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DOCUMENTO de TRABAJO


379

2010

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www.economia.puc.cl · ISSN (edición impresa) 0716-7334 · ISSN (edición electrónica) 0717-7593

Versión impresa ISSN: 0716-7334
Versión electrónica ISSN: 0717-7593

PONTIFICIA UNIVERSIDAD CATOLICA DE CHILE
INSTITUTO DE ECONOMIA

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Oficina de Publicaciones
Casilla 76, Correo 17, Santiago
www.economia.puc.cl

# CEO COMPENSATION AMONG FIRMS CONTROLLED BY LARGE SHAREHOLDERS: EVIDENCE FROM EMERGING MARKETS

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Santiago, Septiembre 2010

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# CEO Compensation among Firms Controlled by Large Shareholders: Evidence from Emerging Markets*

Francisco Gallego† Borja Larrain‡

First Version: October 2009

This Version: September 2010

**Abstract**

Using a novel data base for three emerging markets, we find that the type of large shareholder matters for CEO compensation. In particular, we find a compensation premium of about 30 log points for professional (not controller-related) CEOs working in firms controlled by a family compared to firms controlled by other large shareholders. The premium cannot be explained away by standard firm characteristics, observable executive skills (e.g., education or tenure), or the compensation of the CEO in her former job. The premium comes mostly from family firms with absent founders and when sons are involved.

*A previous version of this paper circulated with the title "The Compensation of Professional Managers in Family Firms." We thank Matías Braun, Marcelo Donelli, Carola Frydman, Jeanne Lafortune, Andrei Shleifer, Marcos Singer, and seminar participants at the Pontificia Universidad Católica de Chile and Universidad Adolfo Ibáñez for comments and suggestions. We particularly thank Alfonso Mujica and José Barroilhet from Spencer Stuart's Santiago office for making available the data we use in this study, and for many conversations about the market for professional managers. The executives' identity was removed from the dataset in order to protect their privacy. Luis Beltrán, Felipe González, Andrés Vicencio, and especially Christian Salas provided outstanding research assistance. Larrain acknowledges partial financial support from the Programa Bicentenario de Ciencia y Tecnología in the context of Concurso de Anillos de Investigación en Ciencias Sociales (code SOC-04). The usual disclaimer applies.

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The principal-agent framework has been the workhorse model for studying executive compensation as seen in Jensen and Murphy (1990) and Murphy (1999). In this framework a principal must delegate control to an agent who cannot be easily monitored, and who needs incentives to work hard. This captures the conflict between a set of dispersed shareholders, with little incentive to monitor, and a manager, which is typical of U.S. firms. However, dispersed ownership is not the paradigm in other countries. In fact, concentrated ownership is the norm in most of continental Europe, Asia, and Latin America (see Claessens, Djankov, and Lang (2000), Faccio and Lang (2002), and La Porta, López-de-Silanes, and Shleifer (1999)). Even in the U.S. some publicly-traded firms are controlled by a small number of shareholders with large stakes (e.g., Microsoft or Wal-Mart Stores). Principals with large stakes have powerful incentives to monitor managers and therefore can be a solution to the principal-agent problem posed by dispersed ownership (Shleifer and Vishny 1986). For example, Bertrand and Mullainathan (2001) find that executive pay is less sensitive to pure luck in firms with large shareholders.

A parallel literature studies the peculiarities of one form of concentrated ownership: family ownership (e.g., Bertrand and Schoar (2006)). Family firms are special in that they tend to pursue a special set of values, managerial practices, and specific traditions related to the family (sometimes with a strong distrust for outsiders). Management is many times kept within the family, even after the retirement of the family founder, potentially as a way to preserve a specific form of human capital related to the family's business expertise. Family ownership may also act as a remedy for market imperfections that exacerbate agency problems (e.g., Burkart, Panunzi, and Shleifer (2003)). All these dimensions make family ownership stand out from other forms of concentration.

In this paper we study large shareholders and their relationship with professional managers. In particular, we study whether families stand out from other classes of large shareholders in terms of how they compensate executives. We approach this issue in the context of emerging markets, where concentrated ownership is prevalent. Although different from

the U.S. setting, this corporate environment allows us to compare families with other shareholders who also have large stakes in the companies they hold. For example, it would be much harder to separate the pure effect of family ownership from the effect of ownership concentration if we were conducting this study with U.S. firms where ownership is typically dispersed. Given the debate about the role of large shareholders in executive compensation, and in corporate governance more broadly (see, for example, Shleifer and Vishny (1997)), this paper attempts to fill a gap in the literature by studying whether it is appropriate to talk about large shareholders as a uniform class of "hands-on" principals or if different large shareholders have different implications for how management is compensated.

The lack of empirical work on this topic is probably related to the absence of detailed data on executive compensation outside the Anglo-Saxon world where large shareholders are prevalent.[1] We present a unique data set of approximately 1,700 top executives in Argentina, Brazil, and Chile. For each executive we have base and bonus compensation, biographical information such as age, gender, education, and a detailed description of previous work experience. For approximately 40% of executives we also have compensation in their previous jobs. Through the biographical information we can study several dimensions of executives' careers such as tenure and promotion within firms, which complement the study of compensation itself.

The executives in our sample work in a wide array of firms: private and publicly-traded, small and large, in financial services and manufacturing, and so on. Despite this variety, ownership structures are amazingly homogeneous. The majority of firms are controlled by a single, easily-identifiable, large shareholder, who typically is a family, a foreigner (mostly foreign corporations), or the government. The rest of the firms are controlled by coalitions of a few wealthy individuals, families or foreigners. Widely-held corporations, in which there is no controlling block of, say, 10% of shares or more, are almost non-existent. Some could argue that these markets are perhaps not the best setting to study executive compensation

[1] See some notable exceptions mentioned in Murphy (1999), although most of the studies refer to developed countries (Canada, Japan, and continental Europe).

precisely because of the high levels of ownership concentration. However, these three Latin American economies are similar to many other markets, even to some developed markets, in terms of the level of ownership concentration, the size of its equity market relative to GDP, the number of listed firms relative to population, the legal protection given to investors, and other characteristics of financial markets (Djankov, La Porta, Lopez-de-Silanes, and Shleifer 2008). Thus, understanding the determinants of executive compensation in these markets can shed some light on this issue for a host of other markets. If one wants to understand the role of large shareholders in executive compensation, then one could even argue that these are the best type of markets to study their influence. Also, these Latin American countries are at the top of the pack of emerging markets, instead of being among the relatively poorer ones. This ensures that the companies that we study are modern corporations in many ways, comparable to corporations in developed countries in terms of organizational structure, internal hierarchy, managerial practices, and so on.

Our main result comes from comparing executive compensation across different classes of large shareholders. We find that professional CEOs in family-controlled firms make around 30% more than CEOs in other firms. The premium is not observed among executives below the CEO level. Given that our sample includes only professional executives who are not family members, the family-premium is not a mechanical result of nepotism.

We explore several alternative hypotheses that could explain the family premium. First, the premium can reflect special characteristics of family firms, for example, that family control is more prevalent in certain sectors, such as financials, where executive compensation is typically higher. We do not find evidence for this. In fact, the family premium survives a host of control variables such as sector fixed effects, firm size, volatility, and profitability. The fact that the premium is seen only among CEOs and not among other executives also suggests that the premium is not a firm-level effect, but something more specific to the CEO position.

Second, it can be the case that CEOs in family-controlled firms have special character-

istics vis-à-vis executives working for other types of large shareholders. At least in terms of observable characteristics we do not find clear evidence for this either. CEOs in family firms are of about the same age, education, and are as likely to come from the lower ranks of the firm as CEOs in other firms. Executives in family firms frequently come from firms controlled by other types of large shareholders and viceversa, which reinforces the idea that executives in family and non-family firms are part of a general executive population and not separate populations.

The model of family firms in Burkart, Panunzi, and Shleifer (2003) suggests that families hire high-quality CEOs since these make the delegation of management more attractive.[2] The fact that we do not find a clear difference in observable executive skills, such as education or experience, seems to be against this hypothesis. However, CEOs in family firms can still be more talented than executives in other firms. For instance, they can have soft skills (unobservable to the econometrician) that justify the compensation premium. For example, one can imagine that CEOs in family firms need special skills to interact with the family members, who potentially have little formal business education. The greatest obstacle to test this hypothesis is to find an empirical measure for unobservable skills. We follow Gibbons and Waldman (1999) who argue that compensation in previous jobs can be a proxy for the sum of observable and unobservable skills. We find that the family premium is still of about the same magnitude after we control for former compensation, and that former compensation itself does not have a significant impact on current compensation among CEOs (It does have an impact in other executive levels). Similarly, former compensation does not predict being hired by a family in the future. Again, this evidence does not support the idea that the family premium is a compensation for managerial skills, although it leaves the door open for other soft skills that are not captured by former compensation.

A third possible explanation is that family firms are different in the way the principal-

[2]In strict rigor, there is no heterogeneity of managerial talent in Burkart, Panunzi, and Shleifer (2003). The source of heterogeneity that interests them is that of the contracting environment. However, introducing managerial heterogeneity into their framework is straightforward.

agent relationship is dealt with. Hands-on principals need to offer higher direct compensation because of the detrimental impact they have on managerial private benefits. More intense monitoring curves perk-taking, but for the same reason it reduces the incentives of executives (Burkart, Gromb, and Panunzi 1997). In order to retain incentives managers must receive higher direct compensation. The interpretation of our finding would be that families are particularly strict monitors. Hands-on principals can also have an impact on private benefits in more subtle ways, for example by affecting the executive's own human capital and career. Rajan and Zingales (1998) argue that agents increase their (inalienable) human capital by receiving access to critical resources controlled by the principal. Empirically we find that the family premium comes mostly from firms where the founder is absent, which can be a sign that managers ask for a compensation if they do not have access to the business expertise of the founder. Having a business-savvy founder is arguably the critical resource behind the success of many family firms (Bertrand and Schoar 2006). Similarly, we find that the involvement of sons of the founder in management or the board of the company is associated with a larger premium in CEO compensation. The presence of sons can increase the chance of CEO replacement and damage the CEO's career, although we do not find significant differences in the tenure of CEOs in family firms when compared to other firms. Still, the perception of higher career risk may lead CEOs to ask for higher compensation.

Finally, the family premium can represent rent extraction on the part of CEOs (Bebchuk and Fried 2004). Perhaps family firms are more easily captured by a professional CEO than other large shareholders. The fact that the family premium is seen mostly when the founder is absent seems to support this idea, because other family members may lack the experience of the founder.

Although we do not find conclusive evidence in our sample to discriminate between these different mechanisms, the take-away from our results is that the class of large shareholder matters for CEO compensation. In other words, not all forms of ownership concentration are the same when it comes to hire and compensate managers. In particular, if the large

shareholder is a family then CEO compensation is higher on average than in a comparable firm controlled by a different class of large shareholder. This result is related to the finding of Cronqvist and Fahlenbrach (2009), who report that large-shareholder fixed effects are significant in explaining executive compensation in the U.S. We go one step further in predicting that families are the large shareholders with big and positive fixed effects on executive compensation.

