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Abstract

We investigate the role played by institutional development in the prevalence and value of family firms, while controlling for the potential effect of cultural norms. China provides a good research lab since it combines great heterogeneity in institutional development across the Chinese provinces with homogeneity in cultural norms, law, and regulation. Using hand-collected data from publicly listed Chinese firms, we find that, when institutional efficiency is low, family ownership and management increase value, while family control in excess of ownership reduces value. When institutional efficiency is high, none of these effects are significant.

A growing body of research shows that family firms dominate economic activity around the world, and that they are significantly different from other companies in their behavior, structural characteristics, and performance (Morck et al. (2005)). Nevertheless, the extant literature has documented significant geographical variation in the prevalence and value of family firms. For instance, La Porta et al. (1999) report that the fraction of family firms among the 20 largest firms in 27 countries averages 35% but ranges from 10% to 100%. Villalonga and Amit (2006) show that the value of family firms relative to non-family firms in the United States is contingent on how three elements enter the definition of a family firm: family ownership per se is positively associated to firm value, as is family management by a founder-CEO; however, family control in excess of ownership and family management by descendant-CEOs are negatively related to value. Barontini and Caprio (2006) find similar effects for family ownership, control, and founder management in Europe, yet they find no significant performance differences between descendant-led firms and non-family firms.

Several explanations to this variation are plausible. Burkart et al.'s (2003) theoretical model of family succession suggests that it is attributable to the varying degrees of investor protection around the world: the lower the legal protection of outside investors, the higher the need for a large (family) shareholder that can mitigate the agency problem between owners and managers, but also the higher the ability of the large shareholder to expropriate minority investors. As a result, the model predicts that family firms will be more prevalent in countries with low investor protection, which is consistent with the evidence in La Porta et al. (1999). The theory also suggests that the variation in family firms' value may be related to investor

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protection, but it is ambivalent about the sign of the relationship: whether family firms have higher or lower value in high- or low- investor protection countries (relative to non-family firms) will depend on which of the two agency problems dominates—the one between owners and managers or the one between large and small investors. Indeed, the evidence on this point remains inconclusive; La Porta et al. (2002) find higher values for firms in countries with better investor protection and in firms with higher cash-flow ownership by the controlling shareholder, but find no significant interaction effect between the two factors.

A second explanation is suggested by Khanna and Palepu's (2000) arguments about diversified business groups in emerging markets (which are usually family-controlled): when the institutions that contribute to the efficiency of input and output markets are under-developed, family firms and business groups can act as substitute markets for capital and labor and thus contribute to mitigate market failures caused by agency and information problems. Families can also add value to their firms in product markets, through their business and political connections or reputation. While fundamentally different from the legal investor protection argument, this "internal markets" explanation shares with it the prediction that family firms should be more prevalent in less developed markets. It does, however, offer a more definite prediction about the sign of the moderating effect of institutional development on the value of family firms: family firms should have higher value relative to non-family firms in less developed environments.

A third explanation to the variation in the prevalence and value of family firms is that it is the outcome of cultural norms such as family values or trust that are deeply embedded in social and economic behaviors in each country (Weber (1904), Banfield (1958), Fukuyama (1995)).

Some macroeconomic evidence is consistent with this view: Morck et al. (2000) show that countries in which inherited wealth is large relative to their gross domestic product (GDP) have slower growth than similarly developed countries where entrepreneurs' self-made wealth is large relative to GDP. Bertrand and Schoar (2006) show that countries with stronger family values such as children's obedience to parents or parental duties to their children have lower economic performance in terms of GDP per capita. As they acknowledge, however, family values may be the consequence rather than the cause of economic development. Moreover, because economic and institutional development are highly correlated, it is difficult to separate the cultural explanation from the central tenet, common to the other two explanations, that the variation in the prevalence and value of family firms across countries results from differences in institutional and market development.

In this paper we apply Villalonga and Amit's (2006, 2009) ownership-control-management decomposition approach to a sample of publicly listed Chinese firms in order to tease these explanations apart. China provides a good research laboratory for this purpose, since there is great heterogeneity in the degree of institutional development of its provinces and regions, and at the same time great homogeneity in cultural norms, with strong emphasis on family values (Wong (1985), Allen et al. (2005)). We are thus able to investigate the role played by institutional development in the prevalence and value of family firms, while controlling for the potential effect of culture. Moreover, by decomposing family firms into their ownership, control, and management elements, we are able to test the specific predictions of the investor protection and internal markets explanations.

The use of Chinese data brings about an additional advantage for the study of family firms, which is that it allows us to examine these firms very soon after they become family-owned or controlled. This is important because many of the mechanisms used by families around the world to enhance their control over their firms are set up very early on and condition those firms' future ownership and control structure, which becomes very path-dependent. Yet in most economies, analyzing firms since they become family firms de facto means analyzing firms since their inception, since there are relatively few instances in which a family buys out a widely held firm. Thus, studying family firms at the time their control structures are set up generally means analyzing an entrepreneurial setting, which may make it difficult to extrapolate comparisons between family and non-family firms to mature companies. In China, however, the massive privatization of SOEs has created a shock in the economy that facilitates this comparison.[1]

Contrary to the cross-country evidence and to the investor protection and internal markets theories' prediction with respect to the prevalence of family firms, we find that these firms are relatively more common and have higher family ownership stakes in the more developed provinces. They also have family CEOs more frequently than do family firms in the less developed parts of the country. However, just as the investor protection theory would predict, families make greater use of control enhancing mechanisms in the less developed regions.

We find that family ownership significantly increases firm value, and that the effect is entirely attributable to low institutional efficiency regions or provinces. This finding is not

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[1] We do not claim that the shock is exogenous, as in a natural experiment, since neither the State' s decisions of which firms to privatize and when, nor the individual of family's decision to take control of those firms are presumably random.

inconsistent with the investor protection view, but it is particularly consistent with the internal markets view.

Family control in excess of ownership, which in China can be achieved through the use of pyramidal control structures as well as through disproportionate board representation, significantly decreases firm value. The significance of the effect is again entirely driven by the regions or provinces with low institutional efficiency, a result that is not inconsistent with the internal markets view, but is particularly consistent with the investor protection argument that family firms in low investor protection settings lend themselves to the appropriation of private benefits by their controlling shareholders.

Family management significantly increases firm value when institutional efficiency is low, but not when it is high. In fact, the interaction of family management with institutional efficiency is negative and significant and entirely offsets the positive effect of the low efficiency regions for the whole sample. This finding is consistent with the internal markets view, which suggests that family firms may be a valuable source of management talent when the lack of institutional development makes the external labor market inefficient or in short supply. However, the youth of the Chinese private sector implies that family management in China is mostly exercised by founders. Therefore, the lack of a negative effect of family management in the full sample is not inconsistent with the investor protection view either (as it would if family management were exercised by descendants).

Our results are robust to alternative measures of family ownership, control, management, firm performance, and institutional efficiency. The estimated effects on firm value are also

robust to controlling for the endogeneity of family firm status. Moreover, because the fact that most non-family firms in China are state-owned may raise a concern that our findings are driven by the state-owned vs. private-sector distinction rather than by the difference between family and non-family firms, we examine whether our results hold in the subsample of private-sector firms only. We find that they do, even after controlling for self selection into the non-SOE or private status. We therefore conclude that institutional development plays a critical role in the prevalence and value of family firms.

The rest of the paper is organized as follows. Section I provides background information about institutional development and family firms in China. Section II describes our data and variables. Sections III and IV present our results about the role of institutional development in the prevalence and value of family firms, respectively. In Section V we analyze whether our results are driven by the state-owned vs. private sector distinction rather than by the difference between family and non-family firms. Section VI concludes.

I. Background: Institutional Development and Family Firms in China

Ever since China began its transition from a central planning system into a market economy in 1978, it has experienced unprecedented levels of growth: with average annual growth at around 9% and GDP quadrupled, China is now the world's largest and fastest-growing emerging economy. Two important features of this transition are of particular interest for our research purposes: (1) the increasing disparity across regions in their degree of institutional development, and (2) the shift of the bulk of economic activity from the state-owned to the private sector.

A. Regional Disparity in China

The rapid growth of the coastal regions in China over the past 25 years has widened the regional disparity within the country (Jian et al. (1996)). Using the Gini coefficient and generalized entropy (GE) measures of inequality, Kanbur and Zhang (2005) show that inland-coastal disparity in income, health, and education have risen sharply and steadily since 1984. The World Bank's (2006) survey of the investment climate in 120 Chinese cities reports that the average per-capita GDP in Southeast China is more than 50 percent above that in the Northeast, and 150 percent above the averages for Central and Southwest China. Similarly, per-capita foreign direct investment (FDI) in the Southeastern provinces is 130 percent above per capita FDI for the Northeast, more than 7 times the average for Central China, and more than 25 times the average for Western China.

The disparity is even more remarkable given that business law, regulation, and culture are basically the same throughout China. Unlike the U.S., where corporate law differs across states, China has a centralized legal system where corporate law and security regulations are the same across all provinces. In their analysis of the law, finance, and economic growth in China, Allen et al. (2005) note that "despite the almost nonexistence of formal governance mechanisms, alternative mechanisms have been remarkably effective in the private sector. Perhaps the most important of these is the role of reputation and relationships (Greif (1989, 1993)). Without a dominant religion, the most important force shaping China's social values and institutions is the widely held set of beliefs related to Confucius; these beliefs define family and social orders and trust, and are different from western beliefs on the rule of law." The cultural homogeneity across

the country is reinforced by the fact that more than 90% of Chinese people are from the Han ethnic group, which has shared the same social norms, culture, language, and traditions for more than 5000 years.[2] Such a predominance of a single ethnic group in one nation is the highest among large countries all over the world. Given these commonalities in the Chinese culture and legal system, both Allen et al. (2005) and the World Bank study conclude that inter-regional differences in development mainly reflect local government efforts (or lack thereof) to support and participate in the growth of private-sector firms. Fan and Wang (2006) reach a similar conclusion in their survey of the institutional environment of the different Chinese provinces.

It is precisely this stark contrast between the heterogeneity in institutional and economic development and the homogeneity in law and culture across the country that makes China an ideal setting to analyze our research question about the role of institutional development in the prevalence and value of family firms.

