

Ownership Structure and Leverage: Evidence from Family Firms in Chile

Abstract

This paper examines the effects of family control and pyramidal ownership on capital structure decisions. Using a sample of family and non-family listed firms in Chile, we find evidence in support of the conservative approach taken by families regarding their debt and financial risk exposure. Additionally, we test the hypothesis that family firms restrict the use of debt to avoid the monitoring role of creditors, which could limit the ability of family owners to enjoy the private benefits of control. Consistent with this hypothesis, we find that the magnitude of the negative relationship between leverage and family control is most pronounced among those family firms with a higher degree of pyramidal ownership. Finally, we do not find evidence consistent with the hypothesis that family-controlled firms exhibit low leverage ratios because of their access to internal capital markets. In fact, we find the opposite: listed family firms provide more loans to related companies than comparable non-family firms.

Keywords: capital structure, family firms, pyramidal structure, business groups, ownership structure.

JEL codes: G32.

1. Introduction

In prior literature the relationship between family firms and performance has been a point of contention. The vast majority of papers show that family-controlled firms are more often associated with higher financial performances than non-family firms are (e.g., Anderson and Reeb, 2003; Maury, 2006; Villalonga and Amit, 2006; Barontini and Caprio, 2006; and Andres, 2008).¹ The arguments for the superior performances of family firms include families' long-term investment horizons (e.g., Zellweger, 2007), reputational concerns (e.g., Chen et al., 2010; and Pindado et al., 2011; and Zellweger et al. , 2011), and advantages of family firms related to the reduction of agency problems between managers and shareholders (e.g., Isakov and Weisskopf, 2014). However, more recently, scholars have also suggested that family firms are exposed to agency problems between controllers and minority shareholders, especially when families enjoy higher levels of private benefits of control (Dyck and Zingales, 2004; Villalonga and Amit, 2006; Villalonga and Amit, 2010). Therefore, no consensus appears to exist among researchers about whether family control is beneficial or detrimental to the organization (Pindado et al., 2015).

Family shareholders usually enjoy private benefits by using control-enhancing mechanisms, such as pyramidal ownership and business groups (e.g., La Porta *et al.* 1999; Pindado y Requejo, 2015). Traditionally, the use of control-enhancing mechanisms results in a disproportionality principle between voting rights and cash flow rights of the ultimate controlling shareholder (Faccio and Lang 2002). The literature has suggested that the

¹ Evidence from Latin American markets in support of family-controlled firms outperforming non-family firms includes Martinez et al. (2007), Bonilla et al. (2010), González et al. (2012), and Jara and Sepulveda (2016).

effectiveness of different mechanisms to retain control depends on the context in which they are used (e.g., Adams and Ferreira 2008; Cronqvist *et al.* 2012), and the beneficial or detrimental effects over financial outcomes remains unclear. On the one hand, there are some arguments that suggest that excessive voting rights provide incentives to controlling shareholders to extract private benefits and engage in tunneling activities (e.g, Claessens *et al.* 2000; Singal y Singal 2011; Greco *et al.* 2015; Sacristán-Navarro *et al.* 2015). On the other hand, empirical evidence suggests that the disproportionality principle could be weakened by an affiliation with a business group, because of the group's tendency to avoid financial friction through the use of internal capital markets (e.g., Silva *et al.* 2006; Buchuk *et al.* 2014).

In this paper, we examine the effects that family control and control-enhancing mechanisms have on both financial leverage decisions and the use of internal capital markets. Previous studies have already analyzed the effect of family control over capital structure decisions. For instance, Pindado *et al.* (2015) use the distribution of control among shareholders and find that family firms in the Eurozone, especially those with no separation between voting and cash flow rights, have higher levels of debt compared to other family firms and non-family firms. However, no prior study has examined the relationship between specific control-enhancing mechanisms and leverage decisions in markets where high ownership concentration and low distribution of control among shareholders are the norm. In this regard, Chile provides an especially suitable corporate framework to test the effect of control-enhancing mechanisms on both the performance of family businesses and the use of internal capital markets.

After September of 1973, the military government regime started a privatization process. In this process, only a few private agents were able to participate, leading to the

concentration of ownership and the subsequent formation of business groups (Meller, 1993; Buchuk *et al.* 2014). Even today the corporate ownership of the Chilean firms is quite concentrated, mainly in the hands of individual shareholders or business groups who control the firms through direct ownership and/or pyramidal structures (Silva and Majluf 2008; Masulis *et al.* 2011; Buchuk *et al.* 2014). Moreover, a few family shareholders dominate the Chilean corporate system. We also benefit from a regulation of internal capital markets in Chile that requires every listed firm to report a line called “Notes and accounts payable from related companies,” on both the liability side and the asset side of the balance sheet.

Using a sample of listed companies in Chile, we establish a link among family firms, control-enhancing mechanisms, internal capital markets, and leverage decisions. Two contrasting sets of arguments predict the relationship between family ownership and financial leverage. First, a positive relationship can be explained by the unwillingness of family firms to use equity financing to avoid the dilution of family control; in other words, family firms would follow an order where debt is preferred to new equity. Additionally, as long as family businesses are perceived as less risky by debtholders, they will have easier access to debt financing and tend to use more debt (Margaritis and Psillaki, 2010; and Croci *et al.*, 2011). Second, a negative relationship should be expected in the following situations: when family firms prefer internally generated funds to external debt due to conservative behavior in their undiversified portfolios (e.g., McConaughty *et al.*, 2001; Adams *et al.*, 2004), and when the financial distresses and bankruptcy risks of debt significantly increase (e.g., Anderson and Reeb, 2003b; and Faccio *et al.*, 2011).

Our results are in the line with the conservative nature of family firms, because the financial leverage of family-controlled firms is lower than that of non-family-controlled firms. Specifically, we find that family control is negatively associated with the leverage.

This finding remains robust after the inclusion of the industry and year fixed effects and the use of an instrumental variable (IV) approach to control for endogeneity concerns, because a number of unobservable firm characteristics can simultaneously drive both family control and leverage.