The literature on family firms shows that family firms run by non-professional (particularly non-founder) CEOs underperform other family firms in a wide range of countries (see Anderson and Reeb (2003), Bennedsen, Nielsen, Pérez-González, and Wolfenson (2007), Pérez-González (2006), Sraer and Thesmar (2007), and Villalonga and Amit (2006)). Consistent with this poor performance, Bloom and Van Reenen (2007) show that family firms run by sons of the founder have relatively poor management practices. For these firms the appointment of a professional manager seems to be a crucial instance of value creation. However, our results suggest that families, and specially those with sons involved in management and with an absent founder, have to pay a substantial wage premium in order to attract a professional manager. If they focus solely on the cost of a professional manager, then this may explain why some of them insist on keeping management within the family and continue to underperform.

The rest of the paper is organized as follows. Section 1 discusses several theories that may explain the relationship between large shareholders and compensation. Section 2 describes the data in detail. Section 3 presents the regressions with the main result and several auxiliary predictions of different theories. Section 4 concludes.

# 1 Large Shareholders, Family Firms, and Executive Compensation: Motivating Theories

The advantage of large shareholders compared to dispersed ownership is that they have strong incentives to monitor the performance of management. Issues that arise in the standard principal-agent problem, such as the unobservability of effort, are less of a problem with a principal that has strong incentives to monitor. However, new issues arise in this context. We also consider in this section the peculiarities of one class of large shareholder: families. We present a number of alternative theories that suggest that family control is different from the control of other large shareholders and, therefore, that the level and composition of managerial compensation, especially for CEOs, can be different in these firms.

## 1.1 Managerial Skills

Working closely together with a large shareholder may require different managerial skills according to the characteristics or needs of the shareholder. If these skills are hard to find in the labor market, then compensation will be higher for the executives who are matched with large shareholders demanding these skills. According to this theory compensation differentials have to go hand-in-hand with differences in executive traits. For example, general management skills may be needed to run a family firm that has been previously conducted in an informal way. Frydman (2007) suggests that an MBA education reveals general management skills, so if this story is true we should see more managers with MBAs among those working in firms controlled by families.

The model of Burkart, Panunzi, and Shleifer (2003) implies that family firms should hire high-quality CEOs since these make the delegation of management more attractive. Families have to compare the loss of benefits of control against an increase in firm value produced by a professional CEO. This implies that talented CEOs are more likely to be matched with family firms.

Besides education, managerial talent can be based on soft skills that are hard to pin down for an econometrician, but easier to detect by savvy shareholders and head hunters. For example, Kaplan, Klebanov, and Sorensen (2008) suggest that subjective measures of CEO ability, which are typically unobservable in a large sample like ours, are significantly related to executive performance. Under this theory, we should see managers with a high stock of soft skills matched with family firms.

Managerial skills may also be acquired while working in a particular firm or job (e.g., knowing how to communicate well with the shareholder in control). Differences in compensation would then be associated with longer tenure in an executive position or longer accumulated tenure in the firm. Executives with these skills would be more likely to be promoted from within the firm since these traits cannot be acquired elsewhere.

## 1.2 Managerial Private Benefits

Many theories that are not based on skill differentials are related to the incentives provided by managerial private benefits. These theories share the idea that salaries can compensate for the detrimental impact that large shareholders have on the private benefits that the manager extracts from a job. We examine two classes of private benefits: perks and human capital.

Principals with large ownership stakes have powerful incentives to monitor managers (Shleifer and Vishny 1986).[3] Monitoring can curve managerial perk-taking, but for the same reason, it reduces the incentives of executives to work hard (Burkart, Gromb, and Panunzi 1997). When monitoring is strict, managers must receive higher compensation in order to retain those incentives.[4,5] As also pointed out by Burkart, Gromb, and Panunzi

[3] As an example of monitoring, consider the following quote regarding Mr. Moller, now 96 and former CEO of A.P. Moller-Maersk, a dutch shipping company founded by his father: "Mr. Moller is no longer involved in the business day to day, but he keeps and eye on cash flow and gives advice to the chief executive, who is not a family member." (Dynasty and Durability, *The Economist*, September 26th 2009).

[4] This type of compensation for lost benefits is akin to what the labor literature calls compensating differences following Rosen (1974). Employees ask for a higher salary when working conditions are bad, for example, when hours are long or when traveling is excessive.

[5] If monitoring prevents shirking, then wages should be lower in firms with large shareholders according

(1997), a side effect of close monitoring is that it reduces the effectiveness of performance-based pay, because the principal can observe easily if the performance of the CEO is due to luck or effort. In this vein, Bertrand and Mullainathan (2001) find evidence that pay is less sensitive to performance in U.S. firms with large shareholders.

Human capital is inalienable, and therefore it constitutes a private benefit for the manager similar to perks in the previous theory. Managers can increase their own human capital through access to a critical resource within the firm (Rajan and Zingales 1998). This transmission of human capital is probably present in most types of firms with large stakeholders. For example, firms controlled by foreigners may allow managers to increase their human capital by granting access to a different organizational culture. Large shareholders that do not offer managers with access to critical resources will have to offer a higher monetary compensation.

In the case of family firms, the transmission of human capital presents positive and negative sides. On the positive side, family firms are typically the consequence of high levels of specific business expertise of the founder of the family. Thus, the access of external managers to this source of human capital may become a private benefit for the manager and, therefore, *ceteris paribus*, they may be willing to receive lower salaries. On the negative side, family firms may include objectives and practices –typically related to a strong family culture– that may not increase the human capital of the executives. Similarly, the presence of family members besides the founder, who do not have a particularly solid knowledge of the business, may harm the manager's accumulation of human capital by depriving him of good interactions in the workplace. Depending on whether the positive or the negative side prevails, we could see a premium or a discount in the salaries paid by family firms to external managers.

to the logic of efficiency wages (Shapiro and Stiglitz 1984). However, in the data we see that family firms pay higher wages, not lower. Under the theory of efficiency wages, higher wages increase the loss in the case of being fired and therefore deter shirking. Higher wages are a substitute for monitoring. See also Acharya and Volpin (2010).

## 1.3 Career risk

CEOs take into account the probability of being fired when negotiating compensation packages. This can be particularly relevant in this case where simply "not getting along" with the shareholder in control can be a reason for CEO replacement. The probability of replacement may vary across classes of large shareholders and may be reflected in compensation. For example, the involvement of family members in other managerial positions can increase the chance of CEO replacement in a family firm. Similarly, the fact that family firms tend to have other objectives than just maximizing the value of the firm may increase the risk of being fired even when the manager is doing what is optimal for a "typical" (non-family) firm.

Career risk may not only affect the compensation of the CEO, but incentives for the entire executive hierarchy in a firm. Lazear and Rosen (1981) describe internal labor markets as tournaments where executives compete with each other to get to the top of the firm. The pay-check of the CEO is the prize of the tournament. Different large shareholders may impose different rules in the tournament. For example, family members have "wild cards" in the sense that they can take the CEO position regardless of their performance in the tournament. Since this reduces the incentives of executives below in the hierarchy to work hard, salaries have to increase at the top to make up for the lower probability of being promoted.[6] Therefore, the wage curve across hierarchical levels should be steeper in family firms.[7]

## 1.4 Rent Extraction

Bebchuk and Fried (2004) have argued that the surge in CEO compensation in the U.S. is

[6] Notice that we are considering external managers in family firms so it may be that these tournament effects are stronger in our sample than in family firms promoting only *internal* candidates. We study what the literature calls *external* tournaments (i.e. internal and external candidates compete for the CEO position). In external tournaments the likelihood of getting the CEO position decreases and, therefore, the premium at the top has to be higher (Kale, Reis, and Venkateswaran 2007).

[7] A similar argument can be made for foreign large shareholders if managers perceive the rules for promotion imposed by foreigners to be stricter.

caused by CEOs who take advantage of foolish boards and set compensation in their own favor. Large shareholders can be a remedy for this problem if they are not easily captured by professional managers. However, CEOs may also capture large shareholders and extract rents from them as easily as they capture boards in firms with diffuse ownership. There can be variation across large shareholders in terms of their ability to avoid being fooled or impressed by CEOs. This ability is probably related to experience, education, and business knowledge. One can suspect that coalitions of large shareholders are better at handling CEOs in this respect, since it is harder to fool all of them simultaneously. Similarly, an agent with high levels of business knowledge (like a successful founder of a family) may be better at handling the potential rent extraction of managers.

# 2 Data Description

Our data consist of the intersection of an executive-level data set provided by a head hunter with firm-level data sets that contain financial information and the ownership structure of firms. The data set contains executives working in three Latin American countries: Argentina, Brazil, and Chile.

## 2.1 Classes of Large Shareholders

The majority of firms in our sample are controlled by a single, easily-identifiable, large shareholder. We identify three classes of large shareholders: families, foreigners, and the state. We create a forth class that contains miscellaneous shareholder coalitions. There are no widely-held firms in our sample.[8] We classify firms using hand-collected information about ownership structures, board composition, and top management. We obtain data from the local regulators, press reports, and the firms themselves, for example, through their

[8] La Porta, López-de-Silanes, and Shleifer (1999) also report that there are no widely-held corporations in Argentina within the 20 largest publicly-traded firms in 1995. Brazil and Chile are not included in their sample. For similar evidence with respect to Chile see Lefort and Walker (2000). The usual definition of widely-held is that there is no controlling block of 10% or more of the voting rights.

websites.[9] The study of Aldrighi and Postali (2008) on Brazilian business groups and Lefort and Walker (2000) on Chilean business groups were particularly helpful for classifying firms.

Following Anderson and Reeb (2003) and Villalonga and Amit (2009), we define a family firm as a corporation controlled by a single family. Family members, related through blood or marriage, exercise control by being officers, directors, or blockholders. Family firms in Latin America are not necessarily small, privately-held, young firms, like could be the archetypical family firm in the U.S. For example, Copec, the largest publicly-traded company in Chile, has been under control of the Angelini family since 1986 when Anacleto Angelini took control. He passed away in 2007, leaving control to his nephew Roberto.

Many firms in our sample are controlled by foreigners (mostly foreign corporations). Some of these firms correspond to local branches of multinationals (e.g., Citibank, Nestlé, Sony, Banco Santander, etc.). Other firms have been acquired by foreigners, but kept their local names (for example, Metrogas S.A. in Argentina, which is controlled by the BG Group, a British energy consortium). Although some of the foreign corporations may ultimately have a dispersed ownership structure in their country of origin, the relationship between local executives and those shareholders does not resemble the principal-agent problem in a typical widely-held corporation. It is more appropriate to think of executives in foreign-owned firms as facing a strong principal represented by the manager in headquarters, as it is described in the literature on internal capital markets (see Stein (2003)). From the point of view of carrying our results to other settings, this category has to be understood as corporations themselves acting as controlling shareholders of other corporations (see La Porta, López-de-Silanes, and Shleifer (1999) for this categorization).

