000) | (0.000) |
| Board size | 1.328\*\*\* | 1.702\*\*\* | 0.061\* |
|  | (0.000) | (0.000) | (0.087) |
| Dummy Chile | -1.689\*\*\* | -1.612\*\*\* | -0.050\* |
|  | (0.000) | (0.000) | (0.096) |
| Constant | -25.679\*\*\* | -12.857\*\*\* | -0.843\*\*\* |
|  | (0.000) | (0.000) | (0.000) |
|  |  |  |  |
| Pseudo R-squared | 0.1999 | 0.2460 |  |
| Adjusted R-squared |  |  | 0.1766 |
| Observations | 818 | 818 | 818 |
| Number of companies | 125 | 125 | 125 |

Robust pval in parentheses. Industry dummies included in the logit regressions. Definitions of the variables are provided in Appendix 2. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. A logit analysis is performed in columns (1) and (2), where CGR75 is a dummy variable that equals one if the firm has at least a corporate governance rating of compliance of 0.75, where the maximum is 1. CGR67 is a dummy variable that equals one if the firm has at least a corporate governance rating of compliance of 0.67, where the maximum is 1. A random effect analysis (RE) is performed in column (3), where CGR is the corporate governance rating.