Additionally, the degree to which control-enhancing mechanism work can moderate the way in which family firms make leverage decision; therefore, the expected effect of pyramidal ownership can be dual. On the one hand, Jiang et al. (2010) show how controlling shareholders exacerbate the use external corporate loans to extract funds from Chinese listed companies, and that these loans represent a substantial portion of the reported assets and market capitalization of Chinese firms. Moreover, the authors show that this form of tunneling is most severe at higher levels of separation between voting rights and cash flow rights. Under the potential circumstances of tunneling activities, we expect that family firms will show increased leverage when levels of voting-cash flow rights divergence are higher. On the other hand, restricting the use of debt can also enable family firms to avoid the monitoring role of creditors, which could limit the ability of family owners to enjoy the private benefits of control (Volpin, 2002), such as tunneling funds from publicly listed companies to unlisted related companies. More specifically, controlling family shareholders may restrict the use of debt in order to preserve their ability to extract benefits from control.

Another argument that can explain a negative relationship between voting-cash flow rights divergence and the use of debt centers on the influence of internal capital markets on productive business group's structures. Generally, the literature associates the positive effect of business groups affiliation with the existence of internal capital markets in order to outweigh the financial frictions that arise from the use of external sources of debt (Khanna and Tice 2001; Ozbas and Scharfstein 2009; Fan *et al.* 2016).

In this paper, we combine these effects with the separation between control and cash flow rights to gain a more comprehensive picture of family firms' financing patterns and, more importantly, to empirically test whether family control indeed increases or decreases the conflicts of interest among controlling shareholders, minority shareholders, and debt providers. With this aim, we analyze whether the levels of debt vary across family firms with higher degrees of separation of control and cash flow rights. Consequently, for our second hypothesis, we expect the negative relationship between leverage and family control to be more pronounced among those family firms with lower degrees of voting rights than cash flow rights. However, when the divergence of voting-cash flow rights exceeds a certain threshold, family firms will be more leveraged. However, according to the conservative behavior of family nature, the leverage on family firms remains lower than the leverage of non-family counterparts at higher levels of voting-cash flow rights wedge. Our results confirm this hypothesis.

Finally, perhaps the most surprising results of our paper are related to the extent to which family control and the separation of voting and cash flow rights motivate the use of inter-corporate loans as a solution for under-developed capital markets (Khanna and Yafeh, 2007), or, alternatively, to siphon funds from firms in which the controlling shareholder has low cash flow rights and move those funds to firms in which he has high cash flow rights. Lemmon and Lins (2003) show that during the Asian crisis, many firms that experienced strong price declines made related-party loans. Similarly, La Porta, Lopez-de-Silanes, and Zamarripa (2003) show that when Mexican banks lend to firms controlled by the banks' owners, the lending tends to take place on better terms, but is more likely to default. More recently, Buchuk et al. (2014) also provide evidence that lending relationships are formed among firms that are close to each other in the control pyramid and belong to the same

industry, and firms that are in more integrated industries. They also find that, at the margin, firms in which controlling shareholders have high cash-flow rights receive more loans than other firms. However, the authors do not find robust evidence of minority shareholders losing out from intra-group loans, as tunneling predicts.

We formally test these relationships by examining whether the levels of intercorporate loans of family-controlled firms are greater than those of non-family-controlled firms. We study whether the magnitude of the positive relationship between intercorporate loans and family ownership is most pronounced for firms with high separation between voting and cash flow rights. Our results suggest that family firms have higher net loans, measured as the difference between accounts receivable and accounts payable from related companies, than non-family firms. However, we do not find this positive relationship between family control and net loans to be more pronounced among firms that have high divergence between control and cash flow. Overall, the evidence suggests that managers of all family firms, even those with low divergence between control and cash-flow rights, have economic incentives to lend more money to related companies than non-family firms.

We structure the remainder of the paper as follows. Section 2 introduces the empirical methodology. Section 3 presents the data sets we use in the empirical analysis. Section 4 establishes the key empirical results. The last section contains a summary and concluding remarks.

2. Empirical Model

2.1 The Effects of Family Control on Leverage

The first analysis examines the effects of family control on firms' external leverage in a multivariate setting. We hypothesize that family control is negatively related to external leverage (hypothesis 1). The following equation shows the baseline regression for this test:

$$Leverage_{it} = \alpha + \beta_1 Family_{it} + \gamma' X_{it-1} + T_t + I_i + \epsilon_{it}, \quad (1)$$

where *Leverage* is external leverage and *Family* is a binary variable that equals one if firm *i* is controlled by a family, and equals zero otherwise. The vector X_{it-1} contains control variables. I calculate all firm-level control variables on a quarterly basis using the most recent quarter prior to the SEO event. We include in all regressions both year (T_t) and industry (I_i) fixed-effects.

To define our key independent variable, *Family*, we follow previous literature (Martínez *et al.* 2007; Bonilla *et al.* 2010; Chen *et al.* 2010; Kowalewski *et al.* 2010; Sacristán-Navarro *et al.* 2011; Naldi *et al.* 2015). We classify a company as a family firm according to three criteria. First, we inspect the list of business groups produced by SVS. At the end of 2007, there were 117 such groups. In each case, if the group was undoubtedly associated with a business family, we classified firms within the group as family-controlled firms, including the family controlling the firm through pyramidal ownership. Second, if a company did not belong to any of these corporate groups, we categorized it as a family-controlled firm if one or more members of a family-controlled firm on the SVS list controlled the firm at the senior management level. Third, we classified a company not in any business group as a family-controlled firm if one or more members of a family on the SVS list controlled its board of directors. For the last two criteria, we used information from credit rating agencies, company financial.

We also control for other known determinants of firms' leverage that prior literature has documented. Prior empirical studies have shown that some of the most pervasive determinants of leverage include the firm's level of profitability and growth opportunities, the size of the company, and the tangibility of assets. Consequently, the vector X_{it} in equation

(1) includes proxies that reflect these key factors. First, we control for overvaluation and firm's growth opportunities using the Tobin's Q ratio. We define Tobin's Q ratio as the sum of the equity market value and debt book value scaled by the firm book value. We also control for the following firm characteristics: Return on assets (*ROA*); natural log of total assets (*Size*); dividends to equity (*Dividends*); and property, plant, and equipment to assets (*Tangibility*).

Finally, we also control by other ownership characteristics and the wedge between voting rights and cash flow rights. First, we control for whether the firm is affiliated to a business group (*BG*), according to the definition used by the Chilean regulator (SVS). The SVS runs a list of the business groups in the country. According to the Chilean Capital Markets Law², a firm belongs to a business groups if any of this conditions occurs: 1) has the same controller of other firms and the controller holds at least 25% of direct ownership; 2) a significant portion of the firm's assets are compromised to the business groups; 3) the firm is controlled by one or more firms that belong to a business groups controlled by an ultimate shareholder. The SVS website provides periodically with the list of firms that are affiliated to each of business group³. We also control for the cash flow rights of the ultimate shareholder (*Cash Flow Rights*), and for the difference between voting rights and cash flow rights (*Excess Control Rights*) and its squared term. We define all control variables in Appendix A.

