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Family firms, institutional development and earnings quality: does family status complement or substitute for weak institutions?

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**Family Firms, Institutional Development and Earnings Quality:  
Does Family Status Complement or Substitute for Weak Institutions?**

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**Abstract**

This study combines insights from the socioemotional wealth perspective and institutional and resource-based theories to examine the earning quality of family and nonfamily firms operating in countries characterized by different levels of institutional development. Results based on a cross-sectional sample of firms from 12 European countries show that family status and a country's level of institutional development are positively related to earnings quality. They also show that institutional development moderates the relationship between family status and earnings quality. Comparing insider-oriented countries that are characterized by lower regulatory and financial development with outsider-oriented countries that are characterized by higher regulatory and financial development, we found that family firms have a higher earnings quality in insider-oriented countries than in outsider-oriented ones. Thus, our study finds support for a substitution effect, whereby family status compensates for the limited capacity of less developed regulations and markets to induce virtuous financial reporting behaviors.

*Keywords:* Earnings quality, Family firms, Governance, Institutional development.

## **1. Introduction**

Researchers interested in the accounting practices of family firms have argued that certain characteristics of these firms such as their reputation and their tendency to establish ties with their stakeholders can have a positive impact on their earnings quality relative to nonfamily firms (e.g., Ali, Chen, and Radhakrishnan, 2007; Cascino, Pugliese, Mussolino and Sansone, 2010; Jiraporn and Dadalt, 2009; Martin, Campbell and Gomez-Mejia, 2016; Pazzaglia, Mengoli and Sapienza, 2013; Prencipe and Bar-Yosef, 2011; Yang, 2010; Wang, 2006). This body of research has suggested that family firms are less inclined than nonfamily firms to manage reported earnings and thus benefit less from the presence of governance mechanisms such as independent boards of directors and CEOs. Meanwhile, a separate body of research has instead focused on the role played by the external environment, arguing that certain features of the institutional environment such as its level of regulatory and market development are more conducive to the emergence and persistence of family firms and can exert a powerful influence on their behavior and outcomes (e.g., Franks, Mayer, Volpin and Wagner, 2012; La Porta, Lopez-de-Silanes, and Shleifer, 1998; 1999; Peng and Heath, 1996; Peng and Jiang, 2010), but has not examined how this impacts their accounting practices. Taken together, prior research has given little attention to examining how differences in institutional environment across countries can influence the earnings quality of family firms and nonfamily firms. This is puzzling in light of the conclusion of a few prior studies that the earnings quality of firms differs depending on the institutional development of the country in which they operate (e.g.; Burgstahler, Hail and Leuz, 2006; Chaney, Faccio and Parsley, 2011; Chen, Chen and Cheng, 2008; Gopalan and Jayaraman, 2012; Leuz, Nanda and Wysocki, 2003). It is therefore not surprising that scholars have suggested a need for a greater focus on the role of institutional development as a determinant of the earnings quality of family

and nonfamily firms (Gomez-Mejia, Cruz and Imperatore, 2014; Prencipe, Bar-Yosef and Dekker, 2014; Salvato and Moores, 2010).

In this paper, we take up this suggestion and examine differences in the earnings quality of family and nonfamily firms operating in countries characterized by different levels of institutional development. We hypothesize that family firms will generally exhibit a higher earnings quality, owing to family firms' unique resources and the strong attachment of their owners to the business. We then hypothesize that a country's level of institutional development moderates the relationship between family status of a firm and earnings quality and offer two contrasting predictions for this moderating effect. The *substitution effect* predicts that family status has a more beneficial effect on firms' financial reporting practices in countries with a lower level of institutional development, so the earnings quality differential between family and nonfamily firms is greater in these contexts. Instead, the *complementarity effect* posits that family status has a less beneficial effect in countries with a lower level of institutional development, so the earnings quality differential between family and nonfamily firms is lower in these contexts. We test these predictions using a large cross-sectional sample of family and non-family firms from 12 Western European countries and find support for the substitution effect.

This study makes several contributions to the literature. First, we address recent calls (Gómez-Mejía et al., 2014; Prencipe et al., 2014; Salvato and Moores, 2010) for future studies to examine how cross-country differences in institutional development shape the earnings quality of family firms relative to that of nonfamily firms. While we echo the conclusion of several prior single-country studies that the family status of a firm has a generally positive impact on earnings quality (e.g., Ali et al., 2007; Cascino et al., 2010; Martin et al., 2016; Pazzaglia et al., 2013; Wang, 2006), we also show that the magnitude of the benefits of family status is contingent to the

institutional development of the country in which these firms operate. Specifically, the earnings quality differential between family and nonfamily firms is greater in insider-oriented countries that are characterized by lower regulatory and financial development than in outsider-oriented countries that are characterized by higher regulatory and financial development. This evidence also contributes to the debate about whether the features of a country's institutional environment compound or mitigate the influence of family status on firm outcomes (e.g., García, Aguilera, and Ariño, 2013; Young, Peng, Ahlstrom, Bruton, and Jiang, 2008). In particular, the findings of our study support the view that families have a particularly positive influence on firm outcomes in countries where regulatory and market-based institutions are lacking. Therefore, the optimal configuration of corporate governance mechanisms may be contingent upon the features of the institutional environment (see also Young et al., 2008).

Second, we extend the body of work that has examined the determinants of international differences in earnings quality among firms (e.g.; Burgstahler et al., 2006; Gopalan and Jayaraman, 2012; Han, Kang, Salter, and Yoo, 2010; Leuz et al., 2003). Prior studies in this line of inquiry have examined the impact of cross-country differences in regulatory development on earnings quality and have advocated the benefits of more comprehensive and better enforced regulations. We add to this line of inquiry by more fully explicating the benefits of more developed capital markets in promoting a higher financial reporting quality. Additionally, our findings add nuance to the insights of these prior studies by showing that not all firms benefit in equal measure from the presence of institutional mechanisms that offer greater protection to shareholders and creditors by imposing more stringent disclosure requirements to firms and enabling greater monitoring of their activities. Our study shows that these mechanisms are mainly beneficial to nonfamily firms, while family firms are comparably likely to engage in virtuous

financial reporting practices in countries characterized by different levels of institutional development. We argue that, as nonfamily firms are less likely than family firms to establish kinship ties based on trust and reputational concerns with their stakeholders that incline them to engage in behaviours conducive to a higher earnings quality, institutional mechanisms that constrain them to do so may play a more crucial role in their case.

Finally, our study also contributes to the literature on the impact of firms' internal governance characteristics on earnings quality by beginning to separately examine the influence of family status, concentrated ownership, and institutional development on earnings quality. Research that explicitly distinguishes between the influence of family and concentrated ownership on earnings quality has generally done so in a single-country setting (e.g., Cascino et al., 2010; Wang, 2006), while cross-country studies on earnings quality have tended to view firms with concentrated ownership as a homogeneous group independent of whether their controlling owners are members of a family or not (also see Salvato and Moores, 2010). This body of work has produced evidence consistent with a negative effect of ownership concentration on earnings quality, particularly in countries with lower institutional development (e.g., Burgstahler et al., 2006; Chaney et al., 2011; Fan and Wong, 2002; Haw, Hu, Hwang, and Wu, 2004; Leuz et al., 2003; Peng and Jiang, 2010) and has implied that family status would be similarly detrimental. Our finding that family status has a positive effect on earnings quality independent of the level of institutional development of the country in which firms operate questions this assumption and highlights the contrast between the negative influence of concentrated ownership on earnings quality and the positive influence of family status. Thus, our study begins to draw attention to the benefits of operationalizing family firms in ways that allow researchers to disentangle the effects of family status on firm outcomes from those of other types of controlling owners.

