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December 2014 Working Paper 03

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Abstract

This paper analyzes whether family enterprises perform better than non-family enterprises, as found in previous studies on Chilean companies, based on the ownership structure of the business, which is an important factor in the literature on corporate governance that had not been taken into account. The analysis confirmed that family enterprises performed better than non-family enterprises and that the effect of ownership concentration on business performance depends on the type of enterprise, regardless of whether it is family-owned. Lastly, the results suggest that performance is better when there is a concentrated ownership, comprised both of shareholders who are family members and others who are not, than with other schemes of corporate governance.

JEL Codes: G32; G20

Key Words: Family-Owned Firms, Performance, Ownership Concentration

Introduction

Family-Owned Firms are key players in most economies; the Family Firm Institute reports that family enterprises create between 70% and 90% of world GDP. Family firms account for 53% of European firms (Barontini and Caprio 2006), 44% of Western European firms (Faccio and Lang 2002), 37% of U.S. firms (Villalonga and Amit 2006), and more than 65% of East Asia firms (Claessens et al. 2000).

The knowledge on family enterprises has been invigorated by the growing interest of the academic world on the subject during the last two decades. One of the areas of interest has been the relationship, if any, between family-owned firms and financial performance. The pioneering study is the one conducted by Anderson and Reeb (2003) who find that family-controlled firms perform significantly better than their non-family counterparts and that the best profitability is found when a member of the family is also the CEO. Other studies are, for instance, Allouche et al. (2008) who use accounting performance for Japanese companies and find that family-owned firms perform better that non-family ones. Martinez et al. (2007) who show that family-controlled firms traded in the Chilean stock market perform better than non-family-controlled firms. Bonilla et al. (2010) who advance the work by Martinez et al. by including a risk dimension, controlling for institutional investors, and by using a different estimation technique. They also find that family-controlled firms outperform non-family firms, and that family firms have less volatile returns than non-family ones.

Family members generally participate in the business management, either as a member of the board and/or as one of the senior managers. This situation would create incentives to oversee managers more strictly to reduce the agency problem between shareholders and managers. However, a second agency issue arises when the majority shareholder, in this case the family,

aligns interests with the company's management in order to, potentially, tunnel benefits from minority shareholders.

The empirical evidence largely supports the hypothesis that family enterprises perform better than non-family ones. However, there is also literature upholding the contrary position. Consequently, an analysis of the relationship between a family enterprise and performance should be empirical for each country or industry in particular.

The objective of this paper is to determine whether or not family enterprises perform better seen through the concentration of ownership of the company, since this is a relevant variable in the literature on corporate governance that has not been taken into account in prior studies. Hence, previous results could be biased. In other words, the better results of family enterprises could be due to their ownership structure and not to their family nature. This also could be because the literature suggests that a high concentration of ownership in a company helps reduce the agency problem between shareholders and managers as shareholders would have more incentive to oversee managers' activities more closely. In the case of Chile, a large majority of the companies have a concentrated ownership structure, so the results obtained for family businesses could be confused with the effect of ownership concentration.

A database of 320 companies traded on the Santiago Stock Exchange from 1998-2007 (10 years) was used. The database was constructed using data taken from Economatica, the Chilean Securities and Exchange Commission (SVS), and corporate annual reports of the companies in the study.[1]

A preliminary analysis of the data revealed that for all measurements of ownership concentration and performance, both family enterprises and non-family enterprises that have a concentrated ownership perform better than businesses with a disperse ownership. Family

[1] The database is the same one used by Bonilla et al. (2010), complemented by new data on the companies in the study (ownership structure and financial ratios).

enterprises were seen to perform better if ownership is concentrated, while no difference was seen in the performance of family enterprises and non-family enterprises if ownership was disperse. Lastly, it was concluded, using an estimator of differences-in-differences, that family enterprises still perform better when controlled by ownership concentration.

A regression analysis was then done using panel data that confirmed the preliminary results. The family dummy variable had a positive and significant effect on all regressions, i.e., statistically; family enterprises would perform better than non-family enterprises.

Moreover, initially, no significant effect was found of ownership structure on performance, but there was a significant effect when an interaction with the type of company was used, meaning the effect of the ownership structure would depend on the type of company. A positive quadratic effect of ownership concentration was found on performance in the case of family enterprises, while a negative quadratic effect was found for non-family enterprises.