State firms are controlled by the government. Many state firms are utilities or in sectors requiring large infrastructure such as mining or energy production. Some of them are listed in the local stock market and represent a non-trivial fraction of the market capitalization of these countries.

[9] For the Argentinian regulator go to http://www.cnv.gov.ar. For the Chilean regulator go to http://www.svs.cl.

Coalitions are formed by wealthy individuals not related through direct family ties (e.g., Telemar-Oi in Brazil, LAN Airlines in Chile), or combinations of families, foreigners and the state (e.g., Telecom Argentina, which is controlled by Telecom Italia and the Werthein family). There are many variations within this category, but in all of them control is shared among a small number of large shareholders.

Overall we have data on executives in 720 firms, of which 115 (16%) are controlled by families, 473 (66%) by foreigners, 28 (4%) by the state, and 104 (14%) by shareholder coalitions. It is worth noting that many firms in emerging markets are organized in groups (Khanna and Yafeh 2007). We define a group as a conglomerate of firms controlled by the same large shareholder, and operating in two or more industrial sectors (out of an industry classification with 21 sectors). We do this classification only for domestically-owned firms since it is impossible to track all the holdings of foreigners in other countries. There is a positive correlation between family control and belonging to a group (0.30), however, there are still many stand-alone family firms.

## 2.2 Executive-Level Data and Sample Characteristics

Our main data set was obtained from a world-wide head hunter with an important presence in Latin America.[10] This data set contains compensation (base and bonus) in the current job, biographical information, and previous work experience of executives who have been in touch with the head hunter in 1997-2007. For approximately 40% of executives we have compensation in their previous jobs. The names of the executives were removed from the data set in order to protect their privacy. Equity compensation is almost non-existent in these markets. If managers receive equity-like compensation it is counted as a bonus.

Not all executives in the data set have been necessarily hired in their current positions through this head hunter. They are simply the professional managers who have been in touch with the head hunter. The head hunter or the manager herself can initiate contact. It

[10] It is not unusual in the executive compensation literature to use data provided by head hunters. See, for example, Murphy (1999).

is part of the head hunting business to get to know as many executives as possible since this maximizes future profits when they serve as intermediaries between firms and executives. All information is self-reported by executives, but there are good reasons to tell the truth. First, the head hunter may be a source of future career opportunities. Second, the head hunter may also realize through her contacts or her own knowledge of the industry that the executive is lying about her compensation or work experience.

Executives in our sample are professional managers, i.e., executives not related to the family in control of a firm. For example, we do not have sons or daughters of founders in our sample. The conversations we had with the head hunter assure us that other closely related members of the family (sons-in-law, cousins, etc.) are not part of the sample either. There is still a chance of having distant relatives or friends of the family. However, this chance is probably very small.

We have approximately 1,700 executives in our sample. Approximately 18% of executives in our sample work in family firms, 63% in foreign-controlled firms, 4% in state firms, and 22% for shareholder coalitions. Observations are concentrated in the years 2003-2007, which account for 92% of our data. Total current compensation moves between \$50,000 and \$2,3000,000 annually (see Figure 1).[11] We truncate the sample from below at \$50,000 to exclude executives that are too far from the CEO.

We classify executives in three hierarchical levels according to their job title: CEOs, top managers (chief officer of area, such as CFO or COO), and second-tier managers (head of non-core areas, product managers, and others). Total compensation for each level is shown in Figure 2. CEOs make more on average than top managers, and top managers make more on average than second-tier managers. However, there is some overlap, which can be expected since the product manager of a big firm can make more in a year than the CEO of a mid-size company.

If all top positions in family firms are filled by relatives, then family firms are likely to

[11] All salaries are expressed in dollars of the year of compensation using the country's market exchange rate.

hire professional managers only for lower-level positions. Our sample does not fit this pattern as seen in Figure 3. We are almost equally likely to observe a CEO in a family firm than a CEO in a non-family firm (as fraction of total executives in family and non-family firms respectively).

Table 1 presents some descriptive statistics about the sample. The median total compensation for all executives is \$136,000.[12] Approximately 20% of executives are CEOs, with a median compensation of about \$215,000. The median compensation of other executives is \$119,000. We also compute medians separately for managers working in the four shareholder classes. The median CEO compensation in family firms is higher than in foreign-controlled firms and coalitions (it is lower than in state firms, but these are very few executives). The difference is about \$40,000, or 18% of the median CEO compensation in the sample. Notice that for other executives the difference disappears or reverses. There seem to be differences in other variables when comparing CEOs in family and non-family firms. For example, CEOs in family firms have higher former compensation, lower tenure, and have occupied fewer positions within the firm. However, most of these differences disappear when we do a multivariate analysis later on.

We also create indicator variables for several characteristics, such as being female or being promoted internally to the current position. The average of an indicator variable corresponds to the frequency of that executive trait in the corresponding sample. For example, 23% of CEOs in family firms are promoted from within the firm, which is actually slightly below other shareholder classes. They also receive bonuses less frequently. The frequency of executives with top MBA degrees is slightly higher among family firms that foreign-controlled firms (7% vs. 4%), but it is lower than in firms controlled by coalitions (11%). We defined a top MBA following the *Financial Times* ranking of several years.[13]

[12] If this level of compensation seems low when compared to the compensation of U.S. executives, consider that in order to adjust for purchasing power in these markets one needs to multiply compensation by a factor of 2 or 3 to make it comparable to compensation in the U.S. (see the Penn World Table at http://pwt.econ.upenn.edu).

[13] More precisely, we define top MBAs as those granted by Harvard, Columbia, Stanford, Chicago, Wharton, Kellog, Berkeley, MIT, NYU, Michigan, Duke, IMD, and London Business School. We have experi-

For approximately half of the CEOs we are able to identify the shareholder class of the previous firm in which they worked. With this information we create a transition matrix to check whether CEOs move between firms controlled by different shareholder classes (see Table 2). Less than half of current CEOs in family firms come also from family firms (10 out of 25 CEOs). The others come from foreign-controlled firms and coalitions (15 out of 25 CEOs). The table also shows that after working in a family firm, executives can also move to other shareholder classes. Out of 30 CEOs who worked in family firms in the past, 10 are currently CEOs in family firms, but 20 are currently CEOs in foreign firms or coalitions. State firms are the only shareholder class where all CEOs previously worked in the same class. The pattern of transitions that is seen in Table 3 suggests that there is significant mobility of executives across firm types. This supports the idea that this is an *integrated* market in which the same executives move across types of firms in contrast to a situation in which markets are *segmented* and executives specialize in different types of firms.

## 2.3 Firm-Level Financial Information

Most firms for which we find financial information are listed in the local stock market. We collected financial information from *Economatica*, a database of publicly-traded Latin American firms. We found financial statements for some non-listed firms (e.g., state firms, firms in regulated industries such as the banking sector, and others). We could not find financial information for many fully-owned subsidiaries of foreign companies. These are private companies from the perspective of local regulators since they do not issue securities in these markets. Overall, we were able to find firm-level book assets for 27% of the firms in our sample (197 out of 720 firms). Financial data was available for 56% of family firms, 13% of foreign-owned firms, 79% of state firms, and 49% of coalitions. Although private firms with no available financial data are sometimes ignored in other studies, they certainly

mented with different measures of education such as highest degree obtained (bachelors, masters, PhD or others), or simply the number of years of schooling and there is no significant difference in these measures across executives in different shareholder classes.

represent an important source of employment for the executives that we study, and therefore we think it is important to include them.

Despite the lack of data for many firms, the firms for which we do have financial data are an important fraction of local markets. For example, the stock market capitalization of the publicly-traded firms in our sample is on average 40% of the stock market capitalization of each country.[14] Our sample is also representative in terms of sectoral coverage. Finance is the sector that employs more executives in our sample (approximately 20%). Retail employs 13% of the managers and the pulp and paper industry 15%. Each one of the other 18 sectors represents less than 10% of the sample.

Table 3 presents summary statistics at the firm-level in the period 1997-2007. The median family firm in our sample has book assets of $840 million and market capitalization of $965 million. The median firm controlled by foreigners is of similar size. State firms are bigger since they tend to be utilities and firms that require large infrastructure. The median firm in each category has similar return on assets (EBIT over book assets). The time-series standard deviation of ROE is higher for state firms and coalitions. Family firms and foreign firms have similar volatility.

# 3 Empirical Results

## 3.1 The Family Premium in Total Compensation

### 3.1.1 Baseline Estimates

Our main regression is:

$$\begin{aligned} \log(\text{Total Compensation}) \;=\; & \text{Large Shareholder Dummies} + \text{Firm Controls} \\ & + \text{Executive Controls} + \text{Fixed Effects} \; + \epsilon \end{aligned}$$

[14] The universe of locally traded firms is taken to be all firms reporting information in Economatica.

Our variables of interest are the dummies for the different classes of large shareholders. The excluded category corresponds to coalitions. We control for whether the firm belongs to a group or conglomerate. Firm size is another important firm-level control (Gabaix and Landier 2008). We measure firm size using total book assets, which is the most widely available measure in our sample. Stock market capitalization, for example, is not available for private firms, and total sales are not as widely available as book assets. The size variable has a zero when assets are not available, although we simultaneously include a dummy variable for firms with missing size to control for this effect. As also suggested by Gabaix and Landier (2008), we control for the size of the average firm in each country, each year.[15] In some regressions we control for firm-level ROA and its volatility.

In terms of controls at the executive level, we include age, the square of age, a dummy for female executives, and in some regressions we include measures of education and tenure. In these last two cases we may be over-controlling as they may be endogenous to being in a given firm class, but it is still interesting that our results survive after conditioning on these variables.

We include a host of fixed effects. First, we add country fixed effects to control for potential differences in benefits, taxes, and other institutional features that are constant at the country level. Second, we add year fixed effects to capture region-wide cycles. We also add fixed effects for executive level. In some regressions, we include sector fixed effects. For example, in our sample the executives of the financial sector have higher wages on average, as also documented by previous studies (Murphy 1999). Gibbons and Katz (1992) argue that sector fixed effects are not necessarily related to ability, but can be true unobservable differences between sectors.

Table 4 presents the results for the whole sample. The basic regression in the first column contains 1,696 observations and it includes country, executive level, and year fixed effects in addition to firm and executive level controls. The coefficient on the family dummy implies

[15] As this variable varies by year and country, it may capture other country-year shocks besides the impact of market size on compensation.

that family firms pay on average a premium of 15 log points with respect to the excluded category (coalitions). This premium is economically and statistically significant ($t$-stat of 3.33, robust to heteroskedasticity).[16] Firms controlled by foreigners offer a statistically and economically significant premium of 11 log points, although this premium, as we show later, is not as robust as the family premium. Firms controlled by the state do not pay significantly different, as well as firms belonging to groups.