2.2 The Effects of Family Control and Excess of Control Rights on External Leverage

Next, we investigate whether companies with low levels of separation between voting and cash flow rights (excess of control rights) will maintain even lower external leverages

² Law n. 18,045 – Title XV, pp. 39-44.

³ <http://www.svs.cl/sitio/mercados/grupos.php> (accessed in October, 2015).

than otherwise, when controlled by families. We hypothesize that family control will play a large decreasing role in leverage of firms with low excesses of control rights. To test this hypothesis, we use the following model:

$$\begin{aligned} \text{Leverage}_{it} = & \alpha + \beta_1 \text{Family}_{it} + \beta_2 \text{Excess Control Rights}_{it} \\ & + \theta' \text{Interaction terms} + \gamma' X_{it-1} + T_t + I_i + \epsilon_{it}, \end{aligned} \quad (2)$$

where we define *Leverage*, *Family*, and *Excess Control Rights* as in equation (1). The variables of interest in this model are the interaction terms between family control and proxy for excess of control rights. The interaction terms allow us to analyze how firms' decisions to leverage may vary in relation to the firms' degrees of excess of control rights and their family ownerships. The vector X_{it} includes control variables. I also control for both year and firm fixed-effects.

2.3 The Effects of Family Control and Excess of Control Rights on Intra-Groups Loans.

Finally, we examine the effects of family control on the flow of intra-group funding. We measure the intensity of internal capital market using the size of the intra-group loans a company receive during a given year. Every Chilean listed firm typically report a line called “notes and account payable from related companies” on the liability side of the balance sheet. We scale account payable from related companies by total assets and use the result as our proxy for active intra-group funding. Our hypothesis suggests that higher levels of internal capital market activity should reduce cash holdings. The following is the econometric specification:

$$\text{Net Loans}_{it} = \alpha + \beta_1 \text{Family}_{it} + \gamma' X_{it-1} + T_t + I_i + \epsilon_{it}, \quad (3)$$

where *Net Loans* corresponds to the difference between the total amount of accounts receivable and total amount of accounts payable from related companies reported by a firm

on its balance sheet (e.g., Buchuk et al., 2014). We take two definitions for intra-group loans. In the first definition, the dependent variable uses the end-of year amount of accounts receivable and accounts payable reported by a firm. Then, we divide the results by the firm's assets at the end of the previous year. In the second definition, the dependent variable uses quarterly data. In particular, we use the maximum difference between quarterly notes and account payable from related companies scaled by the total assets the previous year. The rest of the variable are defined as in equation (1).

Equations (1) to (3) are estimated using OLS data panel estimators. However, since OLS estimates could be biased in the presence of endogeneity, we also use the instrumental variables panel data estimates to check the robustness of our results. Specifically, our firm-level variable of cash flow rights may be endogenous with performance endogenous (Demsetz y Villalonga 2001; Miguel *et al.* 2004; Pindado y Requejo 2015). We deal with this issue by running instrumental variables regressions that consist of a two-stage corrected estimation (Amoako-Adu y Smith 2001). In the first stage we use the cash flow rights as the dependent variable. As independent variables (instruments assumed to be exogenous to the dependent variable), we introduce three variables: the shareholder protection index of Lee (2006), a lagged dummy variable for the introduction of the Sarbanes-Oxley Act that only impacts the ADRs firms, and the introduction of the three corporate governance regulatory reforms: the "Takeover Law" in 2000, the "Corporate Governance Law" in 2009 (Ley-N°20.382 2009) and the legal rules on board constitution and operation in 2012 (NCG-N°341 2012). This selection of instrumental variables is coherent with Roberts y Whited (2013) recommendations to address endogeneity issues in corporate finance. We also introduce the same set of control variables. Once we estimate the first stage regression, we rerun the same equations corrected by endogeneity.

3. Data

Our data sets come from several sources. First, we obtain financial information and stock prices from Economatica and Thomson Reuters Eikon. To identify business groups, we use the list of Chilean business groups published by the Chilean Stock Exchange Authority (SVS). We also use from the SVS to determinate the ultimate ownership level of voting and cash flow rights. Finally, we collect information on the board of directors and the top management team from credit rating agencies, the financial press, and other company sources. To measure the intensity of internal capital market, we use the size of the intra-group loans a company receive and provide during a given year. Every Chilean listed firm typically report a line called “notes and account payable from related companies” on the liability side of the balance sheet. We scale account payable and account receivable from related companies by total assets and use the result as our proxy for active intragroup funding.

In line with the earlier literature, we apply several filters to the data. First, we only consider stocks listed on the Santiago Stock Exchange for the period 2006 – 2014. Next, and to conform to the previous literature and minimize the influence of regulatory issues, we exclude financials and utilities. After imposing these filters, the final sample is an unbalanced panel of 829 firm-year observations from 105 listed firms for the period 2006-2014. In this sample, 525 observations are considered firms under family control and 304 are non-family firms.

Table 1 presents the number of observation and firms in our sample, categorized by year. Table 2 provides descriptive statistics for the final sample of 829 observations, where, to minimize the influence of extreme outliers, we drop the outliers in the top and bottom 1% of each variable. Table 2 shows that 46.6% firms in the sample features pyramidal structures that allow separating the voting rights and cash flow rights. On average, this difference of

rights is 8.6%. As in other similar countries, the ownership structure is highly concentrated (Hormazábal 2010): on average, the ultimate shareholder's voting rights and cash flow rights are 59.3% and 50.6%, respectively. These figures highlight the potential incentives that pyramidal ownership gives to controllers through excess of voting power over cash flow.

[Table 1 about here]

[Table 2 about here]

4. Empirical Results

In the analysis that follows, we establish a relationship between family control and financial leverage by first doing a univariate analysis and then estimating multivariate regressions.

4.1 Univariate Analysis

First, we establish the differences that exist between mean values of family and non-family firms for the variables that we then use in the regressions of family and non-family firms. Panel A of Table 2 shows that Chilean family and non-family firms only differ from each other in the aspect related to leverage and net loans. The mean leverage for the family firms subsample is 0.230, whereas the comparable figure for non-family firms is 0.271. The differences for the mean leverages between the two groups are statistically significant at the 1 percent level. Meanwhile, the differences for the mean net loan between family and non-family firms are statistically significant at the 1 percent level. These results are consistent with the prediction of our hypotheses and indicate that family firms use less debt and have higher levels of account receivable subtracted of account payable, scaled by the total assets, than non-family firms.