B. The Development of the Chinese Private Sector

Regional disparity aside, the transition in China has been marked by the progressive decline in large state-owned enterprises (SOEs) and corresponding expansion of the private sector. Anderson et al. (2003) show that the contribution of SOEs to GDP as measured by output percentage dropped from 77% in 1978 to just over 28% in 1999, while the relative output of privately-owned enterprises rose from zero to 18% over the same period, and collectively-owned

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[2] Most minority ethnic groups in China, such as the Hui, Zhuang, Manchu, and Mongolian (which are the biggest ones), use Mandarin as their primary language and hence are strongly influenced by the Han culture. Moreover, although there are various dialects in China, the ideographic nature of the Chinese language allows for the separation of speaking and writing and therefore the dialects only differ phonetically. As a result, the written version of Chinese reinforces the cultural homogeneity across the country.

firms accounted for 35% in 1999.[3] The All-China Federation of Industry and Commerce survey reports that the number of privately-owned and run firms with revenues above 120 million yuan ($14.5 million) rose from 1,582 in 2002 to 2,268 in 2004.[4] In its 2005 survey on the private sector in China, Hong Kong based brokerage CLSA reported that the private sector in China was by then responsible for about three-quarters of economic output and employment.[5] Allen et al. (2005) show that the private sector grows much faster than the other and provides most of the economy's growth. In late 2009, the private sector represented 95% of all companies in China and contributed over 70% of all profits generated by Chinese companies.[6]

Part of the shift in balance between SOEs and private-sector firms has taken place through share-issue privatization in Chinese stock markets, the Shanghai and Shenzhen stock exchanges, which have gained considerable size and momentum since their establishment in 1990. On August 9, 2007, the total market capitalization for the first time exceeded the nation's previous-year GDP of 21 trillion yuan or about $2.8 trillion.[7] As stated by the Chinese government, the main purposes of the stock market are to raise much-needed capital for SOEs, and to facilitate SOEs' restructuring as corporations. However, most privatization processes have been partial, since the government still retains majority ownership or control in most listed companies (Sun and Tong (2003), Allen et al. (2005).

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[3] Collectively-owned firms in China are similar to cooperatives in Western economies but often started by local town governments. They can be seen as a hybrid between SOEs and private firms.

[4] "Survey confirms China's reliance on private companies to fuel growth," *Financial Times*, August 26, 2004.

[5] "Private sector 'in control of China economy'," *Financial Times*, September 13, 2005.

[6] Speech given by the head of the National Statistic Bureau of China at the Annual Forum of Chinese Economists on November 22, 2009.

[7] "Mainland stocks become world giants after defying global rout," *South China Morning Post*, August 15, 2007.

Most of the remaining (non-state-controlled) listed companies are family firms, in which the largest shareholder is a family and the state has either withdrawn or never held any interest. Table I shows that, as of 2007, 896 (62%) of 1,453 publicly listed firms were state-controlled and 491 (34%) were family firms. Among the latter, 201 were privatized from former SOEs, 32 changed ownership from a collective organization to an individual or family, and 258 were founded *de novo* within the private sector (see Table IV and its discussion later in the paper). These figures suggest that the development of the Chinese private sector is not just the outcome of the privatization of SOEs. Rather, the privatization process has been complemented to a significant degree by entrepreneurial activity in China.

The growth of firms that have been born in the private sector is particularly remarkable given the Chinese stock exchanges' official mandate to serve SOEs, which has translated into a large bias in equity issuance against non-SOEs. In our sample, for instance, 187 (93%) of the 201 family firms that were formerly state-owned had their IPO before they were privatized.[8] The first family-controlled listed firm appeared in 1992, but until 1997, the number of family firms was minimal compared with the rapid increase in market capitalization and the total number of listed firms. In 1997, less than six percent of listed firms were family-controlled, despite the increasing importance of non-SOEs in the Chinese economy. However, 1998 saw the start of a boom in family firm listings. The trend was further boosted by the establishment of the Shenzhen second board market in 2004, and by the opening of the Chinext market in October 2009, which is designed to be the NASDAQ-style exchange for startup and innovative companies.

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[8] In contrast, 14 (44%) of the 32 family firms that were previously collectively-owned firms had their IPO before the family took control of the company

C. Family Ownership, Control, and Management in China

Starting with La Porta et al. (1999), the literature on international corporate ownership has documented that most firms around the world are controlled by large shareholders with the aid of mechanisms such as dual-class stock and pyramids that enable them to enhance their control over and above their economic interest. Claessens et al. (2000) show that the wedge between share ownership and voting control in East Asia is particularly pronounced in family firms. Yet it is worth noting that their study does not include China. Unlike other Asian countries, China does not allow the issuance of dual-class stock with different voting rights.[9] However, pyramid structures are widespread among both SOEs and family firms, as suggested by Table I and discussed later in the paper. Fan et al. (2007) analyze the pyramid structures of Chinese listed SOEs and conclude that the government uses them to decentralize decision rights to firm management without selling off its ownership.

In addition, Chinese family firm owners can control a fraction of the board that exceeds their ownership and even voting stake through provisions in the firm's bylaws. Villalonga and Amit (2009) investigate this "disproportionate board representation" in their sample and find that it is the most common form of control enhancement in the United States, even more so that dual-class stock.

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[9] In China there are multiple classes of common stock that are issued for different types of investors: Class A and Class B shares, which are tradable in the Shanghai or Shenzhen stock exchanges among Chinese and foreign investors, respectively; Class H shares, which trade in the Hong Kong stock exchange and can be held by anyone; and non-tradable shares that are held by the state, the firm's founders, foreign owners, employees or legal entities during the process through which firms are converted into limited liability corporations but before they are listed (Allen et al., 2005).

Figure 1 shows an example of a Chinese family firm, CityChamp Dartong Co. Ltd. (GuanChengDaTong, ticker 600067). Following Villalonga and Amit (2009), we decompose the wedge between the family's ownership stake and its voting and board control into its various elements to determine the contribution of each control-enhancing mechanism at play.

CityChamp Dartong is controlled by the Han family, who owns a 23.07% equity stake through multiple control chains, as depicted in the Figure. The company's founder, Han Guolong, indirectly owns 4.75% of the listed company shares through a four-tier pyramid. He personally owns 80% of XinJing International, which holds 36.16% of China HaiDian Holdings Limited. HaiDian Holdings's, in turn, owns 100% of Starlex, which is the second largest shareholder in CityChamp Dartong with a 16.39% ownership stake. Han Guolong's ownership stake in CityChamp Dartong is the product of all these stakes along the chain of control: $80\% \times 36.16\% \times 100\% \times 16.39\% = 4.75\%$.

Meanwhile, Xue Lixi, who is Han Guolong's daughter-in-law, indirectly owns another 18.32% of the listed company shares through FuJian FengRong Investment, in which she personally owns a 68.5% equity stake. Since FuJian FengRong Investment owns 26.74% in CityChamp Dartong, Xue Lixi's indirect ownership in the listed company is: $68.5\% \times 26.74\% = 18.32\%$. Therefore, the Han family's combined ownership in the listed company is 4.75% + 18.32% = 23.07%.

The family's voting control of CityChamp Dartong is 43.13%, the sum of the weakest links in each control chain (16.39% and 26.74%), which is 20.1%, or 1.9 times, higher than the family's ownership stake. The family's control of the company is further enhanced through their

presence on the board of directors: the family holds four out of nine board seats, or 44.4%, which is slightly above the 43.23% voting control: Han Guolong, the founder, is the chairman, and his son Han XiaoHuang is the associate chairman. His other son, Han XiaoJie, and Han XiaoJie's wife Xue Lixi occupy the other two board seats. In addition, Han XiaoJie is the CEO of the company.

In this paper, we perform a similar analysis of each family firm in our sample to arrive at separate measures of (1) the family's ownership stake; (2) the extent to which the family's voting control exceeds its ownership stake; (3) the extent to which the family's board control exceeds its voting control; and (4) the family's presence in management in the role of CEO. We then investigate how each of these measures impact firm value in different institutional settings.

II. Data and Variables

A. Sample and Data

Our sample consists of 1,453 A-share companies listed on the Chinese stock market in 2007, for which the ownership and financial data needed for our empirical analyses are available.[10] We note that this is not a random sample of the total population of firms in China; which also includes non-listed firms. However, it is the best and largest sample for which we can obtain reliable ownership data, which are critical to our research objective. Since 2007, listed companies are required by the China Security Regulatory Commission (the stock market's regulatory authority) to disclose information about their ultimate controllers. Prior to the enactment of this rule, ultimate controllers were difficult to identify due to lack of transparency.

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[10] See footnote 4 above for a description of the different types of shares in Chinese listed companies.

We thus take advantage of this new disclosure requirement and manually collect the following information from our sample companies' 2007 annual reports: (1) the identity and immediate ownership percentage of the two largest shareholders; (2) the identity, control mechanism, and ownership stake of the ultimate controller; and (3) the ultimate ownership stake of corporate insiders (officers and directors). Financial data for our sample firms are obtained from the Wind Data Company, the leading data provider in China, which collects financial information from company annual reports as well as from the Chinese stock exchanges.

We define family firms as those whose largest ownership stake is ultimately held by an individual, a family, or a team of co-founders or their families. Of the 1,453 companies in our sample, 491 are family firms and 962 are non-family firms. Among the latter, 896 are ultimately controlled by the state (and referred to as SOEs in the remainder of the paper), and 66 are neither family- not state-controlled. Included in this category of owners are, in order of their prevalence, collective organizations, universities, foreign owners, and small Chinese investors.

Table I reports the average ownership and voting control stakes of different controlling owner types. On average, families in China hold 26% of the shares and control 35% of the votes in listed family firms. As noted above, this wedge of 9% (or 1.35 times ownership) is entirely attributable to the use of pyramids. The state, in turn, holds an average of 36% of the shares and 40% of the votes in the listed companies that remain under its control. The 4% wedge (or 1.1 times ownership) indicates that the Chinese government also resorts to the use of pyramids to retain control, as suggested by Fan et al. (2007). Other types of owners also control more votes

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than the shares they hold (27% vs. 21%). Overall, however, families get considerably more leverage out of their pyramids than non-family firm owners, whose wedge averages only 4%.