The coefficient on log assets is positive, but small and only marginally significant. The coefficient on reference size is 0.57 with a $t$-stat of 6. Using stock market capitalization as proxy, Gabaix and Landier (2008) find a coefficient of about 0.30 for size and 0.70 for reference size in U.S. firms, both highly significant. Our estimate for reference size is relatively close to that of Gabaix and Landier (2008), but our estimate for the effect of firm size is much smaller. The dummy for firms with missing size has a negative coefficient, which is consistent with these firms being relatively small, although it is not statistically significant.

The dummy for female executives is negative and implies a wage discount of about 9 log points, which is statistically significant at the 5% level. Age and age-square, which capture both the life-cycle pattern of executive pay and cohort effects across managers, have the expected signs and are highly significant.

The second column in Table 4 adds sector fixed effects. The family premium decreases to 11 log points, but it is still significant at the 5% level. The coefficient for foreign firms decreases in magnitude and becomes significant only at the 10%, which suggests that foreign ownership is concentrated in particular sectors. However, the overall impression is that results with and without sector fixed effects are very similar. The next columns exclude different groups of firms as a robustness check. Excluding state-owned firms and firms belonging to groups reduces the sample size, but does not have any noticeable impact on the coefficients. More remarkably, excluding firms controlled by foreigners reduces the sample size to just 620 executives, but we still find a positive and significant coefficient on the family

[16] We have also tried clustering by firm obtaining very similar standard errors.

dummy, and of very similar magnitude to the first regression. Also, when we exclude firms with missing size information, the family premium becomes even larger. Including firms with missing size is biasing the coefficient down, if anything.

A top MBA education gives a wage premium of 24 log points and including it as a control variable decreases the family premium to about 9 log points (column 7).[17] Results remain basically unchanged when we add tenure as a control variable (column 8). In the last column of Table 4 we add ROA and ROA volatility as firm-level controls. Results show again a very similar pattern to previous regressions, with a family premium of 10 log points (column 9). ROA has a positive and significant effect on total compensation, with an elasticity of 0.31, and the standard deviation of ROA has a negative effect. Both are strongly significant.

In Table 5 we examine the variation in the family premium across executive levels. We run the basic regression for each executive level separately. Approximately 20% of the executives in our sample are CEOs, and results in Table 5 show that the family premium is concentrated among them. The family premium is 30 log points among CEOs compared to 7 log points or less than one point in the other executive levels. The premium is significantly different from zero only among CEOs. The other shareholder classes do not have an effect on CEO compensation. In the second panel of Table 5 we control for MBA education and tenure. The family premium remains positive and highly significant for CEOs with a coefficient of 28 log points. The family premium in the other executive levels is much smaller and never statistically significant.

The fact that the family premium is concentrated among CEOs is important for two reasons. First, most theories that we reviewed refer to the effect of family firms on the compensation of executives that work in close contact with family members. This is the case with CEOs, but it is less likely to be the case with executives below the CEO level. Second, the fact that family ownership does not affect the compensation of other executives suggests that the family effect is not simply a firm quality effect. In that case the compensation of

[17] The premium on other measures of education, for example, having an MBA degree from any university, are much smaller and not significant in general.

all executives should be affected. We deal with this issue in more detail in the next section.

### 3.1.2 Self-selection issues

Although we have shown evidence that our sample is representative of the markets that we study, some could argue that the head hunter does not collect data in a randomized fashion. There may be characteristics of the head hunter or the firms that increase the frequency with which we observe a particular type of ownership structure in the sample. It may be the case that the family firms in the sample are simply "better" firms than the rest, and that this explains the premium in compensation. The family premium would then be a firm-quality effect, and not directly an effect of family ownership. This is a problem if family firms are "better" than other firms in the sample, but not if they are better than other family firms outside the sample. Our identification strategy relies on computing differences among firms with alternative ownership structures within the sample, and not between firms inside and outside the sample.

In Table 6 we deal with the potential self-selection of firms. We estimate a Heckit model by first running a probit equation in which we model the probability that a firm is in our sample as a function of firm-level characteristics. The universe we consider is the entire *Economatica* data set, which covers all publicly-traded companies in the three countries that we study. This is the most comprehensive universe that we have available. The results of the first stage are intuitive, for example, bigger firms in terms of stock market capitalization are more likely to be in our sample. We then construct the inverse of Mill's ratio and we include it in the baseline regression (Wooldridge 2002). Results show that the family premium does not change significantly and, moreover, the coefficient on the inverse of Mill's ratio is not statistically different from zero. This would suggest that our sample is not affected by selection problems.

In the second panel of Table 6 we try an alternative identification strategy. We re-estimate our main regression weighting each observation by the inverse of the propensity

score, which measures the likelihood that a specific executive works for a family firm (see Imbens and Wooldridge (2009)).[18] As recommended by Imbens and Wooldridge (2009) we drop observations for which there is no overlap in the propensity score across executives working in family and non-family firms. The idea is that there is no good base for comparison for an executive in a family firm if we cannot find a similar executive that is not working in a family firm.

Results show a very similar family effect for all executives with the propensity score procedure and with OLS. There is a positive premium of about 11 log points, even though the standard error is larger than with OLS. Larger standard errors are expected if OLS dominates propensity score weighting.[19] The same happens with CEOs, where both the OLS and the propensity score estimates are approximately 28 log points. We conduct a Hausman test to compare both estimates.[20] In the case of CEOs, the test suggests that the estimate using the propensity score is not different from OLS, and therefore that the family effect is homogeneous. The family effect would be heterogeneous if CEOs that are less likely to be working in family firms (i.e., those executives that have a low propensity score because of their observable characteristics or because these firms are not likely to be family firms) were affected more strongly.

It is interesting to notice that OLS, Heckit, and propensity score weighting present good properties under different assumptions. For instance, propensity score weighting dominates Heckit and OLS when the effect of the treatment (i.e., working in a family firm) is heterogeneous and the allocation of the treatment is random conditional on a vector of observable variables. In turn, OLS and Heckit are better than the propensity score weighting in the

[18] As the authors discuss, this estimator is preferred to alternative uses of the propensity score, such as propensity score matching or adding functions of the propensity score as controls in the estimating equation, due to the notion of double robustness (see Imbens and Wooldridge (2009), p. 38).

[19] The intuition for this argument is as follows: if the family effect is homogeneous across individuals and the selection into a family firm is random conditional on observables, then both estimators have the same *plim*, but OLS is more efficient.

[20] The intuition for this test follows from footnote 19. Under the null hypothesis, both estimators have the same *plim* and OLS is more efficient. In contrast, under the alternative hypothesis of heterogeneous effects, both estimators have different *plims* and, if the selection into a family firm is random conditional on observables, the weighted estimator is consistent.

following scenarios: (i) OLS controlling for observables dominates in terms of unbiasedness and efficiency if the treatment effect is homogeneous and random conditional on a vector of observable variables, and (ii) Heckit dominates both OLS and propensity score weighting if the allocation of the treatment depends on unobservables, since both methods rely on observables. By presenting results for three different estimators, we are able to check the robustness of the family premium. Our results show that the OLS estimator is not patently biased and therefore that we can rely on it. The family premium, in particular among CEOs, seems to be a robust feature of the data.

## 3.2 Mechanisms

### 3.2.1 Are CEOs in Family Firms More Skilled?

A first hypothesis to explain the family premium is that it captures skill differentials. For example, CEOs in family firms may have more general skills, which can be correlated with an MBA education as Frydman (2007) suggests. The evidence in Tables 4 and 5 shows that having a top MBA degree does not drive away the family effect from the baseline results. In Table 7 we explore in more detail this idea by running an OLS regression with our dummy for top MBA as dependent variable.[21] The coefficient on *Family* is not significant in the regression for CEOs or the other executive levels. The variable *Group* has a negative coefficient for CEOs, which suggests that general skills are less valuable in conglomerates.[22]

The importance of general skills, as opposed to firm-specific skills, should also be seen in that managers in family firms have low tenure and are not promoted internally (see Bertrand (2009) for a survey of these and similar effects). Conversely, if firm-specific skills are important in family firms, we should see longer tenure and more internal promotion. We

[21] In the main text of the paper we present results for linear probability models. The results with non-linear models such as logit are qualitatively similar.

[22] We have experimented with other measures of formal education, such as total years of schooling. In the case of this variable we find that it has no correlation with total compensation, but we find that executives in family firms have marginally more schooling than executives in the other firms. The estimated effect is only significant for second-tier managers and equivalent to about one more year of schooling (i.e., about 5% of the schooling level of the average top manager) in family firms.

explore these possibilities in Table 8 with several measures of tenure and mobility. The effect of *Family* is statistically insignificant for CEOs throughout the table, which is inconsistent with the skills hypothesis.

The absence of a family effect in tenure and promotion contrasts with the strong and positive effect of *Foreign*. Executives in firms controlled by foreigners have longer tenure, occupy more positions in the firm, and are more likely to be promoted internally. This evidence is consistent with the idea of rotations that are typical of multinationals. Domestic firms that belong to groups also show similar patterns. These results suggest that there is meaningful variation in the measures of tenure and mobility across firms in our sample, but that *Family* is not one of their determinants. Moreover, these differences in tenure and mobility not necessarily translate into differences in compensation.

Even if we find no evidence regarding observable skills, it may be the case that CEOs in family firms are more skilled than other CEOs in ways that we cannot measure. This possibility is hard to rule out. One potential proxy for unobservable skills is the compensation of the CEO in her previous job. For example, Gibbons and Waldman (1999) show in their model that executives with high salaries are more likely to be promoted because they have higher accumulated human capital.[23]

Table 9 presents regressions for the sub-sample of executives for which we have information on previous job compensation. Panel A tests the most obvious implication of this hypothesis: former job compensation should predict being hired by a family firm in the future. The results show that this is not the case in our data. Panel B tests a related implication: former job compensation should drive the family effect out of our main regression. In the first set of regressions we exclude many control variables due to the reduced number of observations. The family effect is about 30 log points, which is very close to our baseline

[23] An alternative –more cynical– interpretation is that previous compensation may be a rule of thumb that family members use to pick external CEOs. This may happen even if compensation is unrelated to CEO skills, as the literature on conspicuous consumption suggests. For example, Shiv, Carmon, and Ariely (2005) show that patients get more relief from a placebo when they think it is more expensive. In our setup, families may feel better about hiring an external CEO if she is more expensive.

estimate for the full CEO sample in Table 5. The effect is only marginally significant. In the second column we add former job compensation, which turns out not to be statistically significant for CEOs. The coefficient on family even increases when former compensation is added. On the other hand, former compensation is strongly significant for the other two executive levels. When other controls are included the standard errors increase and the family effect decreases in size, but it is in line with previous results. Former compensation is still not significant among CEOs. This evidence, which we take mostly as suggestive due to the small sample, shows that skills captured by former compensation do not seem to be the reason behind the family premium. Even after controlling for former compensation we see an economically relevant premium among CEOs, and with an estimate that is very close to the estimate in the full sample.