## **2. Institutional Development, Family Status and Earnings Quality**

### **2.1. EARNINGS QUALITY OF FAMILY AND NON FAMILY FIRMS**

Prior studies have emphasized how the earnings quality of firms differs depending on whether they are owned by a family or not (see Salvato and Moores, 2010). Single-country studies have generally found evidence supportive of a positive relationship between the family status of a firm and its earnings quality (e.g., Ali et al., 2007; Cascino et al., 2010; Jiraporn and Dadalt, 2009; Martin et al., 2016; Pazzaglia et al., 2013; Stockmans, Lybaert, and Voordeckers, 2010; Wang, 2006). Research adopting a socioemotional wealth perspective has motivated this relationship by noting that engaging in practices such as managing earnings would attract negative publicity and damage the image and reputation of the family and the firm if these practices were discovered (see also Berrone, Cruz and Gómez-Mejía, 2012; Gedajlovic and Carney, 2010; Gómez-Mejía et al., 2014) and would threaten the firm's existing and future relationships with their stakeholders. Family firms are also likely to exhibit a higher earnings quality than nonfamily firms as they generally appoint family managers whose compensation is less sensitive to accounting-based performance indicators than that of nonfamily managers and who are less likely to manage reported earnings to avoid being disciplined in case of poor performance (e.g., Pazzaglia et al., 2013; Yang, 2010). From a resource-based perspective, the evidence of a positive relationship can be explained with family owners' ability to establish kinship ties (see Berrone et al., 2012; Miller, Lee, Chang and Le Breton-Miller, 2009 and to obtain social, physical and financial resources from like-minded suppliers, financiers, advisors and business partners (see Arregle, Hitt, Sirmon and Very, 2007, Dyer, 2006; Lester and Cannella, 2006), which make them less likely to conceal their performance to outside parties by reporting earnings of lower quality.



While a large body of evidence would point to a positive relationship between family status and earnings quality, an exception could occur in situations where family owners fear losing control of the firm and bequeathing the financial and socioemotional benefits they derive from it (see Gomez-Mejia et al., 2014; Stockmans et al., 2010). When these concerns predominate over reputational and resource-based considerations, family owners may take the risk of engaging in earnings management if they are presented with the opportunity to do so. However, our interpretation of the literature on the earnings quality of family firms would point to family owners being generally more likely to prioritize the beneficial effects stemming from their reputation and trust-based ties with their stakeholders over financial considerations (Berrone et al., 2012). Thus, we posit:

*Hypothesis 1: Family firms will have a higher earnings quality than nonfamily firms*

## 2.2. THE MODERATING ROLE OF COUNTRIES' LEVEL OF INSTITUTIONAL DEVELOPMENT

A country's institutions represent "the set of fundamental political, social and legal ground rules that establishes the basis for production, exchange and distribution" (Davis and North, 1971: 6; North, 1990). We expect that the level of institutional development of the country in which family and nonfamily firms operate will moderate the relationship above for two reasons. First, evidence that family firms are more likely to persist and prosper in weak institutional environments (Franks et al., 2012; Peng and Heath, 1996; Peng and Jiang, 2010; Young et al., 2008) points to a relationship between institutional development and firms' outcomes. And second, while they have not explicitly distinguished between family and nonfamily firms, some prior studies have shown that countries' level of regulatory and financial development can influence firms' earnings quality (e.g., Burgstahler et al., 2006; Degeorge, Ding, Jeanjean and Stolowy, 2013; Han et al., 2010; Leuz et al., 2003).

We develop the next two hypotheses with reference to a common typology of countries' institutional development that divides them in insider and outsider-oriented (Aguilera and Jackson, 2003). Insider-oriented countries are characterized by less developed investor and creditor protection regulations and enforcement and lower financial development than outsider-oriented countries. The *substitution effect* posits that the earning quality differential between family and nonfamily firms is greater in insider-oriented countries than in outsider-oriented countries. This effect rests on the argument that family firms are a response to the underdeveloped regulatory and financial systems of insider-oriented countries, which make arms-length relationships between firms and their stakeholders less effective than transactions based on reputation and trust (Carney and Gejdailovic, 2002; Franks et al., 2012; Gilson, 2007; Peng and Heath, 1996). Family firms' inclination to rely on kinship ties with external parties to obtain needed resources, such as information, social and financial capital and even political clout (Arregle et al., 2007; Berrone et al., 2012; Miller et al., 2009; Peng and Heath, 1996; Bigelli and Mengoli, 2011) allows them to compensate for the difficulties imposed by the less developed institutions that characterize insider-oriented countries. As family firms are well suited to operating in these contexts, they will be less likely to need to hide their performance by managing reported earnings. Family owners' heightened concerns with preserving the socioemotional wealth they derive from having a positive image and reputation in the eyes of outside constituencies relative to nonfamily firms, along with their longer-term orientation (Berrone et al., 2012; Dyer and Whetten, 2006; Miller, Le Breton-Miller, and Scholnick, 2008) can also foster expectations of reciprocity and mutual trust and prompt family firms to behave in a more considerate manner than nonfamily firms even in the absence of stringent regulatory mechanisms. Finally, as firms located in insider-oriented countries often face difficulties in sourcing the capital

needed to support their investment and growth from financial markets (e.g., La Porta et al., 1998; Leuz et al., 2003), they may be more inclined to manage earnings in the attempt to lower their cost of financing. However, family firms operating in these contexts are less likely than nonfamily firms to seek financing from capital markets and are instead more likely to turn to non-arm's length providers of capital who are closely associated to the firm, such as family members or banks (Chen et al., 2008; Young et al., 2008). These providers of capital rely to a lesser extent on financial statements to make financing decisions and rely instead to a greater extent on sources of information such as personal conversations and meetings, which further lowers family firms' incentives to manage earnings. Thus, we posit:

*Hypothesis 2a: The earning quality differential between family firms and nonfamily firms will be greater in insider-oriented countries than in outsider-oriented countries.*

In contrast to the substitution effect which posits that the earnings quality differential between family firms and nonfamily firms is greater in insider-oriented countries than in outsider-oriented countries, the *complementarity effect* posits instead that this differential will be smaller in inside-oriented. One could argue that family owners' concerns with preserving their reputation and the benefits it provides in terms of granting access to resources, put forward by prior socioemotional wealth and resource-based studies, will be greater in outsider-oriented countries as their stricter disclosure obligations and transparency requirements and closer surveillance by regulatory agencies make behaviors that violate institutional rules easier to detect and their greater use of fines and sanctions makes these transgressions more stigmatizing for firms (Djankov, La Porta, Lopez-de-Silanes, and Shleifer, 2008a, 2008b; Franks et al., 2012; Gopalan and Jayaraman, 2012; Young et al., 2008). These countries are also characterized by a greater incidence of financially sophisticated agencies, analysts and auditors that are particularly skilled at detecting instances when firms report earnings of low quality (Degeorge et al., 2013).