These results suggest that when ownership concentration in a family firm increases, the positive effect of ownership concentration predominates, i.e., agency problems diminish, which results in a better performance. On the other hand, in non-family enterprises, an increase in ownership concentration reduces performance, which could be due to majority shareholders tunneling resources from the company, consequently reducing its performance. This practice arises because outside owners are less committed to the company in comparison to the long-term commitment of a family to the business that it owns. A second explanation is that in the case of non-family firms, shareholders are not involved in the company's management as actively as in a family firm, hence an increase in ownership concentration in non-family businesses would not help align the incentives of managers and shareholders.

Lastly, the results from comparing regressions in which different measurements of ownership concentration were used suggest that the combination between family owners and outside owners would create a synergy that explains the superior performance of this type of corporate governance in comparison to the performance of purely family and/or non-family enterprises.

The rest of the paper is structured in the following way: literature is reviewed in section 2; section 3 describes the variables in the study; section 4 provides a descriptive analysis of the data and a preliminary analysis of the differences between companies; section 5 conducts a regression analysis of panel data; and lastly, section 6 summarizes the main conclusions.

2. REVIEW OF LITERATURE

Corporate governance can be defined as a series of contracts that specify the rights of each of the parties that are involved in the relationship: capital providers, on the one hand, represented by the shareholders in the company and their creditors; and managers, on the other, who use those resources, supposedly in the interest of maximizing profits. However, those contracts are incomplete, so an agency problem arises.

Berle and Means (1932) were the first to describe the agency problem as a problem arising from the separation of ownership and control of the company in which the interests of the owners and the managers may diverge. When the ownership of a company is very dispersed, its assets may be used to benefit the managers more than the shareholders, which results in a reduction in the company's worth. The problem could be solved by ownership concentration since it would create incentives for shareholders to oversee managerial behavior more closely. Jensen and Meckling (1976) defined the agency costs as the sum of the costs of oversight by shareholders. As a company grows, the greater the agency cost will be because oversight is

more difficult and costly in a large company. Nonetheless, oversight costs can fall if managers become owners of a share in the company, which aligns the interests of shareholders and managers as that share increases.

Morck et al. (1988) argue that the relationship between worth and the equity interest of managers in a company is not linear. Initially it is negative since managers allocate the company's resources on the basis of their own interests, which may conflict with the interests of the shareholders. However, as the equity interest of managers in the company increases, it is more likely that their interests will coincide with those of shareholders. McConnell and Servaes (1990) analyzed whether the equity interests of large-block controlling shareholders does or does not contribute to increasing a company's value. They also analyzed the equity interests of managers. They did not find any significant relationship between the equity interests of large-block shareholders and value, but they did find a positive relationship between the equity interests of institutional shareholders and value. They also found a positive quadratic relationship between the equity interests of managers and the worth of the company. On the contrary, Barclay and Holderness (1989) argue that majority shareholders reduce a company's value since there is less probable that other shareholders will make an offer for the company because it is more difficult for those shareholders to attain control of the company by purchasing shares.

If companies with a concentrated ownership perform better, then there would be no companies with a disperse ownership, yet Stein (1988) justifies the existence of the latter, saying that if managers acted according to their own interests, i.e., by tunneling benefits from shareholders, the company's revenues would decline, as would the price of the share, which would increase the probability of a takeover at an unfavorable price. Consequently, managers are concerned about the company's actual profit and do align interests with shareholders.

However, this pressure can lead managers to sacrifice long-term interests in the aim of increasing present profits, which the author calls "managerial myopia."

Demsetz's model (1983) follows a different line of investigation. He argues that the ownership structure of a company is an endogenous result of maximizing shareholder profit, so there should be no relationship between ownership structure and performance. The author recognizes that managers divert a company's resources, but he said that they did not do it to increase their own monetary income but rather to increase their profit, which comes from monetary and non-monetary consumption. Non-monetary consumption means the profit generated to satisfy personal interests different from the profit they receive from their income. Nonetheless, the company behaves competitively on the market for goods, so non-monetary consumption arises only when costs have been minimized. Demsetz suggests that there are two types of companies, some where there is a high cost of oversight and others where there is a low cost. Managers who prefer non-monetary consumption will work in companies where the cost of oversight is high, as they would be willing to accept a lower salary in exchange for an increase in their non-monetary consumption. At the same time, there will be shareholders who prefer to refrain from oversight and diversify their capital. This creates a company with a disperse ownership structure. On the other hand, managers with preferences for monetary consumption will work in companies where the cost of oversight is low, who will earn a higher salary and will minimize their non-monetary consumption. At the same time, there will be shareholders who prefer to oversee the behavior of managers and concentrate their capital in the company. This creates a company with a concentrated ownership structure. In other words, both ownership structures are the endogenous result of maximizing the profits of both managers and shareholders.