### 3.2.2 Performance-based compensation

Differences in private benefits are one alternative for skill differentials. Large shareholders are strong monitors and can reduce the private benefits that executives extract from a job. As a result of the reduction in perk-taking, the principal may need to increase base compensation in order to keep the executive incentivized (see Burkart, Gromb, and Panunzi (1997)). An auxiliary prediction of this model is that performance-based pay is less effective when monitoring intensity is high because monitors can see whether performance is due to effort or luck. If the family premium is due to the more intense monitoring in family firms, then we should see that executives are paid mainly through base compensation rather than bonuses in these firms.

Table 10 shows regressions that study bonus payments. The executives included in this table have been in their current jobs for at least a year, so the bonus can be tied to performance in the firm and not to other motives (e.g., sign-up bonuses). The dependent variable takes a value of one if the executive receives a bonus and zero otherwise. Results imply that, on average, executives in family firms tend to receive bonus payments less frequently.

However, the effect is seen only among top managers and second tier managers. We do not see a lower frequency of bonuses among CEOs for whom there is a compensation premium. Therefore, the evidence is not fully consistent with Burkart, Gromb, and Panunzi (1997)'s model. We obtain very similar results (not reported) if we use bonus compensation (in logs) and bonus compensation as fraction of total compensation as dependent variables.

### 3.2.3 Career risk

Higher CEO compensation in family firms may compensate for the higher risk of being fired. A direct implication of this hypothesis is that tenure should be shorter in family firms, but we do not find evidence for this (see Table 8). The compensation of the CEO can also provide incentives for other executives below the CEO who aspire to get to that position (Lazear and Rosen 1981). Tournament-like incentives are stronger in family firms since we see the family premium in compensation given only to CEOs. Fewer top managers and second-tier mangers receive bonuses according to Table 10, so it seems like family firms solely rely on tournaments to incentivize their executives. Although this is a plausible explanation, other features of tournaments are not seen in our data. For example, larger firms should have a higher CEO premium because those firms need to provide incentives for more executives (Bognanno 2001). In unreported results we find that the family premium is not related to firm size (proxied by total assets), which sheds doubts over the tournament explanation.

### 3.2.4 Variation across family firms

It is ultimately hard to pin down the mechanism behind the family premium. No explanation so far seems to be fully consistent with the data. The family premium perhaps reflects managerial skills in some cases, private benefits in other cases, and compensation for career risk in others. In this section we explore variation in the premium across firms with different family characteristics, which can potentially shed light on the underlying mechanism. We explore two issues motivated by previous literature: the presence of the family founder and

the involvement of other family members in management.

We were able to find detailed biographical information on the founder or *pater familias* and other family members for approximately 60% of the family firms in our sample.[24] Approximately one third of the founders were still alive and in control of the company as of 2008. Some of the founders passed away long ago, such as José Ermírio de Morais of Brazil's Votorantim who died in 1973. Others passed away more recently, like Andrónico Luksic of Banco de Chile in 2005 or Anacleto Angelini of Chile's Copec in 2007. Some of the founders were immigrants, such as Leon Feffer of Brazil's Suzano who arrived from Ukraine to Brazil in the early 20th century. Some founders have college education or higher, for example, Alvaro Saieh of Chile's Corp Banca holds a Ph.D. in Economics from the University of Chicago. Others only finished high school like Fulvio Pagani, founder of Argentina's Arcor. There is also variation in the involvement of founder's sons and daughters.[25] About two thirds of the family firms have sons or daughters involved. Many firms have several sons involved. For example, Cencosud, a Chilean retailer with presence in four Latin American countries, is still under the control of its founder Horst Paulmann, and three of his children are already board members.

In Table 11 we split the family dummy of previous tables into two indicator variables representing family firms with and without active founders.[26] Although the coefficient on both dummies is of similar magnitude, only the dummy for family firms with absent founders is statistically different from zero. In column 3 we split the family dummy according to whether children of the founder are involved in management (or board) of the company. The

[24] Not all family firms were founded by the family who is in control of the firm during our sample period. For that reason the term pater familias, basically the creator of the family's economic power, is sometimes more appropriate than the term founder, which might be confused with firm's actual founder. When we use the term founder throughout the paper we are referring to the founder of the family's economic power.

[25] We count only children of the founder, and not other family members potentially involved in the firm, such as brothers, wives, grandchildren, nephews, sons-in-law, and so on. Ours is an arguably incomplete metric of "family size" compared to the measure of Bertrand, Johnson, Samphantharak, and Schoar (2008), but it is a workable definition given that family trees are very extended and that there is limited information available about them.

[26] An active founder is alive as of 2008. If the founder dies during the sample period that we cover we consider him as inactive.

cross-sectional correlation between the presence of a founder and involvement of sons is small ($-0.08$), so columns 2 and 3 give independent information. The family premium is larger and more statistically significant when sons are involved than when they are not. Finally, in column 4 we split the family dummy in four pieces following the combinations of active founder and children involvement in the company. Again, the family premium is larger and more robust when sons participate and, among those firms, when the founder is absent.

This evidence can be interpreted in several ways depending on the underlying theory one has in mind. If the explanation is about executive skills, then the unobservable skill may be related to the ability to handle the sons of the founder, infighting among them, or possibly the ability to train them. If the explanation is about monitoring and perk-taking, then the family premium can be higher in firms where more family members, and therefore more monitors, are involved. If the critical resource behind a successful family firm is an active founder, then executive pay has to compensate for the lack of access of the CEO to this resource. This last fact can also be interpreted as the CEO extracting more rents when an experienced founder is absent. Overall, this evidence in and of itself is not definitive in favor of any particular theory. Still, it is useful to delineate the skills or the personal interactions that matter the most to executives in our sample, and therefore to understand what to expect in other markets. Also, the family characteristics we have explored are key in the rest of the family firm literature, which suggests that there is something systematic about them.

# 4 Concluding Remarks

The effect of large shareholders on executive compensation and other corporate policies is a topic of much debate. Our study comes to complement this literature by presenting empirical evidence on the relationship between different types of large shareholders and CEO compensation. This is an important concern for managers around the world given that a

large fraction of firms are controlled by large shareholders. We find that family ownership translates into higher CEO compensation, but not into higher compensation for other executives below the CEO. We find a premium of about 30 log points for professional CEOs working in family firms, after controlling for several individual and firm specific characteristics, and after using alternative econometric techniques. On the other hand, firms controlled by foreigners (mostly foreign corporations), the state, and shareholder coalitions do not pay a significant premium at the CEO level. We observe differences in executives' careers in some of these other types of firms (e.g., in tenure or internal promotion), but these cannot account for the compensation differentials that we uncover. We find that observable skills (general or firm-specific) are not able to account for the family premium. Former compensation, which can capture unobservable skills, does not predict that a particular CEO will be hired by a family firm in the future. Ultimately, it is hard to tell apart what piece of the family premium corresponds to compensation for managerial skills, private benefits, career risk, or rent extraction. All of these different mechanisms may work simultaneously, or may be more important for certain firms or certain time periods than for others.

We find that the family premium comes mostly from family firms with absent founders and where children of the founder are involved. We think this last result is important for the interpretation of our findings because it stresses the main difference of family firms with other forms of concentrated ownership: the involvement of an entire family, with its own family history, in the process of controlling and managing a firm. We believe that understanding how these factors determine the level and structure of executive compensation is an interesting area for future research.

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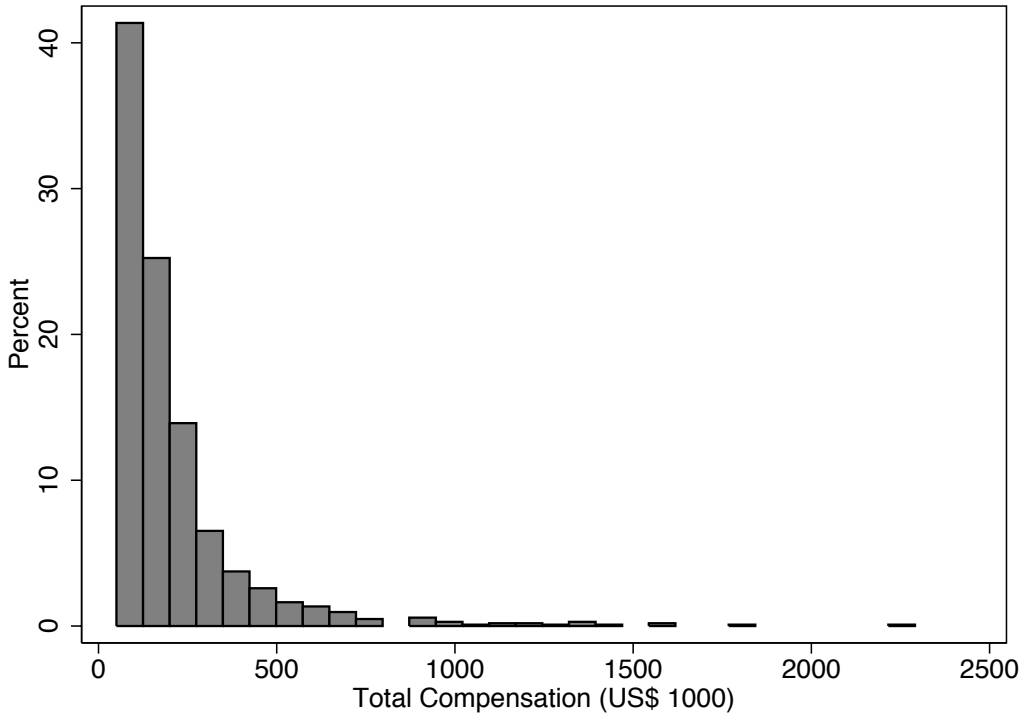
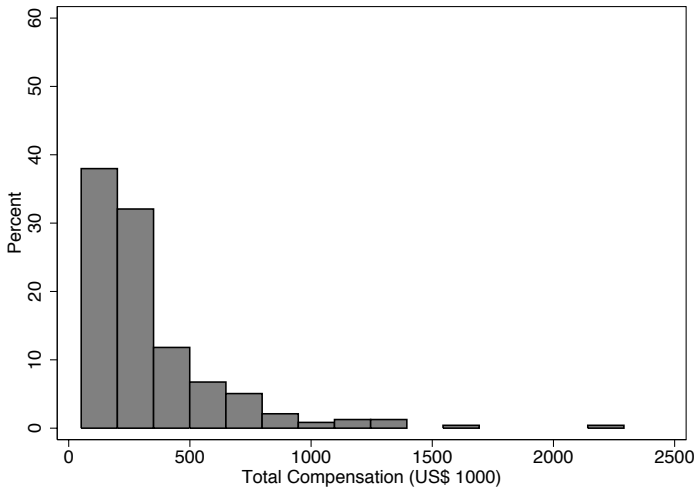
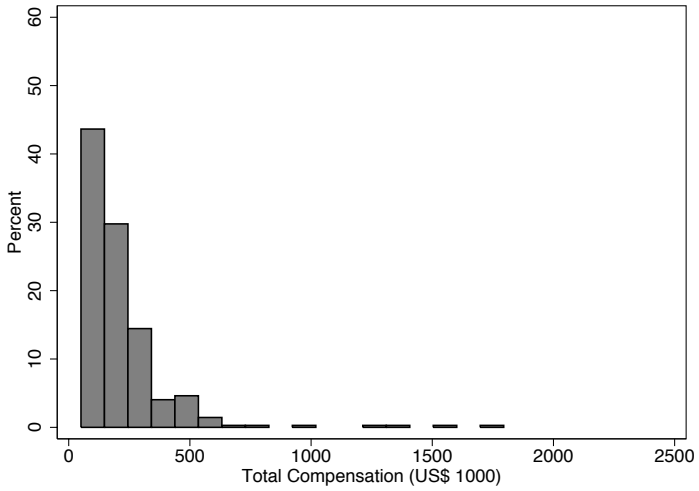