Next, we establish the relationship between mean values for leverage and net loans of firms for samples based on: (1) Divergence in control and cash flow rights (separation)

and (2) affiliation to business groups. Each of the subsamples is further partitioned into family and non-family firms. Panel B of Table 2 splits the sample into firms with separation of control and firms without separation based on the divergence of voting and cash-flow rights. Results indicate that the difference between the mean leverage of firms with and without separation of ownership and control is statistically insignificant. More importantly, we document that family firms, both with and without separation of control, have lower levels of leverage than no-family firms.

Panel C of Table 2 partitions the sample of firms by the affiliation to business groups and family ownership. Results show that firms non-affiliated to business groups have higher leverage (0.2667) compared to affiliated to business groups (with a leverage value of 0.2351). The difference between the means of the two groups is statistically significant at the one percent level. Non-family firms' subgroups are the only subgroups where we find a significant difference between affiliated and non-affiliated to business groups. For instance, among the non-family owned firms, the mean leverage for non-affiliated to business groups are 0.2936. In contrast, non-family firms affiliated to business groups have an average leverage of 0.2545. The difference between the means of the two groups is statistically significant at the five percent level. Panel C of Table 2 also document that family firms, both affiliated and non-affiliated to business groups, have lower levels of leverage than no-family firms.

Panel D of Table 2 partitions net loans by separation of ownership and control and by family ownership. Supporting our hypothesis that family firms lend more money to related firms, we find that the mean loans is significantly smaller for family firms than for non-family firms, for both firms with and without separation of ownership and control. The differences in the mean net loans between the subgroups are statistically significant at the

one percent level. Finally, Panel E of Table 2 partitions the sample firms by affiliation to business groups and by family control. The evidence shows that firms affiliated to business groups receive more loans from related companies. Importantly, we document that not all family firms make more loans to related companies than non-family firms; rather, family firms affiliated to business groups are the ones that have significantly lower net loans. The differences in means between the family and non-family groups within the subgroups of firm affiliated to business groups is statistically significant at the one percent level.

[Table 2 about here]

4.2 Multivariate Analysis

4.2.1 The Effects of Family Control on Leverage

In this section, we use a multivariate setting to examine the effects that family ownership has on the financial leverages of firms. Our first hypothesis is that family firms take a conservative approach regarding their debt and financial risk exposures, and as such, we expect family-controlled firms to have lower levels of leverage than non-family firms. The empirical evidence presented in Table 4 supports a negative direct effect of family control on a company's level of debt. The results are consistent with the view that family firms prefer equity to debt as an external source of funds to avoid the monitoring role of creditors, which could limit the ability of family owners to enjoy the private benefits of control (Volpin, 2002). These results are contrasting to those of Pindado et al. (2015), who investigate the effects of family control on company's levels of debt for a sample of firms in countries part of the Eurozone. Pindado et al. (2015) find a positive relationship between family control and company's level of debt. They conclude that their result is consistent with the view that family firms prefer debt to equity as an external source of funds to avoid diluting the family's control of the business (King and Santor, 2008; and Croci et al., 2011).

We now turn to the impact of the separation of ownership and control on leverage. Results in Table 4 show that excess of control rights have a negative effect on debt. Firms appear hence to have less debt when the excess control rights of the ultimate controlling shareholder increases. However, we also include the squared-value of ultimate cash-flow rights in order to control for a potential non-linear effect in the spirit of Morck et al. (1988). We find that the relationship between excess of control rights and leverage is not linear. Results report a U-shaped relation between leverage and the separation of voting and cash flow rights. To restate these findings, companies with low degrees of separation display low leverage ratios, meanwhile companies with high degrees of separation tend to have high debt ratios. This is in line with previous literature showing the contingent effect of the disproportional ownership structures, so that whether such mechanisms create or destroy value is contingent on its level of use. It is important to note that the negative relationship between family control and company's level of debt remains even after controlling for the endogeneity problem of the family variable as previously explained.

For comprehensiveness, we also control for a number of firm and deal characteristics that appear in the existing literature that may affect firms' leverage. In fact, variables that other studies have emphasized do seem to play an important role for this sample of firms. In particular, variables related to size (natural log of assets), growth opportunities (Tobin's Q), profitability (ROA), and tangibility of assets (property, plant, and equipment to assets) are statistically significant with companies' levels of debt.

[Table 4 about here]

4.2.2 Interactions with Excess of Control Rights

We hypothesize that family firms restrict the use of debt to avoid the monitoring role of creditors, which could limit the ability of family owners to enjoy the private benefits of control. Consequently, in Table 5, the difference between voting and cash-flow rights is interacted with the family dummy variable. Prior literature has argued that family ownership tends to offset the negative impact of a high ownership-control discrepancy. However, it has been also often assumed that families are prone to extract private benefits at the expense of minority shareholder. Results presented in Table 5 validate this last intuition. First, we note that the coefficient for family control variable is always negative and statistically significant at the one percent level. The coefficient for excess of control rights is also always negative and statistically significant. We then try to analyze more precisely these last finding: we interact the family control variable with the separation of control and ownership and find that the effect of excess of control rights is smaller for family firms. More precisely, the coefficient for the interaction term between the excess of control rights and the dummy variable for family control is positive and statistically significant. This finding suggest that firms with high separation of control and cash-flow rights maintain a relatively lower leverage, especially when firms are non-family controlled.

However, when we test for a possible non-linear relation between the separation control and ownership in family firms and financial leverage, we do find evidence of a non-linear relationship between these. In particular, the specific effects for the interaction term between excess of control and the dummy variable for family have a positive sign, while the interaction term between the square value of the excess of control and the dummy variable for family have a negative sign. These results indicate that there is an inverse U-shaped influence of the separation of rights in family controlled firms. Therefore, results reported in Table 5 show that for family-controlled firms with low levels of separation have high levels

of leverage. However, after a certain threshold, family firms with high divergence between voting rights and cash flow rights exhibit lower leverage compared to similar non-family firms. All in all, we conclude that in family-controlled firms there exists an optimal value for the separation of voting and cash-flow rights respect to the amount of debt kept by the company. These results are consistent with the hypothesis that family firms restrict the use of debt to avoid the monitoring role of creditors, which could limit the ability of family owners to enjoy the private benefits of control. Results remain robust after controlling for all the other determinants of leverage and endogeneity concerns using an instrumental variable approach.