Table I also reports the average ownership stake of the second largest blockholder. We find that, on average, the second largest blockholder in Chinese listed companies only holds 7% of the shares (as compared to a sample average of 32% for the largest shareholder). We note, however, that because the China Security Regulatory Commission only requires full ownership disclosure from the controlling (largest) shareholder, for other shareholders only direct ownership stakes can be obtained. To the extent that these shareholders too may use pyramids to enhance their control, the direct ownership figure of 7% is likely to overestimate their actual ownership in the listed company. This power imbalance suggests that second-largest blockholders may be unable or unwilling to prevent controlling shareholders from appropriating private benefits of control if they choose to do so.

B. Variable Descriptions

Table II contains summary descriptions of all the variables we use in our empirical analysis. Two of the variables merit further explanation. The first is our key dependent variable, *Tobin's q*, which by definition is the ratio of the firm's market value to the replacement cost of its assets. Most Chinese listed companies have, in addition to their listed and tradable shares, a class of non-tradable shares that are not publicly listed on any stock market.[11] When non-

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[11] In April 2005, the China Securities Regulatory Commission launched a so-called "non-tradable shares reform" to convert the non-tradable shares to be tradable on the open market. As stipulated by the reform, holders of the non-tradable shares paid cash and stock to the holders of tradable shares in exchange for their shares' "tradability." By 2007 (our sample year), the reform had been completed but the converted non-tradable shares were still within the 1-2 year official lock-up period.

tradable shares are traded in private, their price tends to be primarily determined by their book value. We therefore measure Tobin's q as the sum of the market value of tradable equity, plus the book values of non-tradable equity and net debt (liabilities minus liquid assets), divided by total assets. All the empirical analyses reported in the paper are based on Tobin's q calculated in this way. However, our results are robust to the use an alternative measure of q, in which equity value is computed as the product of the tradable stock's price by total number of shares outstanding (including tradable and non-tradable shares).

The second variable that is worth describing in some more detail than what is provided in Table II is *Institutional Efficiency*. We use two alternative measures of this variable. Our primary measure is derived from the World Bank's (2006) ranking of 30 Chinese provinces according to their investment climate. Using a survey on 12,400 firms from 120 cities in China, the World Bank measures investment climate by an index that captures: (1) market potential, (2) labor flexibility, (3) skill and technology endowment, (4) private sector participation, (5) government efficiency, (6) contract enforcement, (7) access to finance, and (8) harmonious society (which is a combination of a broad range of factors such as air quality, female education, and medical insurance coverage). Based on this index, the World Bank (2006) ranks China's regions from best to worst as follows:

(1) Southeast (Jiangsu, Shanghai, Zhejiang, Fujian, and Guangdong),

(2) Bohai (Shandong, Beijing, Tianjin, and Hebei),

(3) Central (Anhui, Henan, Hubei, Hunan, and Jiangxi),

(4) Northeast (Heilongjiang, Jilin, and Liaoning),

(5) Southwest (Yunnan, Guizhou, Guangxi, Sichuan, Chongqing, and Hainan), and

(6) Northwest (Shanxi, Shaanxi, Neimenggu, Ningxia, Qinghai, Gansu, and Xinjiang).

Empirically, the World Bank's (2006) study finds that better regional investment climate is associated with higher productivity. Therefore, the ranking of investment climate can be viewed as a measure of regional institutional efficiency in China. For most of our analyses, we collapse the six regions into two groups to simplify tests across groups and to facilitate the comparison between those tests and the results of the regressions where we interact our family-related variables with the institutional efficiency dummy. Specifically, the top two regions, where 836 of our sample companies are headquartered, are classified as having high institutional efficiency, while the bottom four regions, which are home to the remaining 617 companies, are classified as having low institutional efficiency.[12] Nevertheless, the regression results are robust to measuring institutional efficiency by the six-category variable instead.

The second measure of institutional efficiency we use in this paper is based on Fan and Wang's (2006) index of the market development of Chinese provinces as an alternative source to the World Bank's survey. Fan and Wang's index takes into consideration the following factors: (1) relationship between government and market; (2) development of the private sector; (3) development of product markets; (4) development of the labor market; (5) development of financial markets; (6) foreign direct investment; and (7) the legal environment, particularly as it relates to the protection of entrepreneurs, employees, consumers, and intellectual property. In our analyses, provinces are classified as having high (low) institutional efficiency when they are

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[12] Dividing the sample into the top three and bottom three regions would create a higher imbalance in the size of the two subsamples.

above (below) the median index value. Because there are many more provinces than regions, the Fan and Wang index allows a more even sample split than the World Bank's ranking: 697 (756) firms are in provinces with high (low) institutional efficiency by the Fan and Wang measure.

C. Descriptive statistics: Family vs. Non-Family Firms

Table III shows descriptive statistics for the full sample as well as for two sets of subsamples: family vs. non-family firms, and high vs. low institutional efficiency. Panel A shows that family firms on average have significantly better performance than non-family firms, regardless of how performance is measured—Tobin's q, industry-adjusted q, or ROA. In this regard, Chinese family firms are no different from those in other parts of the world (Anderson and Reeb (2003), Villalonga and Amit (2006), Barontini and Caprio (2006)).

Panel A of Table III also shows that families use pyramids not just to a greater effect than other controlling owners (as reported in Table I), but also with much greater frequency—70% vs. 28%. Moreover, families on average control 28% of their companies' board (26% ownership plus 9% voting control in excess of ownership minus the 7% by which voting control *exceeds* board control). Considering that the number of shares outstanding in most companies is many orders of magnitude higher than the number of board seats, and hence board representation is much less divisible, board control in China seems very proportionate to share ownership. This leaves pyramids as the only mechanism that is widely and effectively used by Chinese families to enhance their control over their firms. In addition, 26% of family firms have a family member as CEO.

On average, family firms are significantly smaller, younger, and less capital-intensive than non-family firms. Yet they exhibit significantly lower systematic risk, and they are not significantly different from non-family firms in their growth and leverage. In terms of economic magnitude, the most significant differences are in firm size: family firms' assets (sales) average 3.89 (1.43) billion yuan, while non-family firms average 40.4 (8.56) billion yuan—more than ten times larger. This striking difference suggests that, for all the growth that the Chinese private sector has seen, the largest companies in the country still remain under state control. Panel A of Table III further shows that the largest firms are concentrated in high institutional efficiency regions, while the smaller, more asset-intensive, and more highly leveraged firms are located in regions with low institutional efficiency.

The comparison between high and low institutional efficiency regions on the right-hand side of Panel A of Table III also shows that families hold significantly higher ownership stakes in firms located in high institutional efficiency regions: 11% vs. 6% in regions with low institutional efficiency. Their voting control exceeds their share ownership by the same amount (3%), although as a fraction of ownership this excess voting control is obviously higher in low institutional efficiency regions (3/11 = 0.27 vs. 3/6 = 0.5). Families in high institutional efficiency regions hold a significantly lower fraction of board seats relative to their ownership and voting stakes (4% vs. 1% below voting control), although not in absolute terms (11% + 3% − 4% = 10% vs. 6% + 3% − 1% = 8%). Families' presence in management is also significantly more frequent in the high institutional efficiency regions: 11% vs. 5%.

Because all the family ownership, control, and management variables equal zero for non-family firms, however, these results may be attributable to differences in the prevalence of family firms across high and low institutional efficiency regions. We investigate this possibility with the aid of Panel B of Table III, where we conduct a two-dimensional breakdown of the full sample. The tests of differences in high vs. low institutional efficiency regions within the subsample of family firms (second column from the right) confirm the results shown in Panel A: Relative to family firms in low-efficiency regions, those that are headquartered in regions with high institutional efficiency have significantly higher family ownership (28% vs. 22%); lower voting control, although not significantly so (8% vs. 9% in excess of ownership); significantly lower board representation both relative to family ownership and control and in absolute terms (28% + 8% − 10% = 26% vs. 22% + 9% − 2% = 29%); and a significantly higher frequency of family CEOs (30% vs. 19%).

Panel B of Table III also confirms that the largest, most capital-intensive, and least leveraged companies in China are the non-family firms (which are primarily SOEs) that are located in regions with high institutional efficiency.

The comparison between family and non-family firms within each regional subsample yields very similar results to the comparison between family and non-family firms in the whole sample (shown in Panel A of Table III). Of particular interest is the difference in Tobin's q between family and non-family firms, which is 3.90 – 2.96 = 0.94 in the full sample, 3.84 – 2.90 = 0.94 in the high institutional efficiency subsample, and 4.01 – 3.04 = 0.97 in the low-efficiency subsample. All three differences are statistically significant at the 1% level. The difference-in-

differences is therefore 0.94 – 0.97 = -0.03, and can be interpreted as a measure of the moderating role of institutional development in the effect of family ownership and control on firm value.

A similar calculation can be made with respect to the prevalence of family firms. These firms represent 37% (= 312/836) of the subsample of companies in regions with high institutional efficiency, but only 29% (=179/617) of companies in the low-efficiency subsample. The difference between the two, which can be interpreted as a measure of the role played by institutional development in the prevalence of family firms, is 8%. We explore these two effects in greater depth in Sections 3 and 4, but before that we analyze where the family firms in our sample come from and how their origin affects their structural characteristics.

D. Family Firms' Origin

Table IV shows that, of the 491 family firms in our sample, 258 were founded by families or individuals within the private sector and 201 were privatized from earlier SOEs. The remaining 32 family firms were acquired by individuals or families from collective organizations. Since the latter can be considered a hybrid between public or private, we report three alternative sets of *t*-tests of differences in means of firm characteristics between family firms of public vs. private origin: (1) always-private firms vs. former SOEs; (2) former SOEs vs. non-former SOEs (which include always-private firms as well as former collectively-owned firms); and (3) always-private firms vs. firms that were previously controlled by the state or a collective organization. The results are similar across all three sets of tests.

Panel A shows that there are statistically significant differences in the degree of family ownership, control, and management found in family firms that were privatized from an SOE as compared to those that were founded in the private sector. The latter firms have higher family ownership stakes and more frequent presence of the family in management, but lower board control relative to their ownership. They also have lower growth, perhaps as a result of these families' reluctance to lose ownership and management control over their firms. However, there are no significant differences in performance or other firm characteristics.