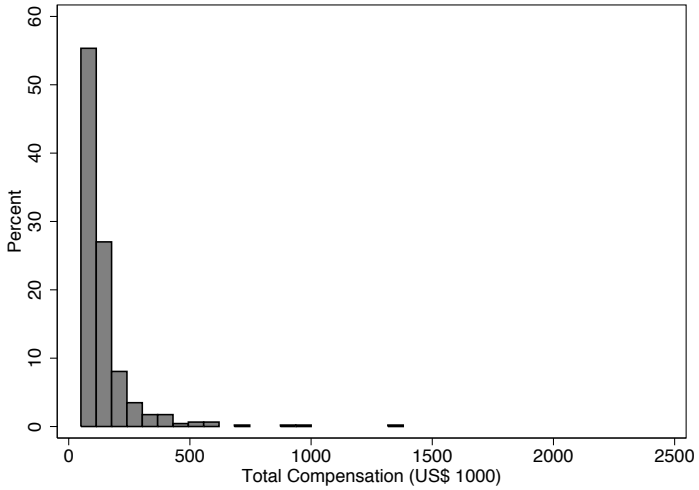

**Figure 1:** Total Compensation, All Executives




(a) CEOs




(b) Top Managers




(c) Second-tier Managers

**Figure 2:** Total Compensation, by Executive Level


**Figure 3:** Executive Level, by Firm Type

**Table 1:** Descriptive Statistics, medians for compensation, means for other variables

| | | | Large Shareholder Class | | | |
|---|---|---|---|---|---|---|
| | Obs | All | Family | Foreign | State | Coalitions |
| | | | **Panel A: All Executives** | | | |
| Total Compensation (US$ 1000) | 1696 | 136.09 | 143.39 | 133.00 | 123.87 | 132.36 |
| Former Total Compensation (US$ 1000) | 971 | 111.47 | 116.46 | 109.13 | 109.48 | 109.49 |
| Tenure in Firm (years) | 1684 | 3.62 | 2.63 | 3.86 | 3.99 | 2.99 |
| Age (years) | 1696 | 43.45 | 42.04 | 43.08 | 47.17 | 44.48 |
| Number of positions in the firm | 1684 | 1.40 | 1.23 | 1.48 | 1.46 | 1.19 |
| Dummy for Internal Promotion | 1674 | 0.26 | 0.18 | 0.27 | 0.43 | 0.20 |
| Dummy for Bonus Payment | 1423 | 0.81 | 0.63 | 0.85 | 0.81 | 0.74 |
| Dummy for MBA Degree from Top University | 1648 | 0.05 | 0.06 | 0.06 | 0.01 | 0.04 |
| Dummy for Female | 1696 | 0.12 | 0.12 | 0.14 | 0.06 | 0.08 |
| | | | **Panel B: CEOs** | | | |
| Total Compensation (US$ 1000) | 390 | 215.55 | 255.43 | 213.56 | 328.13 | 197.57 |
| Former Total Compensation (US$ 1000) | 249 | 179.39 | 246.76 | 172.50 | 195.56 | 167.30 |
| Tenure in Firm (years) | 380 | 3.92 | 2.34 | 4.35 | 4.64 | 3.44 |
| Age (years) | 390 | 47.36 | 48.14 | 47.06 | 50.73 | 48.76 |
| Number of positions in the firm | 380 | 1.32 | 1.07 | 1.41 | 1.27 | 1.17 |
| Dummy for Internal Promotion | 381 | 0.25 | 0.23 | 0.26 | 0.55 | 0.18 |
| Dummy for Bonus Payment | 300 | 0.80 | 0.74 | 0.84 | 0.86 | 0.73 |
| Dummy for MBA Degree from Top University | 367 | 0.05 | 0.07 | 0.04 | 0.00 | 0.11 |
| Dummy for Female | 390 | 0.04 | 0.02 | 0.06 | 0.00 | 0.07 |
| | | | **Panel C: Other Executives** | | | |
| Total Compensation (US$ 1000) | 1306 | 119.62 | 114.84 | 119.15 | 108.39 | 114.20 |
| Former Total Compensation (US$ 1000) | 722 | 96.04 | 91.68 | 96.04 | 90.68 | 91.70 |
| Tenure in Firm (years) | 1304 | 3.54 | 2.71 | 3.73 | 3.87 | 2.81 |
| Age (years) | 1306 | 42.28 | 40.20 | 41.98 | 46.51 | 42.75 |
| Number of positions in the firm | 1304 | 1.43 | 1.27 | 1.50 | 1.49 | 1.20 |
| Dummy for Internal Promotion | 1293 | 0.26 | 0.17 | 0.28 | 0.41 | 0.21 |
| Dummy for Bonus Payment | 1123 | 0.81 | 0.60 | 0.85 | 0.81 | 0.74 |
| Dummy for MBA Degree from Top University | 1281 | 0.05 | 0.06 | 0.06 | 0.02 | 0.01 |
| Dummy for Female | 1306 | 0.15 | 0.15 | 0.15 | 0.17 | 0.09 |

**Table 2:** CEO Transitions

| | | Current Job | | | | |
|---|---|---|---|---|---|---|
| | Shareholder Class | Family | Foreign | State | Coalitions | All |
| Former Job | Family | 10 | 9 | 0 | 11 | 30 |
| | Foreign | 8 | 66 | 0 | 19 | 93 |
| | State | 1 | 1 | 4 | 2 | 8 |
| | Coalitions | 6 | 35 | 0 | 14 | 55 |
| | All | 25 | 111 | 4 | 46 | 186 |

**Table 3:** Firm-level descriptive statistics

| Shareholder Class | N executives | N firms | N firms with financial info | N firms that belong to a domestic group |
|---|---|---|---|---|
| Family | 304 | 115 | 58 | 36 |
| Foreign | 1076 | 473 | 61 | – |
| State | 71 | 28 | 22 | 1 |
| Coalitions | 245 | 104 | 56 | 47 |
| Total | 1696 | 720 | 197 | 84 |

| | Medians | | | |
|---|---|---|---|---|
| | Assets US$ Millions | Market Cap US$ Millions | ROA | St. Dev. ROA |
| Family | 840 | 965 | 7.7% | 2.4% |
| Foreign | 879 | 815 | 7.4% | 2.1% |
| State | 1895 | 1621 | 7.5% | 4.9% |
| Coalitions | 396 | 738 | 7.5% | 3.9% |

**Table 4:** Total compensation, All executives, OLS regressions

| | Dependent variable: Log(Total compensation) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| Family | 0.150*** | 0.114** | 0.157*** | 0.112** | 0.129** | 0.220*** | 0.090* | 0.095** | 0.100** |
| | (0.045) | (0.049) | (0.058) | (0.049) | (0.062) | (0.084) | (0.048) | (0.048) | (0.048) |
| Foreign | 0.113*** | 0.083* | | 0.077* | 0.096** | 0.152** | 0.074* | 0.073* | 0.098** |
| | (0.040) | (0.043) | | (0.043) | (0.049) | (0.063) | (0.042) | (0.042) | (0.042) |
| State | -0.033 | -0.062 | 0.069 | | -0.090 | -0.019 | -0.043 | -0.042 | 0.006 |
| | (0.065) | (0.074) | (0.094) | | (0.077) | (0.089) | (0.073) | (0.073) | (0.073) |
| Firm Belonging to Group | -0.018 | -0.035 | -0.004 | -0.040 | | -0.153* | -0.028 | -0.028 | 0.000 |
| | (0.047) | (0.048) | (0.054) | (0.048) | | (0.079) | (0.048) | (0.048) | (0.048) |
| Log of Total Assets | 0.020* | 0.009 | 0.007 | 0.009 | 0.013 | 0.025* | 0.007 | 0.007 | 0.017 |
| | (0.012) | (0.012) | (0.016) | (0.013) | (0.014) | (0.014) | (0.012) | (0.012) | (0.012) |
| Dummy Missing Assets | -0.016 | -0.054 | -0.104 | -0.047 | -0.044 | | -0.065 | -0.067 | 0.115 |
| | (0.089) | (0.092) | (0.126) | (0.099) | (0.106) | | (0.092) | (0.092) | (0.104) |
| Log of Reference Assets | 0.572*** | 0.532*** | 0.312* | 0.527*** | 0.591*** | 0.491*** | 0.489*** | 0.492*** | 0.472*** |
| | (0.095) | (0.093) | (0.167) | (0.095) | (0.098) | (0.153) | (0.095) | (0.098) | (0.093) |
| Age | 0.095*** | 0.084*** | 0.105*** | 0.085*** | 0.077*** | 0.104*** | 0.091*** | 0.092*** | 0.090*** |
| | (0.017) | (0.018) | (0.031) | (0.018) | (0.020) | (0.034) | (0.018) | (0.018) | (0.018) |
| $Age^2$ | -0.080*** | -0.068*** | -0.092*** | -0.069*** | -0.059*** | -0.088** | -0.075*** | -0.077*** | -0.074*** |
| | (0.019) | (0.020) | (0.034) | (0.020) | (0.022) | (0.038) | (0.020) | (0.020) | (0.020) |
| Female | -0.092** | -0.108*** | -0.143* | -0.114*** | -0.105*** | -0.170** | -0.100*** | -0.098*** | -0.098*** |
| | (0.037) | (0.037) | (0.075) | (0.037) | (0.039) | (0.077) | (0.037) | (0.037) | (0.037) |
| MBA Degree from Top University | | | | | | | 0.240*** | 0.235*** | 0.230*** |
| | | | | | | | (0.056) | (0.057) | (0.056) |
| Tenure in the Firm | | | | | | | | 0.001 | |
| | | | | | | | | (0.003) | |
| ROA | | | | | | | | | 0.313*** |
| | | | | | | | | | (0.086) |
| Standard Deviation of ROA | | | | | | | | | -0.823** |
| | | | | | | | | | (0.341) |
| Dummy Missing ROA | | | | | | | | | 0.000 |
| | | | | | | | | | (0.035) |
| Country fixed effects | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| Executive level fixed effects | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| Year fixed effects | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| Sector fixed effects | no | yes | yes | yes | yes | yes | yes | yes | yes |
| Sample | All | All | Non-Foreign Firms | Non-State Firms | Non-Group Firms | Non-Missing Assets | All | All | All |
| Observations | 1,696 | 1,696 | 620 | 1,625 | 1,483 | 617 | 1,648 | 1,636 | 1,648 |
| $R^2$ | 0.467 | 0.500 | 0.497 | 0.499 | 0.512 | 0.512 | 0.504 | 0.499 | 0.509 |

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. $Age^2 = 0.0001 \times (Age)^2$.