[Table 5 about here]

4.2.3 The Effects of Family Control and Excess of Control Rights on Intra-Groups

Loans

We now turn our attention to the internal capital markets of family firms and examine the effects of family control on the flow of intra-group funding. Prior studies have suggested the use of inter-corporate loans by controlling shareholders as a solution for under-developed capital markets (Khanna and Yafeh, 2007). Consequently, one reason why family firms have lower levels of leverage is that they have access to funds available from intra-group transaction when they need financing, and therefore, they should be able to reduce the amount of debt taken from standard sources of funds such as banks or bondholders.

Alternatively, we hypothesize that family firms, and specially those family firms with high divergence between voting rights and cash flow rights, will siphon funds from publicly listed companies to related companies. As argued before, one reason why companies may keep low levels of leverage is to avoid the monitoring role of creditors, which could limit the ability of family owners to opportunistically lend money to firms in which the controlling

family has high cash flow rights. Results presented in Table 6 are partially consistent with our hypotheses. On the one hand, we find that family-controlled firms have larger net loans than non-family firms. This result is consistent with the hypothesis that family-controlled firms have higher incentives to tunneling money to related companies than non-family firms. As a consequence, we can discard the hypothesis that family-controlled firms exhibit lower leverage ratios because of their access to internal capital markets. The result remain robust after controlling for other determinants of inter-corporate loans and endogeneity concerns.

On the other hand, we do not find that the separation of ownership and control is a statistically significant determinant of net loans. Moreover, we do not find either a significant coefficient for the interaction between family control and separation of control and ownership. This last result indicates that family firms in which the controlling shareholder enjoys the lowest cash-flow ownership rights do not systematically have the largest net loans balances as we hypothesize.

[Table 6 about here]

5. Concluding Remarks

In this paper, we have shown how family control and pyramidal ownership affect the financial leverage of firms. Using a panel dataset of family-controlled firms and comparable non-family firms in Chile, we test the hypothesis that family firms have lower leverage ratios than non-family firms. We confirm this hypothesis and show that family control has a negative direct effect on a company's level of debt. This result provides evidence in support of the conservative approach taken by families regarding their debt and financial risk exposures. Moreover, our result contradict some of the prior empirical findings regarding the effects of family control on capital structure decision.

Additionally, we test the hypothesis that family firms restrict the use of debt to avoid the monitoring role of creditors, which could limit the ability of family owners to enjoy the private benefits of control. Consistent with this hypothesis, we find that the magnitude of the negative relationship between leverage and family control is most pronounced among those family firms with a higher degree of voting rights than cash flow rights. Finally, we do not find evidence consistent with the hypothesis that family-controlled firms exhibit lower leverage ratios because of their access to internal capital markets. In fact, we find the opposite; listed family firms provide more loans to related companies than comparable non-family firms.

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Appendix A: Variable definition.

Variable	Definition
Family	Dummy variable that equals one if the ultimate large shareholder is a family group or an individual investor, and zero otherwise.
Excess Control Rights	(Voting rights – cash flow rights) of the ultimate large shareholder.
Voting Rights	Voting rights of the ultimate large shareholder estimated through the weakest link methodology.
Cash Flow Rights	Cash flow rights of the ultimate large shareholder estimated by the sum of direct ownership plus the multiplication of indirect participations.
Business Groups	Dummy variable that equals one if the firm belongs to a Business Group, according to the <i>Superintendencia de Valores y Seguros</i> (SVS) definition, and zero otherwise.
Size	Natural logarithm of total assets.
Leverage	(Debt in Current Liabilities + Long-Term Debt) / Total Assets.
Dividends-to-Equity	Cash Dividends / Book Value of Equity
Age	Natural logarithm of Years since IPO.
ROA	Income Before Extraordinary Items / Total Assets.
Leverage	(Debt in Current Liabilities + Long-Term Debt) / Total Assets.
Tangibility	(Property, plant, and equipment) / Total Assets.
Net Loans	End of the year measure of (Total Accounts Receivable Related Parties - Total Accounts Payable Related Parties) / Total Assets.
Maximum Net Loans	Highest quarterly measure of (Total Accounts Receivable Related Parties - Total Accounts Payable Related Parties) / Total Assets, within the fiscal year.
Tobin's Q	(Total Assets + Market Equity – Book Value of Equity) / Total Assets.

Table 1. Distribution of the Sample by Ownership Structure and Year

This table presents the number of firms, categorized by year and ownership structure, in our sample. We only consider firms listed in the Santiago Stock Exchange. We exclude financial firms. We classify a firm as either as family or non-family according to three criteria. First, we inspect the list of business groups produced by SVS. If the group was undoubtedly associated with a business family, we classified firms within the group as family-controlled firms, including the family controlling the firm through pyramidal ownership. Second, if a company did not belong to any of these corporate groups, we categorized it as a family-controlled firm if one or more members of a family-controlled firm on the SVS list controlled the firm at the senior management level. Third, we classified a company not in any business group as a family-controlled firm if one or more members of a family on the SVS list controlled its board of directors.

Panel A: Distribution of the Sample by Ownership Structure and Year			
<i>Year</i>	<i># Observations</i>	<i>% Family Firms</i>	
2004	79	63.3%	
2005	85	64.7%	
2006	89	64.0%	
2007	94	64.9%	
2008	92	64.1%	
2009	90	64.4%	
2010	93	62.4%	
2011	94	62.8%	
2012	92	63.0%	
2013	94	61.7%	
2014	91	62.6%	
Total	993	63.4%	

Panel B: Distribution of the Sample by Ownership Structure and Industry			
<i>Industry</i>	<i># Observations</i>	<i># Firms</i>	<i>% Family Firms</i>
Basic Materials	187	21	81.8%
Consumer Cyclical	109	13	47.7%
Consumer Non-Cyclical	232	23	82.8%
Energy	22	2	0.0%
Financials	14	2	78.6%
Healthcare	22	2	50.0%
Industrials	210	21	69.5%
Telecommunications Services	54	5	59.3%
Utilities	143	16	23.1%
Total	993	105	63.4%