While the greater level of regulatory and financial development of outsider-oriented countries is expected to be beneficial to the earnings quality of family and nonfamily firms alike (Burgstahler et al., 2006; Gopalan and Jayaraman, 2012; Han et al., 2010; Leuz et al., 2003), it is likely to be particularly beneficial for family firms as, in addition to concerns with maintaining a strong family reputation, their owners will also be concerned with maintaining a strong business reputation, which is shaped by outsider parties' assessment of "how well [the family firm] meets the business community's and legal system's codes and standards" (Gupta and Levenburg, 2010: 159). Thus, family firms can be expected to be more likely to adhere to external pressures and constraints as doing so allows them to preserve their "social worthiness" and avoid being stigmatized in the eyes of outside parties, something that they tend to value more than nonfamily firms do (see Berrone et al., 2012). Additionally, the greater financial development of outsider-oriented countries can exacerbate outside parties' tendency to rely on "earnings-based heuristics" to evaluate firm performance (e.g., Beatty, Ke, and Petroni, 2002: 548; Teoh, Welch, and Wong, 1998) and to reward firms that meet or beat financial analysts' earnings forecasts and penalize those that do not. While these features can pose incentives for firms to manage earnings to meet performance targets, we would expect family firms to be less likely to yield to these pressures to reporting earnings of lower quality than nonfamily firms. Thus, we posit:

*Hypothesis 2b: The earning quality differential between family firms and nonfamily firms will be smaller in insider-oriented countries than in outsider-oriented countries.*

### **3. Methods**

#### **3.1. SAMPLE**

We test our hypotheses with a data set derived from the Amadeus database supplied by Bureau van Dijk. Our sample selection criteria are as follows: we selected firms operating across 12 Western European countries (Austria, Belgium, France, Germany, Greece, Ireland, Italy,

Netherlands, Portugal, Spain, Sweden and United Kingdom). We then excluded firms that are in financial industries and those whose consolidated financial statements presented missing data among those needed to compute all the variables used in our analysis for the year 2010. Our empirical analysis was performed on a sample consisting of 22,335 observations, of which 7,611 for family firms and 14,724 for nonfamily firms.

This research context suits our investigation of the impact of institutional differences on the earnings quality of family and nonfamily firms for a couple of reasons. First, the efforts undertaken to harmonize accounting standards across Europe in the last decades have minimized possible confounding effects on earnings quality. Since 2005 all listed firms in the European Union most follow IFRS to prepare their consolidated financial statements. Unlisted firms can either voluntarily adopt IFRS or follow local GAAP, which have been argued to present remarkable degrees of convergence with IFRS (Deloitte, 2012). And second, this context is characterized by widespread family ownership and considerable heterogeneity of investor and creditor protection and financial development (Faccio and Lang, 2002; Franks et al., 2012).

### 3.2. VARIABLES

*Earnings quality.* We calculate the level of discretionary accruals using Ashbaugh, LaFond, and Mayhew's (2003) model and use their volatility as a measure of the earnings quality of the firms in our sample in the year 2010 (calculations for this measure are explained below). Ceteris paribus, a higher volatility of discretionary accruals is associated with a lower earnings quality. This approach has been used in a number of studies, including Chaney et al. (2011) and Liu and Wysocki (2017). A central tenet of this approach is that firms exercise discretion in reporting earnings through their discretionary accruals choices, namely those regarding reporting components unrelated to firm performance. Accordingly, discretionary accruals are calculated as

the difference between total current accruals (TCA) and expected performance-adjusted total current accruals (EPTCA). Both measures use current accruals, as firms have most discretion over these. We first estimated TCA as follows:

$$TCA_{ijt} = \Delta \frac{CurrentAssets_{ijt}}{Assets_{ijt-1}} + \Delta \frac{CurrentLiabilities_{ijt}}{Assets_{ijt-1}} - \Delta \frac{Cash_{ijt}}{Assets_{ijt-1}} + \Delta \frac{ShortTermAndCurrentLongTermDebt_{ijt}}{Assets_{ijt-1}} \quad (1)$$

In this equation, *Current Assets* are the sum of cash and equivalents, receivables, inventories, and other current assets and *Current Liabilities* are the obligations that a firm expects to meet within a year. *Cash* is the sum of cash and short-term investments, *Short-Term and Current Long-Term Debt* is the portion of financial debt payable within a year and *Assets* are total assets. For each ratio, we calculate the difference ( $\Delta$ ) between the values for a year and those of the previous year in the period between 2005 and 2010. Then, we use the values for TCA estimated from equation (1) within the following equation to obtain the coefficients  $\beta_1$ - $\beta_5$ :

$$TCA_{ijt} = \beta_1 \frac{1}{Assets_{ijt-1}} + \beta_2 \frac{\Delta Net Sales_{ijt}}{Assets_{ijt-1}} + \beta_3 ROA_{ijt-1} + \beta_4 Inflation_{t-1} + \beta_5 GDP Growth_{t-1} + \epsilon_{ijt} \quad (2)$$

*Net Sales* are gross sales and other operating revenues less discounts, returns and allowances, while *ROA* is the return on assets and is included to control for the effect of firm performance on total current accruals (e.g., Ashbaugh et al., 2003). We also include *Inflation* and *GDP Growth* as controls for the business cycle in each country (Chaney et al., 2011), obtained from the International Monetary Fund's World Economic Outlook Database. Following Chaney et al. (2011), the model is estimated pooling data across countries and including industry dummies defined based on Fama and French (1997) classification. The coefficients estimated from equation (2) are then used to compute EPTCA:

$$EPTCA_{ijt} = \hat{\beta}_1 \frac{1}{Assets_{ijt-1}} + \hat{\beta}_2 \frac{(\Delta netsales_{ijt} - \Delta AR_{ijt})}{Assets_{ijt-1}} + \hat{\beta}_3 ROA_{ijt-1} + \hat{\beta}_4 Inflation_{t-1} + \hat{\beta}_5 GDPgrowth_{t-1}$$

The only variable in this equation which had not been previously defined,  $\Delta AR$ , denotes the change in accounts receivable. Finally, we compute discretionary current accruals (REDCA) as the difference between TCA and EPTCA and calculate their standard deviation ( $\sigma REDCA$ ), our measure of earnings quality. A higher value of  $\sigma REDCA$  indicates lower earnings quality.

-- Insert Table 1 and 2 about here --

*Family and institutional variables.* We identify family firms using ownership information recorded as of the end of 2010 from the Amadeus database, which reports the stake held by the largest ultimate shareholder. Consistent with prior cross-country studies of family firms (e.g., Aktas, Centineo and Croci, 2016; Franks et al., 2012; Pindado, Requejo and La Torre, 2014), we classify a firm as being a family firm if the largest ultimate shareholder is a family who owns more than 20 percent of the shares. We use the ownership type information reported by Amadeus to identify firms in which the largest ultimate shareholder is a family: firms whose largest shareholder is a family are classified as family firms. This definition identifies entries such as: “Mr Gregory Edward Bailey and Mrs Margaret Ethel Bailey”; “Mme Bringaud et son fils”; and “Families Courault and Andrivon”. A random sample of these firms was manually checked to verify that they were indeed family firms. Table 1 shows the distribution of family and nonfamily firms by country (Panel A) and by industry (Panel B), the latter identified by identified based on Fama and French’s (1997) classification. The results of our comparisons of the frequency of family and nonfamily firms are largely consistent with those of prior cross-sectional studies (e.g., Aktas et al., 2016; Franks et al., 2012; Pindado et al., 2014).

Our main institutional variable is the aggregate index developed by Franks et al. (2012) to capture the degree of outsider orientation of a country. They calculate this index as the equal-

weighted sum of 3 standardized measures: a measure of the quality of the investor protection, a measure of financial development and a measure of the effectiveness of the market for corporate control in a country. We also separately examine the effects of the protection of investors and creditors and financial development on the relationship between family status and earnings quality. The quality of investor protection in a country is measured using the values of the ex-ante anti self-dealing and ex-post anti self-dealing variables obtained by Djankov et al. (2008a) while that of creditor protection is measured with Djankov, Hart, McLiesh, and Shleifer's (2008b) creditor rights index. These measures have been used by several prior studies of earnings quality to capture differences in the development of regulatory and financial systems across countries (e.g., Chaney et al., 2011; Gopalan and Jayaraman, 2008; Kanagaretnam, Lim and Lobo, 2011). The development of a country's equity markets is measured with the ratio of stock market capitalization to GDP obtained from Djankov et al., (2008a) and its level of credit market development with ratio of credit to the private sector to GDP obtained from Djankov et al. (2008b). Table 2 presents the values of these variables for the countries included in our study.