**Table 5:** Total Compensation by Executive Level, OLS regressions

| | **Dependent variable: log(Total compensation)** | | | | | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| **Sample** | **CEOs** | **TM** | **STM** | **CEOs** | **TM** | **STM** |
| Family | 0.297** | 0.074 | 0.008 | 0.276** | 0.025 | 0.004 |
| | (0.124) | (0.101) | (0.055) | (0.129) | (0.099) | (0.054) |
| Foreign | 0.037 | 0.113 | 0.058 | 0.034 | 0.058 | 0.067 |
| | (0.104) | (0.096) | (0.050) | (0.106) | (0.096) | (0.049) |
| State | 0.005 | 0.080 | -0.161* | 0.082 | 0.048 | -0.120 |
| | (0.203) | (0.145) | (0.087) | (0.205) | (0.144) | (0.085) |
| Firm Belonging to Group | -0.106 | 0.107 | -0.006 | -0.061 | 0.071 | 0.001 |
| | (0.130) | (0.084) | (0.057) | (0.134) | (0.085) | (0.057) |
| Log of Total Assets | 0.017 | -0.030 | 0.029* | 0.011 | -0.034 | 0.028* |
| | (0.039) | (0.024) | (0.015) | (0.042) | (0.024) | (0.015) |
| Dummy Missing Assets | -0.108 | -0.376* | 0.138 | -0.136 | -0.416** | 0.129 |
| | (0.287) | (0.194) | (0.114) | (0.303) | (0.191) | (0.114) |
| Log of Reference Assets | 0.504*** | 0.725*** | 0.320** | 0.560** | 0.723*** | 0.328*** |
| | (0.192) | (0.185) | (0.124) | (0.240) | (0.185) | (0.120) |
| Age | 0.099* | 0.154*** | 0.010 | 0.132** | 0.164*** | 0.028 |
| | (0.053) | (0.031) | (0.023) | (0.059) | (0.032) | (0.022) |
| $Age^2$ | -0.081 | -0.143*** | 0.012 | -0.117* | -0.154*** | -0.008 |
| | (0.056) | (0.034) | (0.025) | (0.062) | (0.035) | (0.025) |
| Female | -0.104 | -0.123* | -0.072 | -0.172 | -0.113* | -0.046 |
| | (0.118) | (0.066) | (0.046) | (0.119) | (0.067) | (0.047) |
| MBA Degree from Top University | | | | 0.300** | 0.089 | 0.303*** |
| | | | | (0.140) | (0.090) | (0.079) |
| Tenure in the Firm | | | | 0.006 | 0.003 | -0.003 |
| | | | | (0.005) | (0.005) | (0.005) |
| Country fixed effects | yes | yes | yes | yes | yes | yes |
| Year fixed effects | yes | yes | yes | yes | yes | yes |
| Sector fixed effects | yes | yes | yes | yes | yes | yes |
| Observations | 390 | 564 | 742 | 357 | 550 | 729 |
| $R^2$ | 0.392 | 0.430 | 0.417 | 0.396 | 0.429 | 0.427 |

**TM**: Top Managers, **STM**: Second-tier Managers. Robust standard errors in parenthesis. *** p<0.01, ** p<0.05, * p<0.1. $Age^2 = 0.0001 \times (Age)^2$.

**Table 6:** Total compensation, Heckit and Propensity Score

| Dependent variable: log(Total Compensation) | | | | |
|---|---|---|---|---|
| **Sample** | **All Executives** | **CEOs** | **Top Managers** | **Second-tier Managers** |
| **Panel A: Heckit Regressions** | | | | |
| Family Firm | 0.095** | 0.283** | 0.025 | 0.003 |
| | (0.048) | (0.129) | (0.099) | (0.054) |
| **Panel B: Regressions weighted by the Inverse of the Propensity Score** | | | | |
| Family Firm | 0.110 | 0.287 | 0.216 | -0.074 |
| | (0.084) | (0.191) | (0.167) | (0.067) |
| Hausman | 0.047 | 0.006 | 2.017 | 3.868 |
| p-value | 0.828 | 0.938 | 0.155 | 0.049 |

*** p<0.01, ** p<0.05, * p<0.1. Robust standard errors in parentheses.

**Table 7:** MBA education, OLS regressions

| **Dependent variable: MBA Degree from Top University** | | | | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| **Sample** | **All** | **CEOs** | **TM** | **STM** |
| Family | -0.002 | -0.044 | -0.015 | 0.019 |
| | (0.019) | (0.050) | (0.039) | (0.025) |
| Foreign | -0.001 | -0.044 | 0.041 | 0.004 |
| | (0.016) | (0.046) | (0.034) | (0.018) |
| State | -0.024 | -0.061 | 0.053 | -0.031 |
| | (0.026) | (0.038) | (0.075) | (0.019) |
| Firm Belonging to Group | -0.025 | -0.083** | 0.037 | -0.016 |
| | (0.018) | (0.042) | (0.040) | (0.025) |
| Log of Total Assets | -0.002 | 0.007 | -0.011 | -0.001 |
| | (0.004) | (0.012) | (0.011) | (0.004) |
| Log of Reference Assets | -0.024 | -0.050 | -0.050 | -0.019 |
| | (0.038) | (0.081) | (0.084) | (0.063) |
| Female | -0.024 | 0.028 | 0.003 | -0.051*** |
| | (0.016) | (0.063) | (0.032) | (0.016) |
| Age | -0.007 | -0.025 | 0.009 | -0.016* |
| | (0.008) | (0.029) | (0.011) | (0.009) |
| $Age^2$ | 0.004 | 0.025 | -0.012 | 0.015 |
| | (0.008) | (0.031) | (0.011) | (0.010) |
| Country fixed effects | yes | yes | yes | yes |
| Executive level fixed effects | yes | no | no | no |
| Sector fixed effects | yes | yes | yes | yes |
| Year fixed effects | yes | yes | yes | yes |
| Observations | 1,648 | 367 | 550 | 731 |
| $R^2$ | 0.037 | 0.110 | 0.078 | 0.111 |

**All**: All Executives, **TM**: Top Managers, **STM**: Second-tier Managers. *** p<0.01, ** p<0.05, * p<0.1. $Age^2 = 0.0001 \times (Age)^2$.

**Table 8:** Executive tenure and promotion

| **Dependent variable:** | **Tenure in Firm** | | | | **Number of positions in the firm** | | | | **Internal Promotion** | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) |
| **Sample** | **All** | **CEOs** | **TM** | **STM** | **All** | **CEOs** | **TM** | **STM** | **All** | **CEOs** | **TM** | **STM** |
| Family | 0.576 | 0.242 | 1.473** | 0.250 | 0.132* | -0.094 | 0.254 | 0.150 | 0.004 | 0.010 | 0.034 | -0.029 |
| | (0.353) | (0.858) | (0.742) | (0.502) | (0.078) | (0.146) | (0.161) | (0.124) | (0.039) | (0.082) | (0.074) | (0.060) |
| Foreign | 1.729*** | 2.032** | 2.605*** | 1.377*** | 0.478*** | 0.331* | 0.798*** | 0.451*** | 0.118*** | 0.028 | 0.130** | 0.124** |
| | (0.352) | (0.869) | (0.684) | (0.466) | (0.077) | (0.175) | (0.158) | (0.112) | (0.036) | (0.073) | (0.066) | (0.056) |
| State | 0.794 | -0.297 | 2.142* | 0.417 | 0.395** | -0.221 | 0.827** | 0.340 | 0.238*** | 0.087 | 0.419*** | 0.145 |
| | (0.924) | (4.108) | (1.200) | (0.862) | (0.193) | (0.382) | (0.397) | (0.257) | (0.077) | (0.164) | (0.121) | (0.105) |
| Firm Belonging to Group | 1.039*** | 1.048 | 2.085*** | 1.003* | 0.215*** | 0.109 | 0.465*** | 0.217 | 0.063* | -0.078 | 0.104 | 0.075 |
| | (0.368) | (0.749) | (0.770) | (0.546) | (0.082) | (0.159) | (0.173) | (0.134) | (0.038) | (0.076) | (0.073) | (0.060) |
| Log of Total Assets | -0.005 | -0.148 | 0.082 | -0.022 | 0.012 | 0.053 | 0.055 | -0.008 | -0.012 | -0.000 | -0.003 | -0.016 |
| | (0.097) | (0.209) | (0.261) | (0.127) | (0.022) | (0.054) | (0.061) | (0.029) | (0.010) | (0.024) | (0.021) | (0.014) |
| Log of Reference Assets | 0.708 | 2.010 | -0.059 | 1.303 | 0.314* | -0.014 | 0.300 | 0.640** | 0.006 | -0.189 | -0.031 | 0.268** |
| | (0.726) | (1.532) | (1.316) | (1.140) | (0.184) | (0.387) | (0.401) | (0.296) | (0.078) | (0.146) | (0.144) | (0.134) |
| Female | -0.066 | 2.654 | -0.225 | -0.483 | -0.074 | 0.320 | -0.202 | -0.022 | -0.061** | -0.098 | -0.048 | -0.068 |
| | (0.324) | (1.763) | (0.488) | (0.443) | (0.092) | (0.359) | (0.153) | (0.124) | (0.031) | (0.083) | (0.053) | (0.044) |
| Age | -0.122 | -1.242 | 0.211 | 0.227 | -0.008 | 0.021 | 0.050 | -0.031 | -0.016 | -0.019 | 0.023 | -0.020 |
| | (0.257) | (1.030) | (0.332) | (0.229) | (0.038) | (0.084) | (0.072) | (0.064) | (0.015) | (0.043) | (0.026) | (0.024) |
| $Age^2$ | 0.213 | 1.362 | -0.122 | -0.219 | 0.001 | -0.033 | -0.058 | 0.024 | 0.012 | 0.008 | -0.025 | 0.014 |
| | (0.294) | (1.109) | (0.379) | (0.267) | (0.040) | (0.086) | (0.074) | (0.070) | (0.016) | (0.045) | (0.029) | (0.027) |
| MBA Degree from Top University | -0.892** | -0.886 | -0.380 | -1.923*** | -0.271** | -0.295* | -0.126 | -0.522*** | -0.098** | -0.283*** | -0.037 | -0.115 |
| | (0.368) | (0.970) | (0.675) | (0.504) | (0.110) | (0.175) | (0.231) | (0.134) | (0.043) | (0.057) | (0.079) | (0.073) |
| Country fixed effects | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| Executive level fixed effects | yes | no | no | no | yes | no | no | no | yes | no | no | no |
| Sector fixed effects | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| Year fixed effects | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| Observations | 1,636 | 357 | 550 | 729 | 1,636 | 357 | 550 | 729 | 1,632 | 360 | 546 | 726 |
| $R^2$ | 0.085 | 0.143 | 0.161 | 0.129 | 0.066 | 0.135 | 0.097 | 0.109 | 0.063 | 0.230 | 0.105 | 0.092 |