Demsetz and Lehn (1985) later presented empirical evidence on the endogenicity of ownership structure. By treating ownership structure as an endogenous variable, they found no relationship between the value of the company and ownership concentration. Demsetz and Villalonga (2001) would again discard that there is a relationship between ownership structure and performance by demonstrating that neither a concentrated ownership structure nor an equity interest of managers contributed to increasing the value of the company when they are treated as endogenous variables.

A family enterprise is a particular case of corporate governance where there is a majority shareholder, the family, that is generally not very diversified, meaning that it has invested most of its resources in the company. This situation would create incentives to oversee managers more closely, yet also to tunnel benefits from minority shareholders. The family members are generally part of the company's management, either as a board member or directly as a senior manager.

Demsetz and Lehn (1985) said that the historic presence of a family, its considerable equity interest, control of management and of the board put it in an extraordinary position to have an influence in and to oversee the company. Moreover, since the family's wealth is closely tied to the well-being of the company, families have stronger incentives to oversee managers and minimize the agency problem. Stein (1989) says that families have longer investment horizons than other types of shareholders, who suffer from a managerial myopia, or an excessive tendency to maximize profits in the short term. Since families have longer investment horizons, the probability would decline of renouncing good long-term investment opportunities in the aim of improving short-term profits and they would thus contribute to increasing the company's worth.

Anderson and Reeb (2003) analyzed the relationship between a family business and performance. They found that family enterprises perform better than non-family enterprises. They also said that the relationship between family ownership and performance in a company is not linear. The best performance is attained with a 60% equity interest of the family, and thereafter falls and when family members are CEOs, performance is better than when the CEO is an outsider. On the other hand, they found that there is no detriment to minority shareholders by the presence of a family in the ownership of a company, suggesting that this is an effective organizational structure.

Lee (2006) analyzed the competitiveness and stability of family enterprises in the United States. He found that family enterprises have higher levels of employment and income growth over time and are more profitable. He also confirmed that the company's performance improves when members of the family are involved in management. Martínez et al. (2007) studied the effect of family ownership on the performance of a company using data on Chilean companies traded on the Santiago Stock Exchange. They found that family enterprises perform better than non-family enterprises. Bonilla et al. (2010) reviewed the evidence presented by Martínez et al. using new data and estimation techniques, confirming the better performance of family enterprises in comparison to non-family enterprises and that they not only performed better, but also returns were less volatile.

On the other hand, Barclay and Holderness (1989) argue that the presence of a controlling family reduces the value of a company since it can prevent third parties from attaining control. This reduces the probability that other shareholders make offers for the company. They also present it as evidence of the entrenchment of the family in the company's management (managerial entrenchment). Lastly, Villalonga and Amit (2006) found that family ownership created value only when the founder is the CEO or when he is chairman of the board and

hires an outside CEO. The company's value diminishes when the descendants of the founder work as the CEO of the company. They also argue that the agency problem between shareholders and managers in non-family companies is more costly than an agency conflict between family shareholders and external shareholders in companies where the founder is the CEO. However, in companies where a descendant is the CEO, the conflict between family shareholders and outside shareholders is more costly than the classical conflict between shareholders and managers of non-family businesses.

3. VARIABLES

The dependent variable used to measure performance is the ROA, or return on assets. This unit of measure was the main variable used by Martínez et al. (2007) and Bonilla et al. (2010) to measure companies' performance. Using this variable will ensure that the results are comparable to those obtained in previous studies. The risk-adjusted ROA, or ROARISK, is also used where the risk is approximated as the standard deviation in the returns earned by the companies by type (*j* = family-owned, non-family-owned) for each year (*t*):

$$ROARISK_{i,t} = \frac{ROA_{i,t}}{\sigma_{j,t}}$$

The family nature of a company is measured using a dummy variable equal to one if it is defined as a family enterprise. The definition of family enterprise is the same one used by Bonilla et al. (2010), who classify a company as family-owned based on three criteria:

1. Businesses forming part of economic groups clearly associated with a family.

2. If the company is not a part of one of those economic groups, it is classified as a family business if the senior management is controlled by members of a family on the SVS's list.
3. If the company is not part of one of those economic groups, it is classified as a family business if its board of directors is controlled by one or more members of a family on the SVS's list.

The ownership structure of the company is measured through the ownership concentration, *Cprop*, i.e., by the equity interests held by the main shareholders. There are also two measures that have also been commonly used in previous literature: (1) ownership is concentrated with the largest shareholder, Cprop-a1; and (2) ownership is concentrated with the five largest shareholders, Cprop-a5. Literature has also suggested that there could be a quadratic effect of this variable on performance, so this specification is also analyzed.