*Control variables.* We control for other factors that might affect a firm's earnings quality. We control for the cash-flow rights of the ultimate shareholder (Ownership) as firms with more concentrated ownership structure have been shown to have lower earnings quality (e.g., Chaney et al., 2011; Gopalan and Jayaraman, 2012). We include a binary variable (Listed) that captures a firm's listing status as prior studies note that private firms have lower earnings quality than publicly listed firms (Burgstahler et al., 2006). Total debt divided by total equity (Leverage) and the cash and cash equivalents divided by total assets (Cash) are included, as levered and less liquid firms have lower earnings quality (Sun, Yung, and Rahman, 2012). We include net income divided by total equity (Profitability) as poorly performing firms have lower earnings quality



(Burgstahler et al., 2006; Haw et al., 2004). We also include the natural logarithms of total assets (Size) and the number of years from incorporation (Age), as larger and younger firms have higher earnings quality than smaller and older ones (Chaney et al., 2011; Han, et al., 2010). Finally, we control for industry membership using Fama and French's (1997) classification. Definitions for all the variables used in our analysis are provided in the Appendix.

-- Insert Table 3 and 4 about here --

## **4. Results**

### 4.1. DESCRIPTIVE STATISTICS

Table 3 shows that our sample firms exhibit significant variation in earnings quality, cash holdings, leverage, size, age and ownership concentration. The table also shows that the majority of firms in our sample are unlisted, a finding that holds true for both family and nonfamily firms. Table 4 presents Pearson correlation coefficients between our earnings quality variable and our family, institutional development, and control variables. Family firms are more prevalent in countries characterized by lower outsider orientation (see also Franks et al., 2012), weaker investor and creditor protection regulations and lower equity market development. Our earnings quality measure ( $\sigma$ REDCA) is negatively related to family status and to most of the institutional variables, with the exception of public enforcement, which is not significant. These results suggest that family firms on average have higher earnings quality than nonfamily firms. They also suggest that a country's outside orientation, development of investor and creditor protection regulations and financial development are associated with higher earnings quality. Contrary to family status, ownership concentration is associated with lower earnings quality.

-- Insert Table 5 and Figure 1 about here --

## 4.2. MULTIVARIATE ANALYSIS

In this section, we report our results on the effect of family status, institutional variables, and firm characteristics on earnings quality. As our dependent variable is truncated at zero, we use cross-sectional Tobit regressions to examine these relationships. Regressions are estimated using White standard errors clustered by country, thereby assuming the presence of commonalities among firms located within a country but not among firms in different countries. We include industry dummy variables based on Fama and French classification (*Industry Dummy*). In each regression model, *Institutional Variable* represents a different indicator of institutional development. Specifically, we estimate the following model:

$$\begin{aligned} \text{Earnings Quality}_i = & \beta_0 + \beta_1 \text{Family}_i + \beta_2 \text{Institutional Variable}_i + \beta_3 \text{Family}_i \times \text{Institutional Variable}_i \\ & + \beta_4 \text{Listed}_i + \beta_5 \text{Ownership}_i + \beta_6 \text{Cash}_i + \beta_7 \text{Leverage}_i + \beta_8 \text{Profitability}_i + \\ & + \beta_9 \text{Size}_i + \beta_{10} \text{Age}_i + \sum \beta_j \text{Industry Dummy}_j + \varepsilon_i \end{aligned}$$

Table 5 presents the results of our cross-sectional multivariate analyses. The dependent variable in all models is  $\sigma\text{REDCA}$ , the standard deviation of our discretionary current accruals measure, calculated over the five –year period 2005-2010. Model 1 establishes the baseline effect of our control variables. Model 2 provides a test of Hypothesis 1 on the effect of family status on earnings quality, which is supported. Model 3 provides the main test of Hypotheses 2a-2b on the moderating effect of country’s degree of outsider orientation on the relationship between family status and earnings quality. Consistent with the predictions of Hypothesis 2a, the coefficient on the outsider orientation measure is negative and significant and the interaction between this measure and the family firm indicator is positive and significant, indicating that the earnings quality differential between family and nonfamily firms is smaller in outsider countries.

Models 4 through 7 test Hypotheses 2a-2b by specifically examining the moderating effects of a country's level of investor and creditor protection regulations on the relationship between family status and earnings quality. While the coefficients on the measures of ex ante investor and creditor protection are negative and significant, the interactions between these measures and the family firm indicator are positive and significant. This evidence is consistent with Hypothesis 2a, which posits that the earnings quality differential between family and nonfamily firms is greater when investor and creditor protection are lower. Models 8-9 examines the moderating effect of a country's level of financial development on the relationship between family status and earnings quality. The coefficient on the equity market development measure is negative and significant and the interaction between this measure and the family firm indicator is positive and significant. This evidence offers broad support to Hypothesis 2a.

To facilitate the interpretation of the significant interaction terms, we plotted the relationship between earnings quality and each of our institutional development measures in Figure 1. For simplicity, we only plotted a relationship in the case the relevant interaction coefficient in Table 5 were significant. Thus, Figure 1 only presents graphs for the aggregate index (Model 3), ex-ante anti-self-dealing index (Model 4), creditor rights index (Model 7), equity market development index (Model 8) and credit market development index (Model 9). The figure shows that the earnings quality of family firms is lower than that of nonfamily firms across institutional environments, consistent with Hypothesis 1. Additionally, consistent with Hypothesis 2a, the interaction pattern shows that the earnings quality differential between family and nonfamily firms is greater in countries characterized by lower levels of institutional development.

- Insert Table 6 about here -

#### 4.3. ROBUSTNESS TESTS

We conducted several additional checks to establish the robustness of our findings. First, we assessed the sensitivity of our results to the different ways of measuring institutional development. Instead of Franks et al.'s (2012) aggregate index, we used La Porta et al.'s (1998) classification of countries based on their legal origin to capture their level of institutional development (Table 6, Models 1-4). French origin countries are compatible with the definition of insider-oriented countries, English origin countries are compatible with the definition of outsider-oriented countries, whereas German and Scandinavian countries fall somewhere in between. Results obtained using La Porta et al.'s (1998) measure suggest that location in an English or Scandinavian origin country has a particularly positive impact on the earnings quality of nonfamily firms while location in a French origin country has a particularly positive impact on earnings quality of family firms. This evidence is consistent with our main results.

Second, we checked that the influence of a country's level of regulatory development on the relation between family status and earnings quality is independent of that of a country's level of financial development. While some studies have proposed that countries' levels of regulatory and financial development have a distinct influence on earnings quality (Degeorge et al., 2013; Burgstahler et al., 2006), others have argued that they could be correlated (e.g., Beck, Demirgüç-Kunt, and Levine, 2003). In order to test whether these effects are distinct, we restricted our sample only to firms located in Ireland, a country with high regulatory development and low financial development, or Netherlands, a country with low regulatory development and high financial development (Table 6, Models 5 and 6). The results are consistent with our main results.

- Insert Table 7 about here -

Third, we checked whether the relationships documented in our study were impacted by differences between listed and unlisted firms by repeating our main analysis separately for these two groups of firms (Table 7, Models 1 and 2). For parsimony, Table 7 only reports the coefficients of the key variables of interest, namely the aggregate index measuring a country's outsider orientation, a firm's family status and their interaction. These estimates confirm that the patterns we have observed in our main analysis are not driven by the listing status of firms.