**TM**: Top Managers, **STM**: Second-tier Managers. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

**Table 9:** Effect of former compensation on family status and current compensation

| | Panel A: Dependent variable is Family Firm | | | | | |
|---|---|---|---|---|---|---|
| **Sample:** | **CEOs** | **TM** | **STM** | **CEOs** | **TM** | **STM** |
| Log of Former Job Compensation | -0.008 | 0.025 | 0.024 | -0.004 | 0.016 | 0.030 |
| | (0.030) | (0.027) | (0.020) | (0.025) | (0.028) | (0.021) |
| Year fixed effects | yes | yes | yes | yes | yes | yes |
| Controls | no | no | no | yes | yes | yes |
| Country fixed effects | no | no | no | yes | yes | yes |
| Observations | 159 | 244 | 295 | 157 | 242 | 292 |
| $R^2$ | 0.400 | 0.379 | 0.451 | 0.470 | 0.416 | 0.508 |

| | Panel B: Dependent variable is Log(Total compensation) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Sample:** | **CEOs** | **CEOs** | **TM** | **STM** | **CEOs** | **CEOs** | **TM** | **STM** |
| Log of Former Job Compensation | | 0.181 | 0.536*** | 0.253*** | | 0.145 | 0.393*** | 0.175*** |
| | | (0.169) | (0.059) | (0.062) | | (0.109) | (0.058) | (0.045) |
| Family | 0.308* | 0.324* | 0.041 | 0.020 | 0.227 | 0.233 | 0.015 | 0.032 |
| | (0.185) | (0.182) | (0.127) | (0.071) | (0.165) | (0.164) | (0.118) | (0.064) |
| Foreign | -0.021 | 0.068 | 0.147 | 0.059 | -0.013 | 0.026 | 0.154 | 0.129** |
| | (0.153) | (0.144) | (0.111) | (0.066) | (0.128) | (0.133) | (0.113) | (0.058) |
| State | 0.286 | 0.364 | 0.104 | 0.010 | 0.033 | 0.118 | 0.037 | -0.040 |
| | (0.376) | (0.381) | (0.200) | (0.100) | (0.315) | (0.306) | (0.185) | (0.080) |
| Firm Belonging to Group | -0.156 | -0.088 | 0.153 | 0.222*** | -0.143 | -0.137 | 0.140 | 0.209*** |
| | (0.173) | (0.168) | (0.138) | (0.074) | (0.149) | (0.152) | (0.128) | (0.065) |
| Log of Total Assets | | | | | -0.014 | -0.021 | -0.060* | -0.012 |
| | | | | | (0.045) | (0.042) | (0.036) | (0.023) |
| Log of Reference Assets | | | | | 0.025 | -0.204 | 0.284 | 0.457** |
| | | | | | (0.374) | (0.397) | (0.194) | (0.184) |
| Female | | | | | -0.286 | -0.491** | -0.017 | -0.110* |
| | | | | | (0.181) | (0.242) | (0.089) | (0.063) |
| Age | | | | | 0.206** | 0.191** | 0.125** | 0.088*** |
| | | | | | (0.093) | (0.090) | (0.056) | (0.031) |
| $Age^2$ | | | | | -0.195** | -0.183** | -0.130** | -0.077** |
| | | | | | (0.096) | (0.092) | (0.065) | (0.034) |
| MBA Degree from Top University | | | | | 0.234 | 0.198 | 0.114 | 0.328*** |
| | | | | | (0.178) | (0.162) | (0.132) | (0.105) |
| Year fixed effects | yes | yes | yes | yes | yes | yes | yes | yes |
| Country fixed effects | no | no | no | no | yes | yes | yes | yes |
| Observations | 159 | 159 | 244 | 295 | 157 | 157 | 242 | 292 |
| $R^2$ | 0.209 | 0.271 | 0.500 | 0.307 | 0.410 | 0.446 | 0.589 | 0.566 |

**TM**: Top Managers, **STM**: Second-tier Managers. *** p<0.01, ** p<0.05, * p<0.1. $Age^2 = 0.0001 \times (Age)^2$. Robust standard errors in parentheses. *Controls* in Panel A include: Firm Belonging to Group, State, Foreign, Log of Total Assets, Log of Reference Assets, Female, Age, $Age^2$ and MBA Degree from Top University.

**Table 10:** Bonus compensation, OLS regressions

| **Dependent Variable: Dummy for bonus payment** | | | | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| **Sample** | **All** | **CEOs** | **TM** | **STM** |
| Family | -0.149*** | 0.049 | -0.199* | -0.174** |
| | (0.055) | (0.125) | (0.113) | (0.080) |
| Foreign | 0.091** | 0.122 | 0.047 | 0.080 |
| | (0.045) | (0.094) | (0.099) | (0.069) |
| State | 0.068 | -0.104 | 0.154 | 0.042 |
| | (0.081) | (0.223) | (0.155) | (0.127) |
| Firm belonging to Group | 0.102* | 0.081 | 0.180* | 0.062 |
| | (0.052) | (0.109) | (0.094) | (0.083) |
| Log of Total Assets | 0.004 | -0.016 | -0.008 | 0.008 |
| | (0.013) | (0.034) | (0.020) | (0.018) |
| Log of Reference Size | 0.153 | 0.204 | 0.220 | 0.310* |
| | (0.096) | (0.345) | (0.148) | (0.158) |
| Dummy Missing Assets | -0.009 | -0.125 | -0.058 | 0.021 |
| | (0.108) | (0.244) | (0.175) | (0.159) |
| Female | 0.011 | 0.114 | -0.048 | -0.000 |
| | (0.038) | (0.069) | (0.061) | (0.059) |
| Age | 0.012 | 0.065 | 0.025 | -0.006 |
| | (0.021) | (0.065) | (0.040) | (0.032) |
| $Age^2$ | -0.016 | -0.071 | -0.029 | 0.004 |
| | (0.023) | (0.070) | (0.044) | (0.037) |
| MBA Degree from Top University | 0.026 | 0.179** | 0.061 | -0.035 |
| | (0.060) | (0.081) | (0.070) | (0.132) |
| Country fixed effects | yes | yes | yes | yes |
| Executive level fixed effects | yes | no | no | no |
| Sector fixed effects | yes | yes | yes | yes |
| Year fixed effects | yes | yes | yes | yes |
| Observations | 907 | 203 | 291 | 413 |
| $R^2$ | 0.155 | 0.271 | 0.234 | 0.230 |

**All**: All Executives, **TM**: Top Managers, **STM**: Second-tier Managers.*** p<0.01, ** p<0.05, * p<0.1. $Age^2 = 0.0001 \times (Age)^2$. Robust standard errors in parentheses.

**Table 11:** CEO compensation and family characteristics

| **Dependent variable: log(Total compensation)** | | | | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| **Sample** | **CEOs** | **CEOs** | **CEOs** | **CEOs** |
| Family | 0.354** | | | |
| | (0.149) | | | |
| Family with Active Owner | | 0.311 | | |
| | | (0.194) | | |
| Family with Absent Owner | | 0.386** | | |
| | | (0.174) | | |
| Family with Sons not in Management | | | 0.283 | |
| | | | (0.291) | |
| Family with Sons in Management | | | 0.361** | |
| | | | (0.152) | |
| Family with Active Owner and Sons not in Management | | | | -0.129 |
| | | | | (0.253) |
| Family with Absent Owner and Sons not in Management | | | | 0.541 |
| | | | | (0.346) |
| Family with Active Owner and Sons in Management | | | | 0.349* |
| | | | | (0.196) |
| Family with Absent Owner and Sons in Management | | | | 0.365** |
| | | | | (0.185) |
| Foreign | 0.031 | 0.030 | 0.029 | 0.018 |
| | (0.109) | (0.109) | (0.110) | (0.110) |
| State | 0.083 | 0.083 | 0.081 | 0.076 |
| | (0.211) | (0.212) | (0.212) | (0.214) |
| Firm Belonging to Group | -0.071 | -0.075 | -0.077 | -0.094 |
| | (0.145) | (0.144) | (0.149) | (0.150) |
| Log of Reference Assets | 0.547** | 0.549** | 0.547** | 0.539** |
| | (0.226) | (0.226) | (0.226) | (0.226) |
| Log of Total Assets | 0.001 | -0.001 | 0.002 | -0.001 |
| | (0.046) | (0.047) | (0.046) | (0.047) |
| Dummy Missing Assets | -0.158 | -0.171 | -0.152 | -0.162 |
| | (0.336) | (0.344) | (0.338) | (0.345) |
| Age | 0.097 | 0.097 | 0.097 | 0.094 |
| | (0.062) | (0.063) | (0.062) | (0.063) |
| Age2 | -0.081 | -0.081 | -0.081 | -0.078 |
| | (0.066) | (0.066) | (0.066) | (0.066) |
| Female | -0.162 | -0.160 | -0.165 | -0.170 |
| | (0.121) | (0.122) | (0.123) | (0.125) |
| MBA Degree from Top University | 0.261* | 0.264* | 0.264* | 0.239* |
| | (0.137) | (0.138) | (0.137) | (0.144) |
| Country fixed effects | yes | yes | yes | yes |
| Executive level fixed effects | yes | yes | yes | yes |
| Sector fixed effects | yes | yes | yes | yes |
| Year fixed effects | yes | yes | yes | yes |
| Observations | 348 | 348 | 348 | 348 |
| $R^2$ | 0.390 | 0.390 | 0.390 | 0.393 |

Robust standard errors in parentheses. ** p<0.01, ** p<0.05, * p<0.1. Age$^2$ =0.0001 $\times$ (Age)$^2$.