The control variables are the same ones that were used in the studies by Martínez et al. (2007) and Bonilla et al. (2010) that have also been widely used in the literature analyzed:

- Pension Fund Managers or AFPs. Literature has attributed a positive effect on performance to the equity interests held by institutional investors in a company since they have a greater capacity to oversee the company's administration. AFPs are the largest institutional investors in Chile, so it is a variable of interest in this study. The share held by AFPs in a company is measured through a dummy variable equal to 1 when this condition is met.

- Size. Larger companies are able to achieve economies of scale and production capacity to attend to larger markets, which results in a better performance, but very large

companies are more difficult to administer and agency problems also arise due to the inclusion of a larger number of shareholders to the company's ownership and to the increase in the cost of overseeing a larger company. Size is measured through a natural logarithm of total assets. The expected effect on performance is uncertain.

- Age. Age or the longevity of a company affects family enterprises and non-family enterprises differently. Anderson and Reeb (2003) say that the performance of a family enterprise is better when the company is managed by its founder: the entrepreneur. However, performance worsens when the company is managed by the founder's descendants. Therefore, the performance of a family enterprise should worsen over time (a negative effect on performance) since it is more likely that the company is being administrated by the founder's descendants. Age is measured by the number of years since the company's foundation.

- Leverage. The debt-to-asset ratio. More heavily leveraged companies should have more volatile returns. The expected value of their returns is uncertain although it can be assumed that more indebted companies have finance expenses because they pay more interest, which should have negative impact on the company's performance.

4. DATA AND PRELIMINARY ANALYSIS

A database of 320 businesses was used that were traded on the Santiago Stock Exchange from 1998 to 2007 (10 years). The database was constructed using data obtained from

Economática, the Securities and Insurance Commission (SVS) and corporate annual reports of these businesses. The descriptive statistics on the variables analyzed are contained in Table 1. 68.18% of the companies in the sample are classified as family businesses (dFamily), while 31.82% would be non-family businesses. A significant ownership concentration was seen in Chilean enterprises, the largest shareholder owning on average 51% of the company, while the five largest shareholders owned 77%.

Table 1: Descriptive Statistics

Variable	Observation	Average	Standard Deviation	Minimum	Maximum
ROA	2436	0.0438	0.1347	-0.9780	0.9260
ROARISK	2436	0.3517	1.0100	-7.0766	7.3503
dFamily	2495	0.6818	0.4659	0	1
Cprop_a1	2207	0.5090	0.2540	0.0040	1.0000
Cprop_a5	2207	0.7729	0.1996	0.0164	1.0000
dAFP	2495	0.4176	0.4933	0	1
ln assets	2478	17.8079	2.2865	8.9812	23.6259
Age	2398	41.8186	35.2538	0	195
Leverage	2318	15.1136	16.6613	0.0000	127.7000

Table 2 shows the mean by type of company: family-owned and non-family-owned. Family enterprises performed better in terms of ROA and ROARISK and the difference is statistically significant at 5%. On the other hand, the ownership concentration variables proved to always be lower in the case of family enterprises, with a statistical significance of 1%. Concentration of ownership should have a positive effect on performance, so the difference in performance between family enterprises and non-family enterprises could be underestimated. In addition, the percentage of family enterprises with institutional investors (AF) is higher, with a significant different at 1%. The share of institutional investors in a company's ownership should improve performance, so the difference in performance in favor of family enterprises would be overestimated if that factor were not taken into account.

Table 2: Means by type of company and difference of means test

Variable	Family	Non-Family	Difference	Standard Error (diff.)	T-test	Pr(T>t)	Pr(T<t)
ROA	0.0481	0.0346	0.0136	0.0062	2.2037	(0.0319)**	
ROARISK	0.3877	0.2744	0.1133	0.0439	2.5772	(0.0500)**	
Cprop_a1	0.4897	0.5492	-0.0594	0.0122	-4.8867		(0.0000)***
Cprop_a5	0.7587	0.8025	-0.0439	0.0095	-4.6277		(0.0000)***
dAFP	0.4403	0.3690	0.0713	0.0209	3.4051	(0.0003)***	
ln assets	17.7534	17.9235	-0.1701	0.1008	-1.6869		(0.0459)**
Age	43.0528	39.2091	3.8437	1.5880	2.4204	(0.0078)***	
Leverage	14.3364	16.8595	-2.5232	0.8092	-3.1181		(0.0009)***

Values p in parenthesis
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Family enterprises are larger on average than non-family enterprises and are also the oldest, with a significant difference of 1%. They would be less indebted than non-family enterprises, with a difference that is also significant at 1%. Size has an uncertain effect on performance, while age and leverage would have a negative impact.