Panel B shows that the fraction of family firms that have been founded in the private sector is much higher in regions with high institutional efficiency (195 or 63.5% out of the 312 family firms that are headquartered in those regions) than in regions with low institutional efficiency (63 or 35% out of 179 firms). This finding is consistent with the result, shown in Table III, that the state-owned sector in China carries a higher weight in the less developed regions. The implication is that institutional efficiency plays a positive role in the formation of family firms. However, there are still no significant differences in performance when the sample is broken down by level of institutional efficiency. Thus, in the remainder of the paper we analyze family firms as a single group, regardless of whether they come from the public or the private sector.

III. The Role of Institutional Development in the Prevalence of Family Firms

Table V shows how family firms, SOEs, and other firms are distributed across Chinese regions and provinces with different levels of institutional efficiency. As suggested above, when the sample is split into two subsamples with high vs. low efficiency, family firms are relatively

more prevalent in the more developed provinces: Panel A, where the division is based on the World Bank's (2006) ranking, shows again the 37% (29%) frequency of family firms in the high (low) institutional efficiency subsamples. Panel B shows that the difference is even more pronounced when the sample split is based on Fan and Wang's (2006) index: the equivalent numbers are 40% and 28%, respectively. This finding seems difficult to reconcile with either the investor protection theory or the internal markets theories, both of which share the common prediction that family firms should be more prevalent when institutions are relatively less developed.

Panel C throws some light into what is driving this counterintuitive result. When the full six-region classification of the World Bank is used instead of our two-group simplification of it, we can see that family firms are actually the most prevalent in the least developed region, the Northwest of China (44%). Yet the relation between institutional development and the prevalence of family firms appears to be non-monotonic: the second-least developed region, the Southwest, is where family firms are most scarce (22%), and the second-most developed region, Bohai, is where they are the second-most prevalent (35%).

To test for the effect of institutional development on the prevalence of family firms in a more systematic manner, we estimate probit models of the probability that a firm is a family firm, where the key independent variable, institutional efficiency, is measured in the same three alternative ways as in Table V. We also use, as an alternative continuous measure, Fan and Wang's (2006) original index of the market development of Chinese provinces (as opposed to a dummy variable based on it). In addition, we include as independent variables several firm

characteristics that Villalonga and Amit (2010) find to be theoretically-driven and empirically strong predictors of family control of firms and industries: firm size, as a proxy for efficient scale (measured by the natural logarithm of sales, although we obtain similar results if we use the logarithm of assets); the ratio of property, plant, and equipment (PPE) to total assets, as a proxy for capital requirements, which, like a large efficient scale, should progressively lead to the dilution of a family's ownership stake; and market risk (beta) as a measure of the noisiness of the environment, which should increase the need for large-shareholder monitoring (what Demsetz and Lehn (1985) refer to as "control potential"). We additionally include sales growth, leverage, and the natural logarithm of firm age as control variables.

Table VI shows the results of these probit models. Institutional efficiency is positive and significant under all four measures, including the continuous ones, although the magnitude of the coefficients is larger for the two dummy variables. This finding reinforces our earlier conclusion that institutional efficiency overall plays a positive role in the formation and survival of family firms, contrary to what the investor protection and internal markets arguments lead us to expect. Relatedly, Allen et al. (2005) argue that China is an important counterexample to the findings in the law, institutions, finance, and growth literature in that neither its legal nor financial system are well developed, and yet it is one of the fastest-growing economies in the world. They show that this contrast is particularly stark in the private sector, which has been the main driver of growth in China. Consistent with their view, we find that family firms do not seem to inhibit growth and institutional development; rather, they contribute to it and continue to thrive in more developed environments.

IV. The Role of Institutional Development in the Value of Family Firms

A. *Main Effects of Family Ownership, Control, and Management on Firm Value*

We begin our investigation of the role of institutional development in the value of family firms by analyzing the impact of family ownership, control, and management per se on Tobin's q in our full sample of Chinese firms. Specifically, we run ordinary least squares (OLS) regressions of Tobin's q on two sets of measures—dummy vs. continuous—of family ownership, family voting control in excess of ownership, family board control in excess of voting control, and family management. This analysis combines the approaches of Villalonga and Amit (2006), who analyze the separate contributions to firm value of family ownership, excess voting control, and management; and Villalonga and Amit (2009), who decompose the wedge between ownership and control into three components: (1) vote ownership in excess of share ownership (which is attributable to dual-class stock); (2) voting control in excess of vote ownership (which is attributable to pyramids and/or voting agreements; and (3) board control in excess of voting control (which is attributable to disproportionate board representation). Since there is no dual-class stock in China, and no data source that we are aware of allows us to identify any voting agreements that may exist among shareholders, the decomposition for China simplifies to the last two elements.

Table VII shows the results of this analysis. In the first column, family ownership and control are measured by dummy variables, whereas in the second they are measured by continuous variables. Family management is always measured as a dummy that indicates whether the CEO is a family member or not. The results reported in the third and fourth columns

of the table are based two different alternative measures of firm performance. In the third column we use industry-adjusted q to account for the fact that family firms are not distributed uniformly (nor randomly) across industries, as documented by Villalonga and Amit (2010); thus, a concern may be raised that the results from the raw q estimation may be attributable to industry factors unrelated to family ownership and control. In the fourth column we use return-on-assets (ROA) to address the potential concern that market-based performance measures in China are unreliable because Chinese stock markets are inefficient (Allen et al., 2005). For reasons of parsimony, for industry-adjusted q and ROA we only report the results of the specification with dummy variable measures of family ownership and control. However, the results are robust to using the continuous variable specification instead.

The results are very similar across the different measures of performance and of family ownership and control. Family ownership is positively and significantly associated to firm value, while family control in excess of ownership is negatively associated to it. The negative effect of excess control applies both to excess voting control and to excess board control in all four regressions. The statistical significance of the coefficients does vary across the four regressions, however. Family management has a positive sign, but the coefficient is not significant in any of the regressions. These results are remarkably consistent with the findings of Villalonga and Amit (2006) for U.S. family firms, Barontini and Caprio (2006) for European family firms, and Claessens et al. (2002) for Asian firms with controlling shareholders (family or other).

B. Effects of Family Ownership, Control, and Management on Firm Value in Different Institutional Contexts

We next examine whether the effect of family ownership, control, and management on firm value varies across different institutional contexts. To this end, we estimate similar OLS regressions to those reported on Table VII but on the subsamples of regions with low and high institutional efficiency. Table VIII reports the results when the sample is split in two according to the World Bank's (2006) ranking on regional investment climate. Similar results obtain when the sample is split according to Fan and Wang's (2006) index instead.

Table VIII reveals a stark contrast in results between the two subsamples. Panel A shows that, in regions with low institutional efficiency, the results are similar to those found in the full sample. Namely, family ownership and excess voting control are significantly associated to both Tobin's *q* and ROA, positively in the case of ownership and negatively in the case of control. Moreover, the positive effect of family management on performance becomes significant within the low institutional efficiency subsample. In contrast, Panel B shows that, in the high-efficiency region, none of the measures of family ownership, control, and management are significantly related to firm value, with the exception of the family firm dummy on the raw Tobin's *q* regression which, with a *t*-statistic of 1.65, is just above the cutoff for statistical significance at the 10% level.[13]

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[13] We also estimate similar models to those in Tables 7 and 8 where we include an additional dummy variable to capture family firm origin (privatized from a former SOE or collective vs. always-private). The results (unreported) confirm the findings of our univariate analyses (in Table 4) that there are no significant differences in performance across family firms of different origins, neither within the full sample nor within the subsamples of high vs. low institutional efficiency.

We also estimate a single regression for the full sample where each of the family ownership, control, and management variables is interacted with an institutional efficiency dummy which takes on a value of one when efficiency is high, and zero when it is low. The results of this analysis are reported on Table IX; in Panel A, the sample is split according to the World Bank's ranking, while in Panel B it is split based on Fan and Wang's index. For parsimony, we only report the results when Tobin's q is used as the dependent variable. However, using industry-adjusted q or ROA instead yields similar results.

Table IX further confirms that the significant effects of family ownership and control reported in Table VII for the full sample are entirely driven by the regions or provinces with low institutional efficiency. Moreover, the difference across subsamples in the effect of family management are statistically significant: the positive value effect that family management has in low-efficiency settings is almost entirely offset by the negative marginal effect of the interaction term between family management and the institutional efficiency dummy, which explains the lack of significance of the family management coefficient in the full sample.

The results suggest a role for institutional development on the value of family firms that is consistent with the predictions of both the investor protection view and the internal markets view. In a more efficient institutional context, external factors play an important role in disciplining and incentivizing both family and non-family firms. Product and factor markets are more competitive, and courts and regulatory authorities are more effective in enforcing contracts and judging economic disputes. The labor market is also more sophisticated and efficient, so that professional managers become a viable choice for family firms as they are for non-family firms.

As a result, controlling families' interests are better aligned with those of their companies, and less motivated to expropriate minority shareholders. Furthermore, in an environment with better investor protection and effective legal enforcement, controlling families are also closely monitored, which makes the expropriation of minority shareholders more difficult and costly.

In contrast, in regions with low institutional efficiency, both the positive effects of family ownership and the negative effect of family control in excess of ownership become much more prominent. As argued by Khanna and Palepu (2000), when institutions are underdeveloped, family firms can play a valuable role to all shareholders (and even other stakeholders) by providing a substitute for external labor, capital, and product markets. A similar prediction emerges from the investor protection view: Shleifer and Vishny (1986, 1999) and La Porta et al. (1999) argue that, when legal protection is weak, shareholders tend to protect themselves by becoming large. This argument is consistent with our observation that family ownership significantly increases firm value in low institutional efficiency settings. On the other hand, due to weaker external discipline, as the wedge between family ownership and control becomes wider, small investors become more concerned with the risk of being expropriated and thus discount the stock price of family firms relative to their peers.

Our findings about the effect of family management in different institutional settings are also very consistent with the internal markets view. In the less developed regions, as labor is limited in supply and the market for it more inefficient, competent professional managers are a scarce resource, and family managers become a more attractive option—sometimes even the only one—for family firms. The investor protection theory offers a very different view of family

management. In Burkart et al.'s (2003) model, for instance, appointing a family heir as a management successor is viewed as a private benefit of control that founders may enjoy. However, it is worth noting that family management in China is mostly exercised by founders, not heirs, given the recency of the Chinese private sector's development. Thus the investor protection view may in fact agree with the prediction of the internal markets view in this setting.