Fourth, we assess the sensitivity of our results to alternative measuring of the family status of a firm by operationalizing this variable as a binary variable equal to 1 when one or more members of the Board of Directors have the same surname as the CEO, since it has been consistently shown that family firms tend to appoint family members to senior management positions (e.g., Miller and Le Breton-Miller, 2006). The results of this analysis are consistent with our main results and with those obtained using separate samples of listed and unlisted firms. Fifth, although researchers have noted that the relative stability of corporate shareholdings in Continental Europe minimizes endogeneity concerns associated with family firms (e.g., Barontini and Caprio, 2006), we nevertheless re-estimated our main analysis using instrumental variables two-stage least squares (2SLS) (Model 6) as well as limited information maximum likelihood (LIML) regression analysis (Model 7) (Stock, Wright and Yogo, 2002) and the percentage of family firms inside one's industry as an instrument for the family status of a firm. Our choice of this measure was informed by prior arguments that family ownership of firms is influenced by industry-level factors such as, for instance, the level of investment opportunities in the industry (e.g., Franks et al., 2012). The results of this analysis suggest that even after controlling for endogeneity family firms continue to have a higher earnings quality in insider-oriented countries, thus supporting the substitution effect.

Finally, as some prior studies have advocated the use of a 50% ownership cut off in case of unlisted firms where often one family holds the majority of the shares (e.g., Niskanen,

Karjalainen and Niskanen, 2010; Stockmans et al., 2010), we repeated our main analysis by using two distinct ownership cut off stakes for listed and unlisted firms. Listed firms were classified as family firms if their largest ultimate shareholder is a family with an ownership stake greater than 20 percent while unlisted firms were classified as family firms if their largest ultimate shareholder is a family with an ownership stake greater than 50 percent. The results of this analysis, which are untabulated, continue to support the substitution effect.

## **5. Discussion and Conclusion**

Although there is a growing awareness that the features of a country's institutional environment influence the emergence, persistence and behaviors of family firms (Peng and Jiang, 2010), we know little about how they influence the earnings quality of family firms relative to nonfamily firms (Gómez-Mejía et al., 2014; Salvato and Moores, 2010). This study has examined the earnings quality of family and nonfamily firms operating in 12 Western European countries characterized by different levels of institutional development. Drawing on insights from the socioemotional wealth perspective and the resource-based theory as well as from prior single-country studies of the earnings quality of family firms (e.g., Ali et al., 2007; Cascino et al.; Gómez-Mejía et al., 2014; Martin et al., 2016; Pazzaglia et al., 2013; Stockmans et al., 2010; Wang, 2006), we posit and find that family firms have a higher earnings quality than nonfamily firms. We also draw on insights from institutional theory and prior cross-countries studies of the earnings quality of firms (Burgstahler et al., 2006; Chaney et al., 2011; Degeorge et al., 2013; Gopalan and Jayaraman, 2012; Peng and Jiang, 2010; Young et al., 2008) to develop and test two competing predictions for the moderating effect of a country's level of institutional development on the relationship between family status and earnings quality. The substitution effect posits that the earnings quality differential between family and nonfamily firms is greater in insider-oriented

countries, due to the positive effects of family firms' reputational concerns and distinctive resources which make them particularly suitable to operate in these contexts. The complementarity effect posits instead that the earnings quality differential between family and nonfamily firms is smaller in insider-oriented countries as the greater monitoring of firm behaviors and use of sanctions in outsider-oriented countries amplifies family firms' reputational concerns making them even less likely to risk engaging in earnings management. The findings of our study, which are robust to alternative specifications of our family firms and institutional development measures, support the argument that family status and institutional development have a substitute rather than a complementary effect on the quality of financial reporting.

The findings of our study on the macro-level institutional determinants of the earnings quality of family and nonfamily firms have broadened scholarly understanding of the effect of family ownership on the quality of firms' financial reporting decisions. To date this understanding has been mainly informed by studies that have adopted a micro-level perspective to examine how family firms' characteristics such as their long-term orientation, heightened reputational concerns and ability to obtain and orchestrate social, physical and financial resources impact their earnings quality vis-à-vis nonfamily firms operating in the same context (e.g., Cascino et al., 2010; Gómez-Mejía et al., 2014; Martin et al., 2016; Prencipe and Bar-Yosef, 2011; Stockmans et al., 2010; Wang, 2006; Yang, 2010). Our study has added nuance to prior explanations of the earnings quality differential between family and nonfamily firms by showing that the impact of the distinctive features of family on the differential between their earnings quality and that of nonfamily firms varies according to the institutional context in which these firms operate. In doing so, we have begun to answer growing calls for a greater focus on the impact of institutional

factors on the earnings quality of family and nonfamily firms (e.g., Gomez-Mejia, et al., 2014; Prencipe et., 2014; Salvato and Moores, 2010).

Our study also contributes to the body of work that has examined the effect of cross-country differences in institutional development on the earnings quality of firms (e.g., Burgstahler et al., 2006; Gopalan and Jayaraman, 2012; Han et al., 2010; Leuz et al., 2003). Whereas these prior studies have argued that more developed institutions should have a beneficial impact on the earnings quality of firms across the board, the findings of our study suggest instead that family status has a beneficial impact on financial reporting decisions that can compensate for the weaknesses of regulatory and financial systems. Thus, our results suggest that it is not always the case that external corporate governance mechanisms such as laws and regulations compensate for the failure of internal governance mechanisms as it has been suggested by prior studies (e.g., La Porta, et al., 1998; 1999; Young et al., 2008). In particular, our study shows that the opposite may occur in the case of family firms and posits that family owners' ability to mobilize valuable resources and heightened reputational concerns can promote behaviors that are associated with a higher earnings quality even though regulatory and financial systems are lacking.

On a related note, while our study shows that family firms have a higher earnings quality independent of the level of institutional development of the country in which they operate, our findings also suggest that nonfamily firms have a lower earnings quality in insider-oriented countries than in outsider-oriented countries. This evidence, which is in contrast to the predictions of prior cross-country studies on the determinants of earnings quality (e.g., Chaney et al., 2011; Fan and Wong, 2002; Gopalan and Jayaraman, 2012), suggests that greater institutional development is more beneficial to the earnings quality of nonfamily firms than to the earnings quality of family firms. In particular, our study suggests that regulations seeking to prevent less



than virtuous behaviors by attributing investors and creditors greater monitoring over firm decisions and establishing more stringent mandatory disclosure requirements for firms may be more effective in promoting virtuous behaviors than regulations seeking to punish such behaviors.

This study also has a few limitations that provide opportunities for future research. First, while our cross-country research design enabled us to examine the impact of the level of institutional development of a country on the earnings quality differential between family and nonfamily firms, it did not allow us to also examine the impact of several micro-level factors that have been found to be associated with earnings quality by prior single-country studies. These include, for instance, characteristics of family firms such as their generational stage, corporate governance characteristics such as the size and composition of their board of directors and the presence of a Big 4 auditor. For example, information on the generational stage of the family firms in our sample would have allowed us to examine whether institutional development has a different impact on the earnings quality of family firms in different generational stages. Moreover, the availability of more detailed ownership structure information would have allowed investigating whether a country's level of institutional development has a different impact on earnings quality in the presence of different types of block-holders and/or board of directors' characteristics. These are left as opportunities for future research.

And finally, while we have examined a few dimensions of a country's level of institutional development, namely its level of outsider orientation and the level of development of its regulatory and financial systems, other aspects could also influence the relationships investigated in this study. For example, a country's level of economic development and extent to government corruption has been argued by prior studies to impact family firms' emergence, persistence and behaviors (e.g., Chaney et al., 2011; La Porta et al., 1998; Peng and Heath, 1996) and could also

have an impact on the earnings quality differential between family and nonfamily firms.