The objective of this study is to determine whether the better performance seen in family enterprises as compared to non-family enterprises continues when controlled by the ownership structure of the company. So, not only must the performance of family enterprises be compared to non-family enterprises like in previous studies, but also the performance of family enterprises with a concentrated ownership (high ownership concentration) to the performance of family enterprises with a disperse ownership (low ownership concentration). A comparison must also be made between the performance of family and non-family enterprises, both with a concentrated and disperse ownership, in order to be able to determine whether or not the effect continues despite the difference in ownership structure and what fraction of improved performance is due to the exclusively family nature and not to ownership concentration.

In order to make an initial analysis of the data to arrive at some valid conclusions, a dummy variable was created, *CPh*, equal to 1 when the ownership concentration is high. Since the ownership concentration is generally high in Chilean companies, the 25th percentile was used to

define high and low concentration, meaning if the ownership concentration is above the 25th percentile, it is a company with a concentrated ownership, and if it is less than or equal to that percentile, it is a company with a disperse ownership. This guarantees that at least 25% of the companies will be in the disperse ownership category (low ownership concentration). The 25th percentile for the variable Cprop-a1 is 0.3068 and it is 0.654 for the variable Cprop-a5. This means that a company's ownership is considered to be concentrated if the largest shareholder owns more than 30.68% or the five first shareholders own more than 65.40%.

The expected performance value for a family enterprise when controlled by ownership concentration can be written as:

$$E(Performance/dFamily = 1, CPh = 1) - E\ (Performance/dFamily = 1\ CPh = 0)$$

The expected performance value for a non-family enterprise controlling by ownership concentration can be written as:

$$E(Performance/dNonFamily = 1, CPh = 1) - E\ (Performance/dNoFamily = 1\ CPh = 0)$$

Finally, the difference in performance between family and non-family enterprises controlling by ownership concentration is equal to the difference between the above expressions (a procedure similar to constructing an estimator of differences-in-differences).

Table 3 shows, for both types of company and for all ownership concentration and performance measurements, that companies with a concentrated ownership perform better than companies with a disperse ownership. A better performance was seen in family companies with concentrated ownership, but no difference was seen in the performance of family and non-family enterprises when ownership is disperse. Lastly, the estimator of

differences-in-differences indicates that when controlling by measurements of ownership concentration Cprop-a1 and Cprop-a5, performance is better in family enterprises.

Table 3: Differences-in-Differences

ROA				ROARISK			
Cprop-a1	CPh = 1	CPh = 0	**difference**	**Cprop-a1**	CPh = 1	CPh = 0	**difference**
Family Enterprise	0.0383	0.0139	0.0244	Family Enterprise	0.3095	0.1123	0.1972
	(0.0032)	(0.0015)	(0.0035)***		(0.0248)	(0.0125)	(0.0278)***
Non-Family Enterprise	0.0294	0.0134	0.0160	Non-Family Enterprise	0.2304	0.0979	0.1325
	(0.0048)	(0.0022)	(0.0053)***		(0.0343)	(0.0154)	(0.0376)***
difference	0.0089	0.0005	0.0084	**difference**	0.0791	0.0144	0.0647
	(0.0057)*	(0.0027)	(0.0065)*		(0.0423)**	(0.0198)	(0.0479)*
Cprop-a5	CPh = 1	CPh = 0	**difference**	**Cprop-a5**	CPh = 1	CPh = 0	**difference**
Family Enterprise	0.0402	0.0120	0.0281	Family Enterprise	0.3244	0.0974	0.2270
	(0.0031)	(0.0017)	(0.0035)***		(0.0241)	(0.0137)	(0.0277)***
Non-Family Enterprise	0.0299	0.0129	0.0171	Non-Family Enterprise	0.2362	0.0921	0.1441
	(0.0049)	(0.0020)	(0.0053)***		(0.0349)	(0.0139)	(0.0375)***
difference	0.0103	-0.0008	0.0111	**difference**	0.0882	0.0053	0.0829
	(0.0058)**	(0.0026)	(0.0065)**		(0.0424)**	(0.0195)	(0.0478)**

Standard errors in parenthesis
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 1 and Table 3 both show that the differences between each type of company are greater when the ROARISK variable is used as the performance variable. This is due to the results found by Bonilla et al. (2010), who say that the returns of family enterprises are less volatile in comparison to non-family enterprises, so the performance differences found using the ROA should increase when the risk-adjusted ROA, or ROARISK, is used as the dependent variable (performance differences rise).