C. Endogeneity of Family Firm Status

As shown in Villalonga and Amit (2006, 2010) and in Section 3 of this paper, family firms do not occur at random but as a rational response on the part of their owners to keep ownership and control within the family. Hence, in estimating the effects of family ownership, control, and management on firm value, either by themselves or in their interaction with institutional development, one needs to control for the endogeneity of the family firm status.

We use Heckman's (1979) two-stage approach to estimate several treatment effects models where the first stage is a probit model of the probability that a firm is a family firm like those reported in Table VI. The second stage consists of linear regressions of Tobin's q on (a) only the main effects of family ownership, control, and management (the same specification as in Table VII), or (b) both the main effects of family ownership, control, and management and their interaction effects with institutional efficiency (similar to the specification in Table IX but omitting the main effect of institutional efficiency). We apply the exclusion restriction to the institutional efficiency dummy, since we see no reason why it should affect firm value per se. Moreover, our empirical results in Tables VI and IX respectively validate that institutional efficiency is a significant predictor of the probability that a firm is a family firm (the dependent

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variable in the first stage) but is uncorrelated with Tobin's q (the dependent variable in the second stage).

Tables X and XI show the results of these two sets of models, respectively. Each table contains two panels, A and B, which, as before, are each based on a different measure of institutional efficiency: a dummy based on the World Bank's (2006) ranking or a dummy based on Fan and Wang's (2006) index. In addition, each panel shows the results from two different specifications of the second stage (the first stage is common to both models): one where family control and management are measured by dummy variables, and one where they are measured as continuous variables. Family ownership is measured by a dummy in all cases since it is the treatment variable in these models.

The coefficient of the self-selection parameter λ is negative and statistically significant in seven out of the eight regressions, which supports our concern about possible selectivity bias in the single-stage estimates of Tables VII and IX. This negative sign implies that the unobserved factors that encourage Chinese families to acquire or retain control of their firms are negatively correlated with firm value. Nevertheless, after controlling for this bias, the positive effects of family ownership become greater, while the negative effects of family excess control, while still statistically significant, become smaller in magnitude: The coefficient of the family ownership dummy, which was 0.60 in the OLS regression reported in the first column of Table VII, becomes 2.42 in the second stage of the treatment effects model in Panel A of Table X, or 2.06 in the model shown in Panel B. In contrast, the coefficient of the family excess control dummy goes down (in absolute value) from -0.51 to -0.49 in both treatment effects models. The conclusion is

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that, after controlling for the unobserved motives of controlling families, the net benefits of their presence in their companies are positive for all shareholders. The interaction effects of institutional development with family ownership, control, and management on firm value do not change much in size or statistical significance after correcting for endogeneity.

V. Family vs. Non-Family Firms or State vs. Private Sector?

An important difference between China and other parts of the world is that most non-family firms in China are state-owned—93% in 2007, as we show in Tables I and V (896 / 962 = 93%), or even 96% if one considers collective organizations as a form of state ownership. Therefore, our focus on China in this study may raise a concern that our results are driven by the state-owned vs. private sector distinction rather than by the difference between family and non-family firms itself. Reinterpreting our results as evidence of private sector superiority over the state-owned sector is no less interesting or timely, given that the global economic crisis of 2008–2009 has led to a worldwide increase in the role of governments in the economy. However, it may limit the generalizability of our conclusions about the role of institutional development on the prevalence and value of family firms, which is our focus in this paper.

To address this potential concern, we re-estimate our models after excluding SOEs from the sample and find that our results hold very well. An outright exclusion of SOEs from the sample is problematic, however, since the propensity of firms to be state-controlled is just as endogenous as their propensity to be family-controlled. We therefore resort to Heckman's (1979) two-stage method once again to estimate sample-selection models where the first stage (the selection equation) predicts the probability of a firm to be (a) non-state-owned (which includes

collective organizations) or (b) in the private sector (which excludes collective organizations), and the second-stage specifications are the same as before. We also apply the exclusion restriction to the institutional efficiency dummy, as before. The fundamental difference between these sample selection models and the treatment effects models presented in the previous section, besides the dependent variable used at the first stage, is that the second stage in the sample selection models is only estimated in the selected sample of non-state-owned firms, rather than on the full sample. We also focus on the continuous measures of family ownership and control, to fully exploit the variation in these variables within the sample.

Table XII shows the sample selection model estimation results. The main effects of family ownership, control, and management only are reported in the first column, while the second column shows both the main effects and the effects of their interaction with institutional efficiency, after controlling for firms' selection into the non-SOE status. The third column reports the main and interaction effects after controlling for firms' selection into the private sector (excluding collectively-owned firms from it) The first-stage results confirm that institutional efficiency is a statistically significant predictor of a firm's propensity to be state-controlled, as are all the other variables that previously helped us predict the propensity to be a family firm. The selection parameter λ is positive but not significant, which reduces the concern about sample selectivity based on unobservable characteristics. More to the point of our analysis, the second-stage results show that, when SOEs are excluded from the subsample of non-family firms, the positive effects on performance of family ownership and family management, and the

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negative effects of family control in excess of share ownership, are still valid and, for the most part, statistically significant.

VI. Conclusion

In this paper, we use manually collected ownership data from a sample of publicly listed firms in China to test for the role of institutional development in the prevalence and value of family firms. While legal investor protection and institutional development in general are often used to explain the observed variation in the prevalence and value of family control around the world, prior empirical studies have been unable to rule out cultural norms as an alternative explanation. Our focus on Chinese data allows us to do precisely this, since China offers great heterogeneity in institutional efficiency across its various regions, yet the whole country shares a common baggage of cultural and social norms together with a common legal and regulatory framework.

We find that family ownership, control, and management in China have very similar effects on firm value and profitability to those reported by Villalonga and Amit (2006) for the United States: (1) family ownership is positively and significantly related to value; (2) family control in excess of ownership, which in China is primarily achieved through the use of pyramids, is negatively and significantly related to value; and (3) family management, which in China is primarily exercised by founders, bears no significant relation to value in the full sample.

We further show that these effects are entirely driven by the low institutional efficiency regions, where in addition to the effects of family ownership and control, the effect of family management is also statistically significant (and has a positive sign). In regions with high

institutional efficiency, the significance of all the effects disappears, and the size of the management coefficient, which is negative for this subsample, offsets the positive effect from the low-efficiency subsample. We show that these results are not driven by our choice of variables, the endogeneity of family firm status, or the state-owned vs. private sector distinction.

We conclude that family control is an optimal response to institutional development, not to cultural differences. Moreover, the relatively higher prevalence of these firms in regions with high institutional efficiency suggests that family firms do not inhibit growth and development as is sometimes argued. These findings are particularly relevant for China as it continues its transition from a central planning system to a market economy. More generally, we throw new light onto the debate about the causes and consequences of family control around the world.

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Han Guolong

Xue Lixi

80%

XinJing International

68.5%

36.16%

FuJian FengRong Investment

China HaiDian Holdings

100%

26.74%

Starlex Limited

16.39%
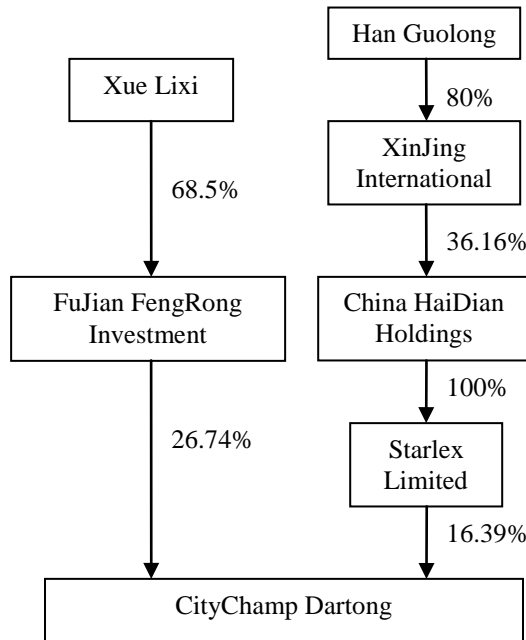
CityChamp Dartong

Han Family's Ownership and Control of CityChamp Dartong:	**Wedge Components:**	**Control Mechanism Creating the Wedge:**	**Total Wedge:**

O (Share ownership) = **23.07%**

C (Voting control) = **43.13%**

B (Board control) = **44.44%**

(C – O) = **20.06%** → **Pyramid**

(B – C) = **1.31%** → **Disproportionate Board Representation**

(B – O) = **21.37%**

Figure 1. Family Ownership and Control of CityChamp Dartong. Han Guolong, the company founder, owns $80\% \times 36.16\% \times 100\% \times 16.39\% = 4.75\%$ of the shares of CityChamp Dartong, and controls $min(80\%, 36.16, 100\%, 16.39\%) = 16.39\%$ of the votes. Xue Lixi, who is Han Guolong's daughter-in-law, owns $68.5\% \times 26.74\% = 18.32\%$ of the shares of CityChamp Dartong, and controls $min(68.5\%, 26.74\%) = 26.74\%$ of the votes. Therefore, the Han family's combined ownership in CityChamp Dartong is $4.75\% + 18.32\% = 23.07\%$, and their voting control is $16.39\% + 26.74\% = 43.13\%$. In addition, the family holds four out of nine board seats, or 44.44%.

Table I
Ownership and Control in Chinese Listed Firms

Controlling owner is the holder of the largest ultimate ownership stake. Family owners include individuals, families, and teams of co-founders or their families. State owners include the central and local governments. Other owners include collective organizations, universities, foreign owners, and the general public. Collectively-owned firms in China are similar to cooperatives in Western economies but often started by local town governments. They can be seen as a hybrid between state-owned enterprises (SOEs) and private firms. The sample comprises 1,453 A-share companies listed on the Chinese stock market in 2007.