Unfortunately, because of limitations in the coverage of the database used for our study, we were not able to capture meaningful differences in the level of economic development and government corruption among our sample countries and examine their impact on earnings quality. These are left as opportunities for future research.

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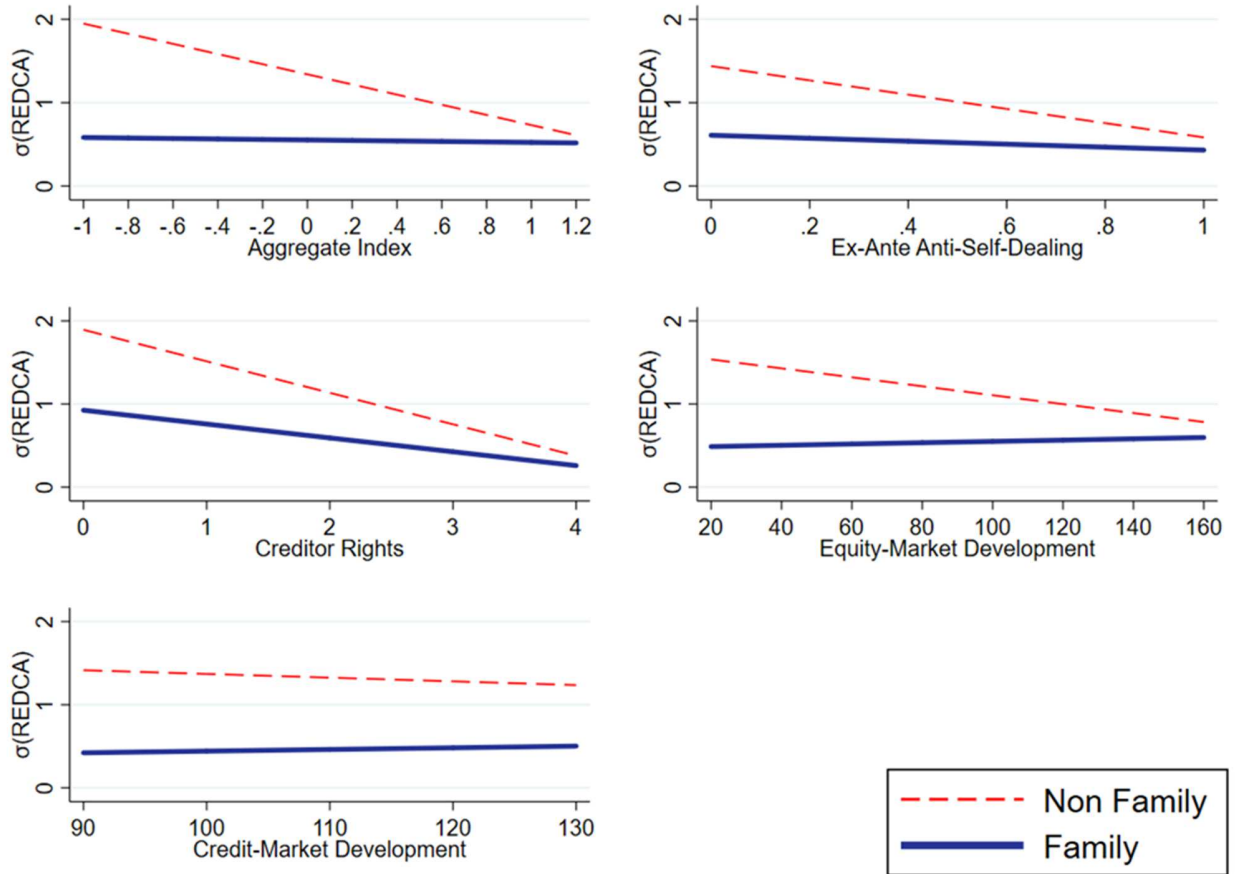
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**Figure 1**

**Sensitivity of Earnings Quality to Level of Institutional Development and Family Status**



**Table 1**  
**Firms, Countries and Industries Included in the Sample**

**Panel A: Number of Family vs. Nonfamily Firms by Country**

	Number of family firms	Number of nonfamily firms	Total
Austria	13	33	46
Belgium	50	885	935
France	1353	3321	4674
Germany	1038	1238	2276
Greece	63	95	158
Ireland	33	47	80
Italy	2039	2675	4714
Netherlands	12	333	345
Portugal	320	434	754
Spain	850	1102	1952
Sweden	78	977	1055
UK	1762	3584	5346
Total	7611	14724	22335

**Panel B: Number of Family and Nonfamily Firms by Industry**

	Number of family firms	Number of nonfamily firms	Total
Consumer Nondurables	706	1226	1932
Consumer Durables	192	353	545
Manufacturing	1486	2545	4031
Oil, Gas and Coal Extract, Products	15	71	86
Chemicals	147	425	572
Business Equipment	296	828	1124
Telephone and Television	37	110	147
Utilities	15	210	225
Wholesale, Retail, Some Services	2049	3428	5477
Healthcare, Medical Equip., Drugs	170	649	819
Other	343	743	1086
Total	7611	14724	22335

**Table 2**  
**Institutional Characteristics by Country**

	Legal Origin	Aggregate Index	Anti-Self-Dealing		Public Enforcement	Creditor Rights	Equity Market Dev.	Credit-Market Dev.
			Ex-ante	Ex-post				
Austria	German	-0.90	0.00	0.21	1.00	3	16.39	121.24
Belgium	French	0.33	0.39	0.54	0.50	2	67.16	94.23
France	French	0.10	0.08	0.38	0.50	0	89.49	111.51
Germany	German	0.02	0.14	0.28	1.00	3	54.69	107.12
Greece	French	-0.29	0.08	0.22	0.50	1	91.38	108.39
Ireland	English	1.02	0.78	0.79	0.00	1	67.65	228.23
Italy	French	-0.25	0.17	0.42	0.00	2	52.77	115.68
Netherlands	French	0.27	0.06	0.20	0.00	3	131.74	205.46
Portugal	French	-0.18	0.14	0.44	1.00	1	46.24	186.13
Spain	French	0.27	0.22	0.37	1.00	2	79.91	211.28
Sweden	Scandinavian	0.59	0.17	0.33	1.00	1	112.27	.
United Kingdom	English	1.19	1.00	0.95	0.00	4	157.7	201.71

Details of the computation of each of the three sub-components of the Aggregate Index can be found in Table 7 of Franks, Mayer, Volpin and Wagner (2012). Details on the computation of the ex-ante anti self-dealing, ex-post anti self-dealing, public enforcement and equity market development measures can be found in Table 1 of Djankov et al.'s (2008a). Details on the computation of the creditor rights and credit market development measures can be found in Table 1 of Djankov et al. (2008b).