5. REGRESSION ANALYSIS

Panel data regressions with fixed effects were used since they permit a control by individual heterogeneity not observed and omitted variables, for example, the ability of managers or the administrative culture of companies. These variables suppose constants over time, but vary between individuals, in this case the companies. The intra-group estimator (within estimator) is used to make the estimation that eliminates the correlation between regressors and omitted variables, attaining a consistent estimation of the coefficients.

The basic model is:

$$Performance_{it} = \alpha_i + \beta_1 dFamily_{it} + \beta_2 Cprop_{it} + \beta_3 dAFP_{it} + \beta_4 Size_{it} + \beta_5 Age_{it} + \beta_6 Leverage_{it} + u_{it}$$

The *Performance* variable may be the *ROA* variable or the *ROARISK* variable. A quadratic effect is also modeled for the ownership concentration variable *Cprop* since prior literature suggests an existence of an effect of this type. An interaction between the dummy variable *dFamily* for the family enterprise and the *Cprop* variable for ownership concentration is also analyzed to determine whether the effect of ownership structure varies by type of company. Lastly, a control is made by temporary fixed effects, for example, changes in conditions in the economy that affect all companies equally but vary over time, so dummies were added for each year in the sample (two-way effects).

A Hausman test was performed in which the random effects null hypothesis was rejected, i.e., the most appropriate model is the fixed effects model (consistent estimator). Robust errors were used in the estimation, grouped by individual (company).

Table 4 shows the results of regressions using the *ROA* variable as the dependent variable. The ownership concentration variable used is indicated at the start of each column. The family dummy variable was seen to have a positive significant effect in all regressions, meaning family enterprises statistically performed better than non-family ones.

The ownership concentration variables have no significant effect except in the cases of regressions 6 and 8 (the Cprop-a5 variable was used) where a negative quadratic effect was seen for non-family enterprises and a positive quadratic effect for ownership concentration in

family enterprises. The minimum and maximum ownership concentration for family and non-family enterprises is found in the intervals (0.065, 1) and (0.0164, 1), respectively, which means that there is a marginal effect for regression 6 that varies in the interval (-1.22, 0.58), with zero in Cprop-a5=0.66 for family enterprises, and in the interval (0.36, -0.22), with zero in Cprop-a5=0.65 for non-family enterprises (the interval is constructed on the basis of minimum and maximum ownership concentration values for each type of company). There is an interval of (-0.81, 0.99) when the dummy coefficient is added for the total effect of family ownership on performance. There is a marginal effect for regression 8 that varies in the interval (-1.25, 0.59), with zero in Cprop-a5=0.68 for family enterprises, and in the interval (0.35, - 0.20), with zero in Cprop-a5=0.66 for non-family enterprises. There is an interval of (-0.83, 1.00) for the total effect of family ownership on performance when the dummy coefficient is added.

The above effects are similar in both regressions, even though only individual effects were controlled in regression 6 (one-way effects) and individual and temporary effects were controlled in regression 8 (two-way effects). Controlling for temporary effects increases the magnitude of the family enterprise coefficients.

The above results suggest that when the ownership concentration in a family enterprise increases, the positive effect of ownership concentration predominates, meaning the agency problems are reduced, which results in a better company performance. In non-family enterprises, on the other hand, an increase in ownership concentration reduces performance, which is due to the fact that majority shareholders would tunnel resources from the company, with the consequent reduction in its performance (an agency problem). This practice is due to the fact that outside owners are less committed to the company in comparison to the long-

term commitment of a family to the business that it owns. A second explanation is that shareholders in non-family enterprises are not involved in the company's management as actively as in a family company, so an increase in ownership concentration in non-family enterprises would not align the incentives of managers to those of shareholders.

Furthermore, it is more likely that the largest shareholder in a family enterprise will be a member of the family. In the regressions in which only the ownership concentration held by the primary shareholder, Cprop-a1, was included, no significant effect of this variable on performance was found, but it was seen in the case of Cprop-a5, which could be due to the fact that the combination between family owners and outside owners would create a synergy that implies a better performance than purely family and/or purely non-family enterprises.