Controlling Owner Type	Number of Firms	Share Ownership	Voting Control	Direct Share Ownership of Second-Largest Shareholder
1. Family	491	26%	35%	9%
2. Non-Family	962	35%	39%	7%
2.1. State	896	36%	40%	7%
2.1.1. Local Government	614	36%	39%	6%
2.1.2. Central Government	282	38%	42%	8%
2.2. Other	66	21%	27%	8%
2.2.1. Collective organization	31	24%	29%	7%
2.2.2. University	13	18%	26%	8%
2.2.3. Foreign	13	29%	33%	12%
2.2.4. Widely Held	9	6%	10%	6%
Total	1,453	32%	38%	7%

Table II
Variable Descriptions

	Variable	Description
1	Family firm	Firm whose largest ownership stake can be traced back to an individual, a family, or a team of co-founders or their families. Source: 2007 firm annual reports.
2	Family ownership stake	Percentage of all shares outstanding owned by the family as a group, directly and indirectly. E.g., if a family owns 25% of Firm X, which in turn owns 20% of all shares outstanding in Firm Y, then the family owns 5% of Firm Y (the product of the ownership stakes along the chain). Source: 2007 firm annual reports.
3	Family excess voting control	Difference between the controlling family's voting control and its ownership stake, where voting control is measured by the minimum voting stake (i.e., the "weakest link") along the control chain. E.g., if a family holds 25% of the votes in Firm X, which in turn holds 20% of the votes in Firm Y, then the family controls 20% of the votes in Firm Y. Source: 2007 firm annual reports.
4	Family excess board representation	Difference between the percentage of founding family members or representatives in the firm's board of directors and the family's voting control. Source: 2007 firm annual reports.
5	Family CEO	Dummy variable equal to one if the family firm's CEO is a member of the controlling family, and zero otherwise. Source: 2007 firm annual reports.
6	Institutional efficiency	Dummy variable equal to one if the institutional efficiency of the region or province in which the firm is headquartered is high, and zero if it is low. The classification of regions or provinces into the high and low institutional efficiency categories is based on two alternative rankings, which are described in more detail in the Appendix:
		1. The World Bank's (2006) ranking of investment climate of six regions in China, which are (from best to worst): (1) Southeast (Jiangsu, Shanghai, Zhejiang, Fujian, and Guangdong; and (2) Bohai (Shandong, Beijing, Tianjin, and Hebei); (3) Central (Anhui, Henan, Hubei, Hunan, and Jiangxi), (4) Northeast (Heilongjiang, Jilin, Liaoning), (5) Southwest (Yunnan, Guizhou, Guangxi, Sichuan, Chongqing, and Hainan), and (6) Northwest (Shanxi, Shaanxi, Neimenggu, Ningxia, Qinghai, Gansu, and Xinjiang). The ranking does not include Tibet. In our analysis, the top two regions are classified as having high institutional efficiency and the bottom four as having low institutional efficiency.
		2. Fan and Wang's (2006) index of market development of Chinese provinces. In our analyses, provinces are classified as having high (low) institutional efficiency when they are above (below) the median index value.
7	Tobin's q	Ratio of the firm's market value (= equity value + liabilities – liquid assets) to total assets, where equity value = stock price × tradable shares + net asset value per share × non-tradable shares. Source: Wind Data Co.
8	Industry-adjusted q	Difference between the firm's Tobin's q and the median of q of its main industry (4-digit SIC). Source: Wind Data Co.
9	ROA	Return on assets, computed as net income over total assets. Source: Wind Data.
10	Sales growth	Sales growth rate from 2006 to 2007. Source: Wind Data Co.
11	Beta	Slope from a market model in which the firm's 2007 weekly returns are regressed on the Chinese stock market value-weighted index. Source: Wind Data Co.
12	Leverage	Ratio of total liabilities to total assets. Source: Wind Data Co.
13	Firm age since founding	Number of years since the founding of the firm or the oldest of its predecessor companies. Source: 2007 firm annual reports.

Table III
Table III
Family and Non-Family Firms in Regions with High vs. Low Institutional Efficiency: Descriptive Statistics

Means, standard deviations, and *t*-statistics from tests of differences in means between family and non-family firms and between firms from high and low institutional efficiency regions in their ownership, control, and financial characteristics. Family firms are defined as those whose largest ownership stake can be traced back to an individual, a family, or a team of co-founders or their families. The high institutional efficiency regions are the top two in the World Bank's (2006) ranking of investment climate of six regions in China: Southeast and Bohai. The low institutional efficiency regions are the remaining four in this ranking: Central, Northeast, Southwest, and Northwest. Tobin's *q* is measured as the ratio of the firm's market value to total assets. Non-tradable shares are priced at book value of equity. Industry-adjusted *q* is the difference between the firm's Tobin's *q* and the median *q* of its main industry (4-digit SIC). Family ownership stake is the percentage of all shares outstanding owned by the family as a group, directly and indirectly. Family excess voting control is the difference between the controlling family's voting control and its ownership stake, where voting control is measured by the minimum voting stake (i.e., the "weakest link") along the control chain. Family excess board representation is the difference between the percentage of founding family members or representatives in the firm's board of directors and the family's voting control. The sample comprises 1,453 A-share companies listed on the Chinese stock market in 2007. Asterisks denote statistical significance at the 1% (***), 5% (**), and 10% (*) level, respectively.

A. One-Way Sample Divisions: By Family vs. Non-Family Firms OR High vs. Low Institutional Efficiency

| | All Firms | | Family vs. Non-Family Firms | | | | | Institutional Efficiency | | | | |
| | | | (1) Family | | (2) Non-Family | | *t*-stat. of Diff. in Means (1) – (2) | (3) High | | (4) Low | | *t*-stat. of Diff. in Means (3) – (4) |
	Mean	S.D.	Mean	S.D.	Mean	S.D..		Mean	S.D.	Mean	S.D.	
Tobin's *q*	3.28	3.62	3.90	4.00	2.96	3.37	(4.70) ***	3.25	3.60	3.32	3.65	-0.36
Industry-adjusted q	0.86	3.57	1.45	3.95	0.55	3.32	(4.56) ***	0.84	3.54	0.88	3.60	-0.21
ROA	0.08	0.14	0.11	0.20	0.07	0.08	(4.43) ***	0.08	0.11	0.08	0.17	-0.28
Family ownership stake	0.09	0.15	0.26	0.16	0.00	0.00	(49.14) ***	0.11	0.17	0.06	0.13	5.19 ***
Family excess voting control	0.03	0.07	0.09	0.09	0.00	0.00	(29.83) ***	0.03	0.07	0.03	0.06	1.21
Family excess board representation	-0.02	0.12	-0.07	0.20	0.00	0.00	(-10.88) ***	-0.04	0.13	-0.01	0.10	-4.52 ***
Family CEO dummy	0.09	0.28	0.26	0.44	0.00	0.00	(18.29) ***	0.11	0.31	0.05	0.23	3.89 ***
Pyramid	0.42	0.49	0.70	0.46	0.28	0.45	(17.13) ***	0.42	0.49	0.43	0.50	-0.55
Sales (RMB billion)	6.15	42.0	1.43	30.5	8.56	51.4	(-3.07) ***	8.51	5.49	2.95	7.01	2.50 ***
Assets (RMB billion)	28.1	339	3.89	41.5	40.4	415	(-1.94) *	45.9	446	3.98	8.06	2.33 **
PPE/Assets	0.28	0.19	0.23	0.16	0.31	0.20	(-7.19) ***	0.25	0.19	0.33	0.19	-7.93 ***
Market risk (Beta)	1.01	0.23	0.98	0.28	1.02	0.20	(-3.13) ***	1.02	0.24	1.00	0.23	1.08
Sales growth	0.34	1.51	0.39	1.63	0.31	1.44	(0.93)	0.36	1.76	0.30	1.07	0.72
Leverage	0.24	0.20	0.24	0.25	0.23	0.16	(1.02)	0.23	0.20	0.25	0.19	-1.95 **
Age since founding	11.64	5.59	10.79	7.16	12.08	4.53	(-4.18) ***	11.81	6.22	11.41	4.58	1.35
Number of firms	1,453		491		962			836		617		

Table III

Family and Non-Family Firms in Regions with High vs. Low Institutional Efficiency: Descriptive Statistics—Continued

B. Two-Way Sample Division: By Family vs. Non-Family Firms AND High vs. Low Institutional Efficiency

	High institutional efficiency regions					Low institutional efficiency regions					Family Firms	Non-Family Firms
	(1) Family		(2) Non-Fam.		*t*-stat. of Diff. in Means (1) – (2)	(3) Family		(4) Non-Fam.		*t*-stat. of Diff. in Means (3) – (4)	*t*-stat. of Diff. in Means (1) – (3)	*t*-stat. of Diff. in Means (2) – (4)
	Mean	S.D.	Mean	S.D..		Mean	S.D.	Mean	S.D.			
Tobin's *q*	3.84	4.11	2.90	3.21	3.66 ***	4.01	3.80	3.04	3.55	3.02 ***	-0.47	-0.62
Industry-adjusted q	1.38	4.05	0.51	3.16	3.46 ***	1.56	3.77	0.60	3.49	3.03 ***	-0.49	-0.40
ROA	0.10	0.13	0.07	0.09	3.99 ***	0.11	0.29	0.07	0.08	2.65 ***	-0.60	-0.32
Family ownership stake	0.28	0.16	0.00	0.00	39.92 ***	0.22	0.16	0.00	0.00	28.87 ***	4.31 ***	0.00
Family excess voting control	0.08	0.10	0.00	0.00	20.34 ***	0.09	0.08	0.00	0.00	23.26 ***	-1.08	0.00
Family excess board representation	-0.10	0.21	0.00	0.00	-10.74 ***	-0.02	0.18	0.00	0.00	-2.83 ***	-3.88 ***	0.00
Family CEO dummy	0.30	0.46	0.00	0.00	14.97 ***	0.19	0.39	0.00	0.00	9.97 ***	2.80 ***	0.00
Pyramid	0.67	0.47	0.26	0.44	12.57 ***	0.77	0.42	0.29	0.46	11.94 ***	-2.24 **	-1.00
Sales (RMB billion)	1.62	3.61	12.6	69.0	-2.81 ***	1.11	1.65	3.71	8.13	-4.23 ***	1.79 *	2.69 ***
Assets (RMB billion)	5.08	52.0	70.1	561	-2.04 **	1.82	2.11	4.86	9.33	-4.32 ***	0.84	2.43 **
PPE/Assets	0.21	0.16	0.27	0.20	-4.15 ***	0.26	0.17	0.35	0.19	-5.45 ***	-3.29 ***	-6.67 ***
Market risk (Beta)	0.98	0.31	1.03	0.18	-3.48 ***	0.99	0.23	1.01	0.23	-0.81	-0.44	2.32 **
Sales growth	0.37	1.58	0.36	1.86	0.14	0.42	1.73	0.26	0.62	1.66 *	-0.28	1.04
Leverage	0.24	0.25	0.22	0.16	1.78 *	0.24	0.25	0.25	0.17	0.32	-0.03	-2.98 ***
Age since founding	10.76	7.95	12.44	4.81	3.82 ***	10.85	5.52	11.64	4.12	1.94 **	-0.15	2.75 ***
Number of firms	312		524			179		438				