Table 2. Summary Statistics for Key Variables

This table reports the means, standard deviations, minimums, medians, and maximums of the variables used in the study, as well as the Pearson correlations between them. The sample comprises 105 companies listed in the Santiago Stock Exchange between the years 2006 and 2014 (829 observations). *Leverage*, is the ratio of total debt to total assets; *Family* is a dummy variable that equals 1 when the ultimate controlling shareholders is a family, and 0 otherwise; *Excess Control Rights* is the separation of control and ownership of the ultimate shareholder; *Business Group* is a dummy variable that equals one if the firm belongs to a business group, and 0 otherwise; *Size* is the log of total assets; *Tobin's Q* is the ratio of the sum of equity market value and debt book value scaled by the firm book value; *ROA* is the return on assets; *Tangibility* is defined as property, plant, and equipment to assets; *Dividend/Equity* is total dividends to total equity; *Cash Flow Rights* is the cash flow rights of the ultimate shareholder. *Net Loans*, is defined as the difference between the total amount of accounts receivable and the total amount of accounts payable from related companies at the end of the fiscal year. Alternatively, *Max Net Loans* takes the maximum quarterly data for the total amount of accounts receivable and the total amount of accounts payable from related companies within the same fiscal year. We define these variables in Appendix A.

Panel A: Summary Statistics										
Variable	N	Mean	p50	SD	Min	Max	p25	p75	Skewness	Kurtosis
Leverage	983	0.245	0.252	0.131	0.000	0.579	0.156	0.333	-0.029	2.494
Family Control (dummy)	993	0.634	1.000	0.482	0.000	1.000	0.000	1.000	-0.558	1.312
Business Group (dummy)	993	0.684	1.000	0.465	0.000	1.000	0.000	1.000	-0.790	1.625
Size	993	26.328	26.319	1.823	20.224	31.103	25.143	27.688	-0.088	2.702
Tobin's Q	983	0.993	0.864	0.557	0.225	4.862	0.645	1.233	2.129	10.998
ROA	979	0.046	0.040	0.062	-0.248	0.422	0.016	0.072	0.937	10.007
Tangibility	986	0.457	0.461	0.229	0.000	0.941	0.312	0.646	-0.197	2.270
Dividends-to-Equity	984	0.062	0.037	0.085	0.000	0.800	0.009	0.082	3.535	22.028
Cash Flow Rights	973	0.500	0.468	0.230	0.082	0.991	0.334	0.667	0.192	2.166
Excess of Control Rights	987	0.087	0.005	0.127	0.000	0.527	0.000	0.145	1.525	4.442
Net Loans	928	-0.007	0.000	0.045	-0.371	0.082	-0.006	0.004	-4.251	26.894
Maximum Net Loans	928	-0.015	0.000	0.050	-0.375	0.061	-0.012	0.001	-3.978	21.909

Panel B: Correlation Matrix

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Leverage (1)	1.000											
Family Control (dummy) (2)	-0.215	1.000										
Business Group (dummy) (3)	-0.124	0.149	1.000									
Size (4)	0.239	-0.010	0.416	1.000								
Tobin's Q (5)	0.041	0.053	0.099	0.082	1.000							
ROA (6)	-0.287	0.040	0.061	0.007	0.540	1.000						
Tangibility (7)	0.195	0.013	0.094	0.045	0.077	-0.111	1.000					
Dividends-to-Equity (8)	-0.026	0.021	0.124	0.123	0.316	0.460	0.056	1.000				
Cash Flow Rights (9)	-0.008	-0.066	-0.107	-0.039	-0.238	-0.074	-0.145	-0.139	1.000			
Excess of Control Rights (10)	-0.047	0.035	0.193	0.054	0.177	0.142	0.002	0.092	-0.488	1.000		
Net Loans (11)	0.043	0.207	-0.057	0.087	0.040	-0.025	-0.005	-0.029	0.025	-0.096	1.000	
Maximum Net Loans (12)	0.072	0.213	-0.072	0.128	0.015	-0.027	0.022	-0.052	0.044	-0.133	0.874	1.000

Table 3. Univariate Analysis for Firm-Level Characteristics, Categorized by Ownership Structure.

This table shows the difference of means tests between family and non-family firms in their financial characteristics. The sample comprises 105 companies listed in the Santiago Stock Exchange between the years 2006 and 2014 (829 observations). *Leverage*, is the ratio of total debt to total assets; *Excess Control Rights* is the separation of control and ownership of the ultimate shareholder; *Size* is the log of total assets; *Tobin's Q* is the ratio of the sum of equity market value and debt book value scaled by the firm book value; *ROA* is the return on assets; *Tangibility* is defined as property, plant, and equipment to assets; *Dividend/Equity* is total dividends to total equity; *Cash Flow Rights* is the cash flow rights of the ultimate shareholder. *Net Loans*, is defined as the difference between the total amount of accounts receivable and the total amount of accounts payable from related companies at the end of the fiscal year. Alternatively, *Max Net Loans* takes the maximum quarterly data for the total amount of accounts receivable and the total amount of accounts payable from related companies within the same fiscal year. *, **, and *** indicate the coefficient is significantly different from zero at the 10%, 5%, and 1% significant level, respectively. These variables are defined in Appendix A. We classify a firm as either as family or non-family according to three criteria. First, we inspect the list of business groups produced by SVS. If the group was undoubtedly associated with a business family, we classified firms within the group as family-controlled firms, including the family controlling the firm through pyramidal ownership. Second, if a company did not belong to any of these corporate groups, we categorized it as a family-controlled firm if one or more members of a family-controlled firm on the SVS list controlled the firm at the senior management level. Third, we classified a company not in any business group as a family-controlled firm if one or more members of a family on the SVS list controlled its board of directors. *, **, and *** indicate the coefficient is significantly different from zero at the 10%, 5%, and 1% significant level, respectively.