Table 4: Results - Dependent Variable: ROA

	1	2	3	4	5	6	7	8
	(a1)	(a5)	(a1)	(a5)	(a1)	(a5)	(a1)	(a5)
dfamily	0.0311	0.0310	0.0296	0.0332	0.1165	0.4142	0.1069	0.4148
	(0.0480)**	(0.0560)*	(0.0640)*	(0.0430)**	(0.0690)*	(0.0190)**	(0.0930)*	(0.0180)**
Cprop	0.0185	0.0115	-0.0790	-0.1275	0.1271	0.3962	0.1236	0.3934
	(0.5780)	(0.7880)	(0.6130)	(0.5680)	(0.3020)	(0.0150)**	(0.3140)	(0.0190)**
Cprop-sq			0.0975	0.1035	-0.0845	-0.3066	-0.0784	-0.2970
			(0.4790)	(0.4950)	(0.4630)	(0.0150)**	(0.4920)	(0.0220)**
Cprop*family					-0.3951	-1.2500	-0.3917	-1.2775
					(0.1300)	(0.0080)***	(0.1310)	(0.0070)***
Cprop-sq*family					0.3533	0.9131	0.3553	0.9357
					(0.1310)	(0.0040)***	(0.1270)	(0.0030)***
dAFP	0.0050	0.0050	0.0056	0.0057	0.0058	0.0073	0.0029	0.0044
	(0.6480)	(0.6500)	(0.6130)	(0.6070)	(0.5980)	(0.4980)	(0.7970)	(0.6860)
1n(assets)	0.0511	0.0509	0.0514	0.0512	0.0511	0.0487	0.0519	0.0494
	(0.0000)***	(0.0000)***	(0.0000)***	(0.0000)***	(0.0000)***	(0.0000)***	(0.0000)***	(0.0000)***
Age	0.0006	0.0007	0.0005	0.0008	0.0006	0.0008	-0.0014	-0.0013
	(0.6640)	(0.6220)	(0.7140)	(0.6120)	(0.6990)	(0.5640)	(0.4150)	(0.4280)
Leverage	-0.0022	-0.0022	-0.0022	-0.0022	-0.0022	-0.0022	-0.0021	-0.0022
	(0.0000)***	(0.0000)***	(0.0000)***	(0.0000)***	(0.0000)***	(0.0000)***	(0.0000)***	(0.0000)***
Constant	-0.8930	-0.8936	-0.8749	-0.8592	-0.9181	-0.9570	-0.8371	-0.8727
	(0.0000)***	(0.0000)***	(0.0000)***	(0.0000)***	(0.0000)***	(0.0000)***	(0.0000)***	(0.0000)***
Temporary Effects	--	--	--	--	--	--	yes	yes
Observations	2014	2014	2014	2014	2014	2014	2014	2014
Groups	274	274	274	274	274	274	274	274
F	8.08	8.36	7.00	7.38	7.29	6.03	4.84	4.22
Prob > F	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
R-sq (within)	0.0949	0.0947	0.0957	0.0952	0.0992	0.1059	0.1042	0.1117

Values p in parenthesis
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The institutional investor variable, dAFP, had a positive but never significant effect. The evidence found in previous literature was mixed, but it generally indicated a better performance by companies with institutional investors because oversight of the company's management is stricter. However, the case of an AFP may be different. Although an AFP may hold a

significant equity interest in a company from the viewpoint of the company, for the AFP the investment in that company may represent a very small fraction of its investment portfolio, so there might not be enough incentive to oversee closely.

As to the remaining control variables, the size of the company had a positive significant effect in all cases. The age variable (longevity) never was significant. An interaction effect between the age variable and the family dummy was also analyzed since the performance of family enterprises would be more affected by age. However, this effect was also insignificant. The leverage variable was negative and significant in all cases.