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Table IV
Family Firms of Public vs. Private Origin: Descriptive Statistics

Means, standard deviations, and *t*-statistics from tests of differences in means between family firms of public and private origin in their ownership, control, and financial characteristics. Family firms are defined as those whose largest ownership stake can be traced back to an individual, a family, or a team of co-founders or their families. Family firms in this table are classified into three groups according to their origin: (1) founded within the private sector; (2) privatized from a formerly state-owned enterprise (SOE); (3) changed ownership from a former collective organization. Collectively-owned firms can be seen as a hybrid between an SOE and a private firm. The high institutional efficiency regions are the top two in the World Bank's (2006) ranking of investment climate of six regions in China: Southeast and Bohai. The low institutional efficiency regions are the remaining four in this ranking: Central, Northeast, Southwest, and Northwest. Tobin's *q* is measured as the ratio of the firm's market value to total assets. Non-tradable shares are priced at book value of equity. Industry-adjusted *q* is the difference between the firm's Tobin's *q* and the median *q* of its main industry (4-digit SIC). Family ownership stake is the percentage of all shares outstanding owned by the family as a group, directly and indirectly. Family excess voting control is the difference between the controlling family's voting control and its ownership stake, where voting control is measured by the minimum voting stake (i.e., the "weakest link") along the control chain. Family excess board representation is the difference between the percentage of founding family members or representatives in the firm's board of directors and the family's voting control. The sample comprises 1,453 A-share companies listed on the Chinese stock market in 2007. Asterisks denote statistical significance at the 1% (***), 5% (**), and 10% (*) level, respectively.

A. Family Firms from All Regions

	(1) Private		(2) SOE		*t*-stat. of Diff. in Means (1) – (2)	(3) Collective		(4) Private + Collective (1) + (3)		*t*-stat. of Diff. in Means (4) – (2)	(5) SOE + Collective (2) + (3)		*t*-stat. of Diff. in Means (1) – (5)
	Mean	S.D.	Mean	S.D.		Mean	S.D.	Mean	S.D.		Mean	S.D.	
Tobin's *q*	3.97	4.06	4.00	4.15	-0.07	2.76	1.89	3.83	3.89	-0.44	3.83	3.93	0.40
Industry-adjusted q	1.49	4.00	1.57	4.11	-0.21	0.38	1.94	1.37	3.84	-0.56	1.40	3.90	0.24
ROA	0.12	0.22	0.10	0.20	1.01	0.08	0.05	0.11	0.21	0.86	0.09	0.19	1.21
Family ownership stake	0.29	0.17	0.22	0.15	4.85 ***	0.23	0.14	0.29	0.17	4.51 ***	0.22	0.15	5.01 ***
Family excess voting control	0.09	0.10	0.09	0.08	0.19	0.11	0.09	0.09	0.10	0.48	0.09	0.08	-0.19
Family excess board representation	-0.12	0.20	-0.01	0.18	-5.87 ***	-0.01	0.22	-0.11	0.21	-5.26 ***	-0.01	0.18	-6.07 ***
Family CEO dummy	0.33	0.47	0.14	0.35	4.85 ***	0.38	0.49	0.34	0.47	5.04 ***	0.17	0.38	4.13 ***
Pyramid	0.62	0.49	0.80	0.40	-4.27 ***	0.78	0.42	0.64	0.48	-3.95 ***	0.80	0.40	-4.40 ***
Sales (RMB billion)	1.52	3.72	1.27	2.12	0.84	1.77	1.76	1.55	3.56	0.98	1.34	2.08	0.65
Assets (RMB billion)	5.53	57.2	1.98	2.21	0.88	2.7	2.54	5.22	54	0.85	2.08	2.27	0.92
PPE/Assets	0.23	0.15	0.22	0.18	0.84	0.29	0.18	0.24	0.15	1.24	0.23	0.18	0.24
Market risk (Beta)	0.99	0.32	0.97	0.25	0.99	1.01	0.20	1.00	0.30	1.11	0.97	0.24	0.81
Sales growth	0.22	0.49	0.62	2.47	-2.50 **	0.31	0.49	0.23	0.49	-2.58 ***	0.57	2.30	-2.39 **
Leverage	0.23	0.23	0.26	0.29	-1.48	0.23	0.14	0.23	0.22	-1.56	0.26	0.27	-1.36
Age since founding	10.29	8.23	11.21	5.96	-1.33	12.16	3.78	10.50	7.88	-1.09	11.34	5.71	-1.62
Number of firms	258		201			32		290			233		

Table IV
Table IV
Family Firms of Public vs. Private Origin: Descriptive Statistics—Continued

	(1) Private		(2) SOE		t-stat. of Diff. in Means (1) – (2)	(3) Collective		(4) Private + Collective (1) + (3)		t-stat. of Diff. in Means (4) – (2)	(5) SOE + Collective (2) + (3)		t-stat. of Diff. in Means (1) – (5)
	Mean	S.D.	Mean	S.D.		Mean	S.D.	Mean	S.D.		Mean	S.D.	
B. Family Firms from Regions with High Institutional Efficiency													
Tobin's *q*	3.76	3.70	4.24	5.08	-0.91	2.70	2.17	3.66	3.59	-1.15	3.96	4.72	-0.41
Industry-adjusted q	1.29	3.63	1.78	5.04	-0.94	0.41	2.20	1.21	3.52	-1.15	1.54	4.68	-0.51
ROA	0.11	0.15	0.09	0.08	0.79	0.08	0.05	0.10	0.15	0.64	0.09	0.08	1.06
Number of firms	195		96			21		216			117		
C. Family Firms from Regions with Low Institutional Efficiency													
Tobin's *q*	4.61	4.98	3.77	3.05	1.34	2.86	1.29	4.35	4.66	0.99	3.69	2.93	1.55
Industry-adjusted q	2.10	4.95	1.37	3.01	1.17	0.31	1.42	1.83	4.64	0.80	1.27	2.91	1.40
ROA	0.14	0.35	0.10	0.27	0.95	0.08	0.04	0.13	0.32	0.82	0.10	0.26	1.02
Number of firms	63		105			11		74			116		

Table V
Prevalence of Family Firms and SOEs across China

Distribution of family firms, State-Owned Enterprises (SOEs), and other firms across regions and provinces with different institutional efficiency. The classification of regions or provinces into the high and low institutional efficiency categories is based on different rankings in the three panels. In Panel A, the high institutional efficiency regions are the top two in the World Bank's (2006) ranking of investment climate of six regions in China, and the low institutional efficiency regions are the remaining four. In Panel B, the high (low) institutional efficiency provinces are those above (below) the median value in Fan and Wang's (2006) index of market development of Chinese provinces. Panel C uses the World Bank's six-region ranking. Family firms are defined as those whose largest ownership stake can be traced back to an individual, a family, or a team of co-founders or their families. SOEs are defined as those whose largest ownership stake can be traced back to the central or local government. Other firms include those whose largest ownership stake can be traced back to a collective organization, a university, or a foreign owner, or that are widely held. The sample comprises 1,453 A-share companies listed on the Chinese stock market in 2007. Frequencies by row are shown to the right of each number; those by column are shown in italics under each number.

	Family Firms		SOEs		Other		Total	
A. Institutional Efficiency Dummy based on World Bank Ranking								
High institutional efficiency regions (top two regions in Panel C)	312 *64%*	37%	478 *53%*	57%	46 *70%*	6%	836 *58%*	100%
Low institutional efficiency regions (bottom four regions in Panel C)	179 *36%*	29%	418 *47%*	68%	20 *30%*	3%	617 *42%*	100%
Total	491 *100%*	34%	896 *100%*	62%	66 *100%*	5%	1,453 *100%*	100%
B. Institutional Efficiency Dummy based on Fan and Wang Index								
High institutional efficiency regions	279 *57%*	40%	374 *42%*	54%	44 *67%*	6%	697 *48%*	100%
Low institutional efficiency regions	212 *43%*	28%	522 *58%*	69%	22 *33%*	3%	756 *52%*	100%
Total	491 *100%*	34%	896 *100%*	62%	66 *100%*	5%	1,453 *100%*	100%
C. World Bank Six-Region Ranking								
(1) Southeast (Jiangsu, Shanghai, Zhejiang, Fujian, and Guangdong),	38 *8%*	27%	99 *11%*	69%	6 *9%*	4%	143 *10%*	100%
(2) Bohai (Shandong, Beijing, Tianjin, and Hebei),	57 *12%*	35%	101 *11%*	61%	7 *11%*	4%	165 *11%*	100%
(3) Central (Anhui, Henan, Hubei, Hunan, and Jiangxi),	32 *7%*	32%	66 *7%*	67%	1 *2%*	1%	99 *7%*	100%
(4) Northeast (Heilongjiang, Jilin, Liaoning),	52 *11%*	25%	152 *17%*	72%	6 *9%*	3%	210 *14%*	100%
(5) Southwest (Yunnan, Guizhou, Guangxi, Sichuan, Chongqing, and Hainan)	55 *11%*	22%	184 *21%*	74%	11 *17%*	4%	250 *17%*	100%
(6) Northwest (Shanxi, Shaanxi, Neimenggu, Ningxia, Qinghai, Gansu, and Xinjiang)	257 *52%*	44%	294 *33%*	50%	35 *53%*	6%	586 *40%*	100%
Total	491 *100%*	34%	896 *100%*	62%	66 *100%*	5%	1,453 *100%*	100%

Table VI
Impact of Institutional Efficiency on Firms' Propensity to be a Family Firm

Probit models of the probability that a firm is a family firm, i.e., one whose largest ownership stake can be traced back to an individual, a family, or a team of co-founders or their families. Each model uses a different measure of the institutional efficiency of the region or province in which each firm is headquartered. World Bank Ranking is a six-category variable based on the World Bank's (2006) ranking of the investment climate in six regions in China, where higher values indicate higher efficiency. World Bank Dummy is a dummy variable that equals one if the the region is one of the top two in the World Bank's (2006) ranking. Fan and Wang's (2006) Index of market development of Chinese provinces is a continuous variable. Fan and Wang Dummy is a dummy variable that equals one if the province in which the firm is headquartered is above the median value of the Fan and Wang Index. The sample comprises 1,453 A-share companies listed on the Chinese stock market in 2007. Observations whose Tobin's q is greater than 20, or whose growth rate is greater than 1000% are considered outliers and excluded from estimation in the q regressions. t-statistics are in parentheses. Asterisks denote statistical significance at the 1% (***), 5% (**), and 10% (*) level, respectively.