Panel A: Characteristics of Family Controlled vs Non-Family Controlled Firms			
Variable	Non-Family Firms	Family Firms	Difference
Leverage	0.271	0.230	0.041***
Size	26.338	26.322	0.016
Tobin's Q	0.973	1.004	-0.032
ROA	0.045	0.047	-0.003
Tangibility	0.453	0.460	-0.007
Dividends-to-Equity	0.066	0.060	0.007
Cash Flow Rights	0.514	0.492	0.023
Excess of Control Rights	0.081	0.090	-0.009
Net Loans	-0.019	-0.001	-0.018***
Maximum Net Loans	-0.028	-0.007	-0.021***

Panel B: Leverage Categorized by Family Ownership and Divergence in Control and Cash Flow Rights					
		All Firms	Non-Family	Family	Difference
Without Separation	Mean	0.2484	0.2779	0.2325	0.0454***
	N	459	161	298	
With Separation	Mean	0.2419	0.2652	0.228	0.0372***
	N	524	196	328	
Difference		0.0064	0.0126	0.0044	

Panel C: Leverage Categorized by Family Ownership and Business Group Affiliation					
		All Firms	Non-Family	Family	Difference
Non-BG Affiliated	Mean	0.2667	0.2936	0.2409	0.0527***
	N	307	150	157	
BG Affiliated	Mean	0.2351	0.2545	0.2265	0.028***
	N	676	207	469	
Difference		0.0316***	0.0391**	0.0144	

Panel D: Net Loans Categorized by Family Ownership and Divergence in Control and Cash Flow Rights					
		All Firms	Non-Family	Family	Difference
Without Separation	Mean	-0.0046	-0.0156	0.0013	-0.0169***
	N	445	154	291	
With Separation	Mean	-0.0098	-0.022	-0.0027	-0.0193***
	N	483	178	305	
Difference		0.0052*	0.0064	0.004**	

Panel E: Net Loans Categorized by Family Ownership and Business Group Affiliation					
		All Firms	Non-Family	Family	Difference
Non-BG Affiliated	Mean	-0.0026	-0.0035	-0.0019	-0.00160
	N	286	133	153	
BG Affiliated	Mean	-0.0094	-0.0294	-0.0004	-0.029***
	N	642	199	443	
Difference		0.0068**	0.0259***	-0.0015	

Table 4. The Effects of Family Control and Excess of Control Rights on External Leverage.

This table presents the parameter estimates from OLS and 2SLS regressions of the following model:

$$Leverage_{it} = \alpha + \beta_1 Family_{it} + \gamma' X_{it-1} + T_t + I_i + \epsilon_{it},$$

where the dependent variables, *Leverage*, is the ratio of total debt to total assets; *Family* is a dummy variable that equals 1 when the ultimate controlling shareholders is a family, and 0 otherwise; *Excess Control Rights* is the separation of control and ownership of the ultimate shareholder; *Business Group* is a dummy variable that equals one if the firm belongs to a business group, and 0 otherwise; *Size* is the log of total assets; *Tobin's Q* is the ratio of the sum of equity market value and debt book value scaled by the firm book value; *ROA* is the return on assets; *Tangibility* is defined as property, plant, and equipment to assets; *Dividend/Equity* is total dividends to total equity; *Cash Flow Rights* is the cash flow rights of the ultimate shareholder. We include fixed effects at the industry and year levels. Robust standard errors are in parentheses. *, **, and *** indicate the coefficient is significantly different from zero at the 10%, 5%, and 1% significant level, respectively.

<i>Dep. Variable: Leverage</i>	<i>OLS Model</i>	<i>2SLS Model</i>
	(1)	(2)
Family	-0.0411*** (4.0882)	-0.0476*** (4.2116)
Excess Control Rights	-0.2657** (2.3689)	-1.2277*** (5.6634)
Excess Control Rights Squared	0.7320** (2.5201)	2.0282*** (4.9297)
Business Groups	-0.0607*** (5.6159)	-0.0598*** (4.4754)
Size	0.0197*** (7.5269)	0.0217*** (7.0185)
Tobin's Q	0.0699*** (6.4857)	0.0195 (1.2872)
ROA	-0.9582*** (9.5612)	-0.6578*** (5.4028)
Tangibility	0.0553** (2.3118)	-0.0012 (0.0426)
Dividends/Equity	0.0215 (0.3756)	-0.0505 (0.6207)
Cash Flow Rights	0.0246 (1.1366)	-0.4993*** (4.7681)
Constant	-0.2433*** (3.1633)	0.0662 (0.7076)
Year Fixed-effects	Yes	Yes
Industry Fixed-effects	Yes	Yes
Obs.	769	716
Adj. R	0.2649	
Uncentered R-squared		0.7426
Hansen J		0.4199

Table 5. The Effects of Family Control and Excess of Control Rights on External Leverage, with Interaction Terms.

This table presents the parameter estimates from 2SLS regressions of the following model:

$$Leverage_{it} = \alpha + \beta_1 Family_{it} + \beta_2 Excess\ Control\ Rights_{it} + \theta' Interaction\ terms + \gamma' X_{it-1} + T_t + I_i + \epsilon_{it},$$

where the dependent variables, *Leverage*, is the ratio of total debt to total assets; *Family* is a dummy variable that equals 1 when the ultimate controlling shareholders is a family, and 0 otherwise; *Excess Control Rights* is the separation of control and ownership of the ultimate shareholder; *Business Group* is a dummy variable that equals one if the firm belongs to a business group, and 0 otherwise; *Size* is the log of total assets; *Tobin's Q* is the ratio of the sum of equity market value and debt book value scaled by the firm book value; *ROA* is the return on assets; *Tangibility* is defined as property, plant, and equipment to assets; *Dividend/Equity* is total dividends to total equity; *Cash Flow Rights* is the cash flow rights of the ultimate shareholder. We include fixed effects at the industry and year levels. Robust standard errors are in parentheses. *, **, and *** indicate the coefficient is significantly different from zero at the 10%, 5%, and 1% significant level, respectively.