Table 5 – Results - Dependent Variable: ROARISK

	1	2	3	4	5	6	7	8
	(a1)	(a5)	(a1)	(a5)	(a1)	(a5)	(a1)	(a5)
dfamily	0.2565	0.2650	0.2439	0.2882	0.9200	3.3240	0.8437	3.2535
	(0.0460)**	(0.0460)*	(0.0620)*	(0.0310)**	(0.0620)*	(0.0130)**	(0.0840)*	(0.0150)**
Cprop	0.2762	0.2956	-0.5084	-1.1810	1.0365	2.8631	0.9838	2.9181
	(0.2820)	(0.3630)	(0.6710)	(0.4870)	(0.2770)	(0.0200)**	(0.2970)	(0.0210)**
Cprop-sq			0.7848	1.0994	-0.5381	-2.0239	-0.4985	-2.0589
			(0.4760)	(0.3410)	(0.5460)	(0.0350)**	(0.5710)	(0.0360)**
Cprop*family					-2.9449	-9.7660	-2.8851	-9.8008
					(0.1410)	(0.0060)***	(0.1450)	(0.0060)***
Cprop-sq*family					2.5633	7.0606	2.5444	7.1265
					(0.1530)	(0.0030)***	(0.1530)	(0.0030)***
dAFP	0.0268	0.0279	0.0310	0.0349	0.0331	0.0482	0.0135	0.0273
	(0.7620)	(0.7530)	(0.7250)	(0.6920)	(0.7070)	(0.5780)	(0.8790)	(0.7550)
1n(assets)	0.3799	0.3769	0.3819	0.3795	0.3798	0.3598	0.3861	0.3665
	(0.0000)***	(0.0000)***	(0.0010)***	(0.0000)***	(0.0010)***	(0.0010)***	(0.0000)***	(0.0010)***
Age	0.0041	0.0056	0.0034	0.0058	0.0036	0.0064	-0.0014	-0.0004
	(0.7230)	(0.6380)	(0.7720)	(0.6240)	(0.7560)	(0.5720)	(0.9140)	(0.9730)
Leverage	-0.0174	-0.0173	-0.0174	-0.0172	-0.0168	-0.0169	-0.0168	-0.0169
	(0.0000)***	(0.0000)***	(0.0000)***	(0.0000)***	(0.0000)***	(0.0000)***	(0.0000)***	(0.0000)***
Constant	-6.6591	-6.7651	-6.5134	-6.3994	-6.8483	-7.1856	-6.6209	-6.9153
	(0.0000)***	(0.0000)***	(0.0000)***	(0.0000)***	(0.0000)***	(0.0000)***	(0.0000)***	(0.0000)***
Temporary Effects	--	--	--	--	--	--	yes	yes
Observations	2014	2014	2014	2014	2014	2014	2014	2014
Groups	274	274	274	274	274	274	274	274
F	7.53	7.62	6.51	6.62	7.21	5.93	5.44	4.91
Prob > F	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
R-sq (within)	0.0910	0.0909	0.0919	0.0919	0.0950	0.1027	0.1033	0.1113

Values p in parenthesis
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 5 shows the results of the regressions using the ROARISK variable as the dependent variable. Despite the change in the dependent variable, the results remain the same. The coefficients increase in magnitude because the performance differences increase between family and non-family enterprises as the returns of family enterprises are less volatile in comparison to non-family enterprises, as indicated by Bonilla et al. (2010).

For the cases of regressions 6 and 8 when the Cprop-a5 variable was used, there is a marginal effect of ownership concentration for regression 6 that varies in the interval (-9.53, 4.36), with

zero in Cprop-a5=0.69 for family enterprises, and in the interval (2.60, -1.18), with zero in Cprop-a5=0.71 for non-family enterprises. When the dummy coefficient is added, there is an interval of (-6.21, 7.68) for the total effect of family ownership on performance. For regression 8, there is a marginal effect that varies in the interval (-9.57, 4.45), with zero in Cprop-a5=0.69 for family businesses, and in the interval (2.65, -1.20), with zero in Cprop-a5=0.71 for non-family enterprises. When the dummy coefficient is added, there is an interval of (-6.31, 7.71) for the total effect of family ownership on performance.

6. CONCLUSIONS

In the preliminary analysis of the data, it was found that companies with a concentrated ownership perform better than companies with a disperse ownership, for both family and non-family enterprises and for all ownership concentration and performance measurements. Performance was seen to be better in family companies with a concentrated ownership, while no difference was seen in the performance between family and non-family enterprises if ownership was disperse. Lastly, it was concluded, using an estimator of differences-in-differences, that when controlled through ownership concentration, family enterprises perform better.

A regression analysis was then made using panel data that confirmed the preliminary results. The family dummy variable had a positive significant effect in all regressions, i.e., family enterprises would statistically perform better than non-family ones.

Furthermore, initially no significant effect was found of ownership structure on performance, but there was a significant effect when using an interaction with the type of company, meaning the effect of ownership structure would depend on the type of company. A positive quadratic effect was found of ownership concentration on performance in the case of family enterprises, while a negative quadratic effect was seen in the case of non-family enterprises.

These results suggest that when ownership concentration in a family enterprise increases, the positive effect of ownership concentration predominates, meaning agency problems were reduced, which results in a better performance by the company. On the other hand, an increase in ownership concentration reduces performance in non-family enterprises, which would be because majority shareholders would tunnel resources from the company, with the consequent reduction in its performance (an agency problem). This practice would be due to the outside owners being less committed to the company in comparison to the long-term commitment of a family to a business that it owns. A second explanation is that shareholders in non-family enterprises are not as actively involved in the management of the company as in a family enterprise, so an increase in ownership concentration in non-family enterprises would not align the incentives of managers to those of shareholders.

Lastly, a comparison of regressions in which different measurements of ownership concentration were used suggest that the combination between family owners and outside owners will create a synergy that explains the superior performance of this type of corporate governance in comparison to the performance of purely family and/or purely non-family enterprises.

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