**Table 3**  
**Descriptive Statistics**

	Family (N=7611)						Nonfamily (N=14724)						t	$\chi^2$
	mean	min	p25	p50	p75	max	mean	min	p25	p50	p75	max		
$\sigma(\text{REDCA})$	0.34	0.00	0.11	0.19	0.35	4.14	0.28	0.00	0.10	0.17	0.29	4.98	7.46 **	84.47 **
Listed	0.04	0.00	0.00	0.00	0.00	1.00	0.05	0.00	0.00	0.00	0.00	1.00	2.4 *	0.77
Ownership	63.09	0.00	49.00	59.00	88.00	90.00	59.32	0.00	21.23	60.00	89.00	91.00	-7.24 **	5.34 *
Cash	0.10	0.00	0.01	0.05	0.14	0.78	0.09	0.00	0.01	0.04	0.12	0.81	5.38 **	7.76 **
Leverage	117.84	0.00	18.15	58.86	147.25	697.39	137.99	0.00	27.92	78.27	181.28	598.54	-8.84 **	78.41 **
Profitability	5.59	-93.10	2.43	12.44	28.09	272.89	6.56	-93.23	3.46	13.03	26.89	299.78	-1.2	4.27 *
Size	10.06	6.80	9.28	9.90	10.63	17.56	10.45	6.81	9.44	10.18	11.19	20.15	20.2 **	47.85 **
Age	3.07	0.00	2.64	3.18	3.56	5.35	3.09	0.69	2.56	3.14	3.64	5.67	1.55	0.45

**Table 4**  
**Correlation Matrix**

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
$\sigma(\text{REDCA})$	1																
Family	2	-0.01 <sup>†</sup>	1														
Aggregate Index	3	-0.02 <sup>*</sup>	-0.06 <sup>**</sup>	1													
Ex-ante Anti-Self-Dealing	4	-0.02 <sup>**</sup>	-0.03 <sup>**</sup>	0.94 <sup>**</sup>	1												
Ex-post Anti-Self-Dealing	5	-0.01 <sup>*</sup>	-0.04 <sup>**</sup>	0.91 <sup>**</sup>	0.98 <sup>**</sup>	1											
Public Enforcement	6	0.01	0.04 <sup>**</sup>	-0.35 <sup>**</sup>	-0.52 <sup>**</sup>	-0.59 <sup>**</sup>	1										
Creditor Rights	7	-0.02 <sup>**</sup>	0.03 <sup>**</sup>	0.67 <sup>**</sup>	0.79 <sup>**</sup>	0.69 <sup>**</sup>	-0.35 <sup>**</sup>	1									
Equity-Market Development	8	-0.01 <sup>*</sup>	-0.08 <sup>**</sup>	0.95 <sup>**</sup>	0.87 <sup>**</sup>	0.86 <sup>**</sup>	-0.45 <sup>**</sup>	0.55 <sup>**</sup>	1								
Credit-Market Development	9	-0.01 <sup>†</sup>	0.01	0.74 <sup>**</sup>	0.71 <sup>**</sup>	0.66 <sup>**</sup>	-0.13 <sup>**</sup>	0.59 <sup>**</sup>	0.69 <sup>**</sup>	1							
Listed	10	-0.01	-0.02 <sup>*</sup>	0.01 <sup>*</sup>	-0.01 <sup>†</sup>	-0.03 <sup>**</sup>	0.04 <sup>**</sup>	0.00	0.02 <sup>**</sup>	-0.04 <sup>**</sup>	1						
Ownership	11	0.02 <sup>**</sup>	0.07 <sup>**</sup>	-0.45 <sup>**</sup>	-0.52 <sup>**</sup>	-0.52 <sup>**</sup>	0.34 <sup>**</sup>	-0.44 <sup>**</sup>	-0.42 <sup>**</sup>	-0.38 <sup>**</sup>	-0.1 <sup>**</sup>	1					
Cash	12	0.00	-0.03 <sup>**</sup>	0.09 <sup>**</sup>	0.05 <sup>**</sup>	0.05 <sup>**</sup>	0.01	0.00	0.09 <sup>**</sup>	-0.01	0.07 <sup>**</sup>	-0.03 <sup>**</sup>	1				
Leverage	13	0.01	0.06 <sup>**</sup>	-0.08 <sup>**</sup>	-0.01 <sup>*</sup>	-0.02 <sup>**</sup>	-0.04 <sup>**</sup>	0.09 <sup>**</sup>	-0.1 <sup>**</sup>	-0.05 <sup>**</sup>	-0.06 <sup>**</sup>	-0.04 <sup>**</sup>	-0.2 <sup>**</sup>	1			
Profitability	14	-0.01 <sup>*</sup>	0.01	0.04 <sup>**</sup>	0.03 <sup>**</sup>	0.02 <sup>**</sup>	0.01 <sup>†</sup>	0.03 <sup>**</sup>	0.04 <sup>**</sup>	-0.01	-0.04 <sup>**</sup>	0.00	0.12 <sup>**</sup>	-0.06 <sup>**</sup>	1		
Size	15	0.00	-0.14 <sup>**</sup>	0.01	0.04 <sup>**</sup>	0.02 <sup>**</sup>	-0.09 <sup>**</sup>	0.15 <sup>**</sup>	0.00	0.00	0.24 <sup>**</sup>	-0.09 <sup>**</sup>	-0.08 <sup>**</sup>	0.08 <sup>**</sup>	-0.03 <sup>**</sup>	1	
Age	16	-0.04 <sup>**</sup>	-0.01	-0.08 <sup>**</sup>	-0.09 <sup>**</sup>	-0.08 <sup>**</sup>	0.02 <sup>*</sup>	-0.13 <sup>**</sup>	-0.06 <sup>**</sup>	-0.05 <sup>**</sup>	0.00	0.00	-0.02 <sup>**</sup>	-0.11 <sup>**</sup>	-0.03 <sup>**</sup>	0.04 <sup>**</sup>	1

\*\*= p<0.01, \* = p<0.05, †= p<0.1

**Table 5**  
**Earnings Quality, Institutional Development and Family Status**

	1	2	3	4	5	6	7	8	9
Constant	0.791 (0.90)	1.282 (1.52)	1.615* (2.00)	1.719* (2.15)	1.687* (1.96)	1.223 (1.43)	2.017* (2.28)	1.849* (1.85)	1.856* (1.73)
Aggregate Index			-0.609** (-6.98)						
Ex-Ante Anti-Self-Dealing				-0.855** (-2.70)					
Ex-Post Anti-Self-Dealing					-0.634 (-0.98)				
Public Enforcement						0.114 (0.21)			
Creditor Rights							-0.379** (-4.00)		
Equity Market Development								-0.005+ (-1.90)	
Credit Market Development									-0.004 (-0.80)
Family		-0.600** (-3.05)	-0.787** (-4.19)	-0.829** (-3.65)	-0.883* (-2.49)	-0.627** (-2.72)	-0.968** (-4.67)	-1.172** (-3.39)	-1.576** (-2.94)
Family x Aggregate Index			0.579** (3.50)						
Family x Ex-ante Anti-Self-Dealing				0.677** (2.90)					
Family x Ex-post Anti-Self-Dealing					0.558 (1.29)				
Family x Public Enforcement						0.075 (0.16)			
Family x Creditor Rights							0.213** (5.01)		
Family x Equity-Market Development								0.006** (2.83)	
Family x Credit-Market Development									0.006+ (1.75)
Listed	-0.420 (-1.22)	-0.375 (-1.18)	-0.412 (-1.26)	-0.460 (-1.28)	-0.421 (-1.25)	-0.403 (-1.19)	-0.533 (-1.14)	-0.389 (-1.25)	-0.473 (-1.29)
Ownership	0.014* (2.47)	0.014** (2.62)	0.011+ (1.89)	0.010+ (1.91)	0.012+ (1.96)	0.013** (2.64)	0.008* (1.98)	0.012+ (1.95)	0.013* (2.07)
Cash	0.265 (0.53)	0.184 (0.36)	0.260 (0.58)	0.229 (0.49)	0.203 (0.42)	0.182 (0.35)	0.199 (0.46)	0.227 (0.49)	0.204 (0.40)
Leverage	0.000 (0.59)	0.001 (0.76)	0.000 (0.63)	0.001 (0.71)	0.001 (0.73)	0.001 (0.77)	0.001 (0.93)	0.000 (0.68)	0.001 (0.65)
Profitability	-0.005 (-1.24)	-0.005 (-1.22)	-0.005 (-1.19)	-0.005 (-1.20)	-0.005 (-1.21)	-0.005 (-1.22)	-0.005 (-1.19)	-0.005 (-1.20)	-0.006 (-1.18)
Size	0.159 (0.92)	0.131 (0.76)	0.136 (0.79)	0.142 (0.80)	0.135 (0.77)	0.135 (0.79)	0.180 (0.91)	0.135 (0.79)	0.151 (0.81)
Age	-1.107 (-1.64)	-1.110+ (-1.65)	-1.124+ (-1.68)	-1.133+ (-1.67)	-1.120+ (-1.66)	-1.112+ (-1.66)	-1.173+ (-1.68)	-1.115+ (-1.67)	-1.128 (-1.57)
Industry dummies	YES	YES	YES	YES	YES	YES	YES	YES	YES
Clustered SE by Country	YES	YES	YES	YES	YES	YES	YES	YES	YES
Observations	22,335	22,335	22,335	22,335	22,335	22,335	22,335	22,335	21,280
R <sup>2</sup>	0.04	0.12	0.16	0.12	0.07	0.06	0.12	0.11	0.09
F-test	2.04	2.09	2.07	2.06	2.02	2.01	2.18	2.04	1.97