<i>Dep. Variable: Leverage</i>	<i>2SLS Model</i>				
	<i>All Firms</i>			<i>Business Group Firms</i>	
	(1)	(2)	(3)	(4)	(5)
Family	-0.0454*** (3.9024)	-0.0599*** (4.0586)	-0.0685*** (4.4094)	-0.1119*** (3.5047)	-0.1491*** (3.8294)
Excess Control Rights	-0.4633*** (4.8273)	-0.5790*** (4.4719)	-1.5477*** (5.3811)	-0.8974*** (2.8459)	-2.7748*** (3.4077)
Business Groups	-0.0514*** (3.7160)	-0.0513*** (3.7824)	-0.0613*** (4.7818)	.	.
Size	0.0198*** (6.4734)	0.0193*** (6.3914)	0.0215*** (7.2057)	0.0321*** (5.7961)	0.0357*** (5.8088)
Tobin's Q	0.0144 (0.9026)	0.0146 (0.9403)	0.0217 (1.5080)	0.0060 (0.2464)	0.0151 (0.6410)
ROA	-0.6487*** (5.0461)	-0.6475*** (5.1042)	-0.6810*** (5.7471)	-0.5185** (2.4699)	-0.5602*** (2.7203)
Tangibility	0.0019 (0.0642)	0.0067 (0.2369)	0.0058 (0.2118)	0.0044 (0.0865)	0.0022 (0.0445)
Dividends/Equity	-0.1246 (1.3573)	-0.1029 (1.1692)	-0.0325 (0.4291)	-0.2480 (1.5411)	-0.1527 (1.0613)
Excess Control x Family		0.1818* (1.8713)	0.6249** (2.4271)	0.2969* (1.9039)	1.6333*** (2.8103)
Excess Control Rights Squared			2.8161*** (4.3472)		4.7867*** (3.2944)
Excess Control Squared x Family			-1.3911** (1.9965)		-3.4679*** (2.5987)
Cash Flow Rights	-0.4887*** (4.6544)	-0.4717*** (4.6962)	-0.4538*** (4.8601)	-0.8477*** (2.9904)	-0.8838*** (3.2129)
Constant	0.0912 (0.9279)	0.1035 (1.0539)	0.0539 (0.6089)	-0.0474 (0.2835)	-0.0842 (0.5483)
Year Fixed-effects	Yes	Yes	Yes	Yes	Yes
Industry Fixed-effects	Yes	Yes	Yes	Yes	Yes
Obs.	716	716	716	496	496
Uncentered R-squared	.7339	.7429	.7637	.5262	.5298
Hansen J	.2165	.2534	.4247	.1110	.0804
Marginal Effects:					
Excess Control x Family		-0.3972***	-0.6760***	-0.6005***	-0.8728***
Excess Control Squared x Family			2.8501***		2.6376**

Table 6. *The Effects of Family Control and Excess of Control Rights on Intra-Groups Loans.*

This table presents the parameter estimates from OLS and 2SLS regressions of the following model:

$$Net\ Loans_{it} = \alpha + \beta_1 Family_{it} + \gamma' X_{it-1} + T_t + I_i + \epsilon_{it},$$

where the dependent variables, *Net Loans*, is defined as the difference between the total amount of accounts receivable and the total amount of accounts payable from related companies at the end of the fiscal year. Alternatively, *Max Net Loans* takes the maximum quarterly data for the total amount of accounts receivable and the total amount of accounts payable from related companies within the same fiscal year. *Family* is a dummy variable that equals 1 when the ultimate controlling shareholders is a family, and 0 otherwise; *Excess Control Rights* is the separation of control and ownership of the ultimate shareholder; *Business Group* is a dummy variable that equals one if the firm belongs to a business group, and 0 otherwise; *Size* is the log of total assets; *Tobin's Q* is the ratio of the sum of equity market value and debt book value scaled by the firm book value; *ROA* is the return on assets; *Tangibility* is defined as property, plant, and equipment to assets; *Dividend/Equity* is total dividends to total equity; *Cash Flow Rights* is the cash flow rights of the ultimate shareholder. We include fixed effects at the industry and year levels. Robust standard errors are in parentheses. *, **, and *** indicate the coefficient is significantly different from zero at the 10%, 5%, and 1% significant level, respectively.

Dep. Variable:	2SLS Model					
	All Firms				Business Group Firms	
	Net Loans	Net Loans	Max Net Loans	Max Net Loans	Net Loans	Max Net Loans
	(1)	(2)	(3)	(4)	(5)	(6)
Family	0.0170*** (3.7006)	0.0166*** (3.2661)	0.0209*** (4.4144)	0.0212*** (3.7000)	0.0206** (2.1798)	0.0213*** (2.1279)
Excess Control Rights	-0.0110 (0.1627)	0.0840 (0.6754)	-0.0750 (1.2638)	-0.0130 (0.1320)	-0.0370 (0.1618)	-0.2278 (1.0822)
Excess Control Rights Squared	-0.1145 (0.6413)	-0.5360 (1.2498)	0.0321 (0.2722)	-0.2244 (0.8508)	-0.2900 (0.5219)	0.2697 (0.6994)
Business Groups	-0.0067* (1.6540)	-0.0061 (1.5469)	-0.0090** (2.0811)	-0.0085** (2.0400)	.	.
Size	0.0019 (1.4650)	0.0016 (1.3250)	0.0031** (2.4104)	0.0030** (2.3862)	0.0015 (0.7964)	0.0036* (1.9244)
Tobin's Q	0.0041 (1.0010)	0.0034 (0.8459)	-0.0002 (0.0504)	-0.0006 (0.1377)	0.0035 (0.7093)	0.0021 (0.3993)
ROA	0.0064 (0.1222)	0.0161 (0.3042)	0.0320 (0.6035)	0.0382 (0.7199)	-0.0092 (0.1284)	-0.0104 (0.1412)
Tangibility	-0.0071 (0.9305)	-0.0069 (0.9445)	-0.0053 (0.6501)	-0.0054 (0.6796)	-0.0030 (0.3157)	-0.0021 (0.1960)
Dividends/Equity	-0.0391 (1.4728)	-0.0357 (1.4751)	-0.0784** (2.5031)	-0.0772** (2.4740)	-0.0839** (2.0838)	-0.1386*** (2.9496)
Leverage	0.0299 (1.2792)	0.0301 (1.3042)	0.0535** (2.2634)	0.0542** (2.2647)	0.0640** (2.1278)	0.0869*** (2.8423)
Excess Control x Family		-0.1566 (1.3495)		-0.1004 (1.1579)	-0.1099 (0.6032)	0.0320 (0.2073)
Excess Control Squared x Family		0.6318 (1.4966)		0.3792 (1.4587)	0.4531 (0.8868)	-0.0493 (0.1519)
Cash Flow Rights	-0.0178 (0.7784)	-0.0224 (1.0344)	-0.0311 (1.3546)	-0.0341 (1.5725)	-0.0890* (1.6455)	-0.1161** (2.0982)
Constant	-0.0615** (2.0030)	-0.0512* (1.8548)	-0.0887*** (2.8346)	-0.0833*** (2.7432)	-0.0316 (0.9533)	-0.0715* (1.8946)
Year Fixed-effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed-effects	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	673	673	674	674	473	475
Uncentered R-squared	.1105	.1303	.1791	.1821	.1019	.135054
Hansen J	.6104	.3879	.3920	.3015	.1797	.0095613
Marginal Effects:						
Excess Control x Family		-0.0571*		-0.0884***	-0.1158**	-0.1540***
Excess Control Squared x Family		0.1916		0.3097	0.3261	0.4408