Robust t-statistics in parentheses  
 \*\*\*= p<0.01, \* = p<0.05, †= p<0.1

**Table 6**  
**Earnings Quality, Legal Origin and Family Status**

	1	2	3	4	5	6
Constant	1.486 <sup>+</sup> (1.84)	0.952 (1.00)	1.281 (1.50)	1.327 (1.55)	1.276 (1.52)	1.180 (1.40)
English	-0.503 <sup>+</sup> (-1.74)					
French		0.656* (2.03)				
German			-0.539 (-1.01)			
Scandinavian				-0.511 <sup>+</sup> (-1.93)		
Ireland					-0.610* (-2.12)	
Netherlands						-1.006** (-3.36)
Family	-0.692** (-3.14)	-0.340** (-2.84)	-0.583** (-2.73)	-0.637** (-3.06)	-0.604** (-3.05)	-0.620** (-3.11)
Family x English	0.424 <sup>+</sup> (1.89)					
Family x French		-0.404 (-1.41)				
Family x German			0.096 (0.30)			
Family x Scandinavian				0.661* (2.03)		
Family x Ireland					1.039* (2.38)	
Family x Netherlands						0.903** (2.68)
Listed	-0.418 (-1.23)	-0.353 (-0.96)	-0.301 (-1.00)	-0.365 (-1.15)	-0.371 (-1.18)	-0.362 (-1.13)
Cash	0.217 (0.45)	0.279 (0.58)	0.239 (0.45)	0.184 (0.37)	0.187 (0.37)	0.190 (0.38)
Leverage	0.001 (0.71)	0.001 (0.75)	0.001 (0.84)	0.001 (0.75)	0.001 (0.77)	0.001 (0.73)
Profitability	-0.005 (-1.20)	-0.005 (-1.15)	-0.005 (-1.20)	-0.005 (-1.21)	-0.005 (-1.22)	-0.005 (-1.21)
Size	0.139 (0.79)	0.146 (0.81)	0.138 (0.77)	0.128 (0.74)	0.132 (0.77)	0.140 (0.81)
Age	-1.125 <sup>+</sup> (-1.66)	-1.139 <sup>+</sup> (-1.67)	-1.122 <sup>+</sup> (-1.65)	-1.106 (-1.64)	-1.111 <sup>+</sup> (-1.65)	-1.107 <sup>+</sup> (-1.65)
Industry dummies	YES	YES	YES	YES	YES	YES
Clustered SE by Country	YES	YES	YES	YES	YES	YES
Observations	22,335	22,335	22,335	22,335	22,335	22,335
R <sup>2</sup>	0.07	0.08	0.05	0.07	0.07	0.08
F-test	2.59	2.44	2.46	3.02	2.03	2.72

Robust t-statistics in parentheses  
 \*\*= p<0.01, \* = p<0.05, †= p<0.1

**Table 7**  
**Additional Robustness Tests**

	1	2	3	4	5	6	7
	listed	unlisted	all	listed	unlisted	2sls	liml
Aggregate Index	-0.329* (-1.99)	-0.830* (-2.47)	-0.659** (-2.81)	-0.226+ (-1.95)	-0.728** (-2.73)	-2.895** (-2.33)	-2.460** (-2.54)
Family	-0.463+ (-1.79)	-0.780+ (-1.82)	-0.202* (-2.18)	-0.115+ (-1.83)	-0.217* (-2.08)		
Family x Aggregate Index	0.393+ (1.81)	0.426+ (1.89)	0.228+ (1.86)	0.082+ (1.87)	0.252+ (1.86)	0.365+ (1.97)	0.534+ (1.96)
Constant	1.050** (5.11)	5.329** (3.29)	4.358** (3.61)	0.720** (4.25)	4.667** (3.11)	3.469 (0.17)	3.294 (0.09)



## Appendix

**Table A1: Variable Definition**

Variable	Period	Definition
$\sigma(\text{REDCA})$	2005-2010	Standard deviation of firms' discretionary accruals over the prior 5-year period (REDCA), calculated using Chaney, Faccio and Parsley's (2012) methodology.
<i>Family</i>	2010	Equals 1 if the largest ultimate shareholder is a family who controls more than 20 percent of the votes and 0 otherwise.
<i>Institutional variables</i>		
<i>Aggregate Index</i>	2010	Index calculated as the equal-weighted sum of three standardized indicators: (1) a measure of the quality of the investor protection, (2) a measure of financial development and (3) a measure of the activity level of the market for corporate control in a country. Obtained from Franks, Mayer, Volpin and Wagner, 2012)
<i>Ex-Ante Anti-Self-Dealing</i>	2010	Index of ex ante control of self-dealing transactions. Obtained from Djankov, La Porta, Lopez-de-Silanes, and Shleifer (2008a)
<i>Ex-Post Anti-Self-Dealing</i>	2010	Index of ex post control over self-dealing transactions. Obtained from Djankov, La Porta, Lopez-de-Silanes, and Shleifer (2008a)
<i>Public Enforcement</i>	2010	Index of public enforcement if all disclosure and approval requirements pertaining to a self-dealing transaction have been met. Obtained from Djankov, La Porta, Lopez-de-Silanes, and Shleifer (2008a)
<i>Creditor Rights</i>	2010	Index aggregating creditor rights in a country. The index was obtained from Djankov, Hart, McLiesh, and Shleifer's (2008b) and ranges from 0 (weak creditor rights) to 4 (strong creditor rights).
<i>Equity-Market Development</i>	2010	Ratio of stock market capitalization to GDP (Djankov, La Porta, Lopez-de-Silanes, and Shleifer, 2008a)
<i>Credit-Market Development</i>	2010	Ratio of credit to the private sector to GDP (Djankov, Hart, McLiesh, and Shleifer, 2008b)
<i>Controls</i>		
<i>Listed</i>	2010	Equals 1 if the firm is listed on a stock exchange and 0 otherwise
<i>Ownership</i>	2010	Cash-flow rights of the ultimate shareholder
<i>Cash</i>	2010	Cash and cash equivalents divided by total assets
<i>Leverage</i>	2010	Total debt divided by total equity
<i>Profitability</i>	2010	Net income divided by total equity
<i>Size</i>	2010	Natural logarithm of total assets
<i>Age</i>	2010	Natural logarithm of the number of years from incorporation