	Institutional Efficiency Measure			
	World Bank Ranking	World Bank Dummy	Fan and Wang Index	Fan and Wang Dummy
Institutional efficiency	0.09 ***	0.30 ***	0.09 ***	0.42 ***
	(4.28)	(3.91)	(4.64)	(5.58)
Ln(Sales)	-0.31 ***	-0.31 ***	-0.31 ***	-0.31 ***
	(-10.87)	(-10.87)	(-10.91)	(-10.82)
PPE/Assets	-1.23 ***	-1.25 ***	-1.20 ***	-1.27 ***
	(-5.70)	(-5.76)	(-5.53)	(-5.90)
Market risk (Beta)	-0.04	-0.02	-0.05	-0.06
	(-0.23)	(-0.14)	(-0.28)	(-0.31)
Sales growth	0.02	0.02	0.02	0.02
	(0.84)	(0.81)	(0.82)	(0.76)
Leverage	0.60 ***	0.60 ***	0.59 ***	0.58 ***
	(2.72)	(2.69)	(2.65)	(2.62)
Ln (age)	-0.36 ***	-0.36 ***	-0.36 ***	-0.38 ***
	(-5.51)	(-5.51)	(-5.62)	(-5.76)
Intercept	6.69 ***	6.90 ***	6.46 ***	6.95 ***
	(-5.51)	(-5.51)	(-5.62)	(-5.76)
Pseudo R2	0.14	0.14	0.14	0.15
Number of observations	1,450	1,450	1,450	1,450

Table VII
OLS Regressions of Tobin's q or ROA on Family Ownership,
Control, and Management: Full Sample

Family ownership dummy equals one if the company is identified as a family firm, i.e., one whose largest ownership stake can be traced back to an individual, a family, or a team of co-founders or their families. Family ownership stake is the percentage of all shares outstanding owned by the family as a group, directly and indirectly. Family excess voting control is the difference between the controlling family's voting control and its ownership stake, where voting control is measured by the minimum voting stake (i.e., the "weakest link") along the control chain. Family excess board representation is the difference between the percentage of founding family members or representatives in the firm's board of directors and the family's voting control. Tobin's q is measured as the ratio of the firm's market value to total assets. Non-tradable shares are priced at book value of equity. Industry-adjusted q is the difference between the firm's Tobin's q and the median q of its main industry (4-digit SIC). The sample comprises 1,453 A-share companies listed on the Chinese stock market in 2007. Observations whose Tobin's q is greater than 20, or whose growth rate is greater than 1000% are considered outliers and excluded from estimation in the q regressions. t-statistics are in parentheses. Asterisks denote statistical significance at the 1% (***), 5% (**), and 10% (*) level, respectively.

	Tobin's q	Tobin's q	Industry-Adjusted Tobin's q	ROA
Family ownership dummy	0.60 ***		0.60 ***	0.034 ***
	(2.81)		(2.80)	(2.60)
Family ownership stake		0.78 *		
		(1.65)		
Family excess voting control dummy	-0.51 **		-0.47 **	-0.020
	(-2.48)		(-2.29)	(-1.54)
Family excess voting control		-1.16		
		(-1.37)		
Family excess board representation dummy	-0.16		-0.19	-0.001
	(-0.81)		(-0.96)	(-0.10)
Family excess board representation		-0.90 *		
		(-1.78)		
Family CEO dummy	0.30	0.32	0.22	0.015
	(1.42)	(1.48)	(1.04)	(1.16)
Ln(Sales)	-0.43 ***	-0.44 ***	-0.40 ***	0.003
	(-11.27)	(-11.59)	(-10.48)	(-1.49)
PPE/Assets	0.59 **	0.64 **	0.44	0.037 **
	(1.98)	(2.14)	(1.49)	(2.03)
Market risk (Beta)	-0.92 ***	-0.92 ***	-0.86 ***	-0.095 ***
	(-3.78)	(-3.77)	(-3.58)	(-6.41)
Sales growth	0.33 ***	0.32 ***	0.31 ***	0.015 ***
	(3.86)	(3.63)	(3.65)	(3.05)
Leverage	-1.52 ***	-1.53 ***	-1.26 ***	-0.060 ***
	(-5.06)	(-5.12)	(-4.27)	(-3.44)
Ln (Age)	-0.27 ***	-0.25 **	-0.26 ***	-0.005
	(-2.81)	(-2.56)	(-2.73)	(-0.77)
Intercept	13.70 ***	13.72 ***	10.44 ***	0.253 ***
	(16.75)	(17.16)	(12.92)	(25.02)
Adjusted R^2	0.15	0.16	0.14	0.05
Number of observations	1,435	1,435	1,435	1,435

Table VIII
OLS Regressions of Tobin's *q* or ROA on Family Ownership, Control, and Management: Subsamples of Regions with High vs. Low Institutional Efficiency

The classification of regions into the high and low institutional efficiency categories is based on the World Bank's (2006) ranking of the investment climate in six regions in China. The high institutional efficiency regions are the top two in this ranking, Southeast and Bohai. The low institutional efficiency regions are the remaining four: Central, Northeast, Southwest, and Northwest. The ranking does not include Tibet. Family ownership dummy equals one if the company is identified as a family firm, i.e., one whose largest ownership stake can be traced back to an individual, a family, or a team of co-founders or their families. Family ownership stake is the percentage of all shares outstanding owned by the family as a group, directly and indirectly. Family excess voting control is the difference between the family's voting control and its ownership stake, where voting control is measured by the minimum voting stake (i.e., the "weakest link") along the control chain. Family excess board representation is the difference between the percentage of founding family members or representatives in the firm's board of directors and the family's voting control. Tobin's *q* is measured as the ratio of the firm's market value to total assets. Non-tradable shares are priced at book value of equity. Industry-adjusted *q* is the difference between the firm's *q* and the median *q* of its main industry (4-digit SIC). The sample comprises 1,453 A-share companies listed on the Chinese stock market in 2007. Observations whose *q* is greater than 20, or growth rate greater than 1000% are considered outliers and excluded from estimation in the *q* regressions. *t*-statistics are in parentheses. Asterisks denote statistical significance at the 1% (***), 5% (**), and 10% (*) level, respectively.

A. Low Institutional Efficiency Regions

	Tobin's *q*	Tobin's *q*	Ind.-Adj. *q*	ROA
Family ownership dummy	0.94 **		0.94 **	0.078 ***
	(2.35)		(2.36)	(2.75)
Family ownership stake		1.61 **		
		(1.97)		
Family excess voting control dummy	-0.81 **		-0.77 **	-0.085 ***
	(-2.15)		(-2.05)	(-3.19)
Family excess voting control		-2.26		
		(-1.58)		
Family excess board representation dummy	-0.17		-0.19	0.017
	(-0.54)		(-0.59)	(0.78)
Family excess board representation		-1.07		
		(-1.19)		
Family CEO dummy	1.04 **	1.05 **	0.99 **	0.050 *
	(2.53)	(2.55)	(2.42)	(1.72)
Ln(Sales)	-0.38 ***	-0.39 ***	-0.36 ***	-0.006
	(-5.77)	(-6.11)	(-5.48)	(-1.42)
PPE/Assets	-0.24	-0.17	-0.21	0.118 ***
	(-0.48)	(-0.34)	(-0.43)	(3.43)
Market risk (Beta)	-0.90 **	-0.92 **	-0.80 **	-0.014
	(-2.22)	(-2.29)	(-1.97)	(-0.48)
Sales growth	0.30 **	0.28 *	0.24 *	0.018 *
	(2.04)	(1.89)	(1.66)	(1.68)
Leverage	-0.42	-0.46	-0.16	-0.136 ***
	(-0.91)	(-1.01)	(-0.35)	(-4.20)
Ln (Age)	-0.24	-0.21	-0.23	-0.015
	(-1.61)	(-1.38)	(-1.57)	(-1.41)
Intercept	12.36 ***	12.61 ***	9.35 ***	0.246 ***
	(9.47)	(9.91)	(7.17)	(2.68)
Adjusted R^2	0.13	0.13	0.11	0.07
Number of observations	609	609	609	612

Table VIII
OLS Regressions of Tobin's *q* or ROA on Family Ownership, Control, and Management: Subsamples of Regions with High vs. Low Institutional Efficiency—Continued

B. High Institutional Efficiency Regions

	Tobin's *q*	Tobin's *q*	Ind.-Adj. *q*	ROA
Family ownership dummy	0.42*		0.40	0.020
	(1.65)		(1.62)	(1.53)
Family ownership stake		0.26		
		(0.46)		
Family excess voting control dummy	-0.39		-0.34	0.007
	(-1.58)		(-1.39)	(0.54)
Family excess voting control		-0.53		
		(-0.50)		
Family excess board representation dummy	-0.17		-0.21	-0.018
	(-0.66)		(-0.81)	(-1.39)
Family excess board representation		-0.95		
		(-1.54)		
Family CEO dummy	0.01	0.03	-0.07	0.006
	(0.05)	(0.13)	(-0.30)	(0.50)
Ln(Sales)	-0.48***	-0.48***	-0.43***	-0.001
	(-9.87)	(-10.04)	(-9.14)	(-0.60)
PPE/Assets	1.23***	1.26***	0.97**	-0.005
	(3.18)	(3.28)	(2.56)	(-0.26)
Market risk (Beta)	-0.99***	-0.96***	-0.94***	-0.141***
	(-3.22)	(-3.17)	(-3.13)	(-9.13)
Sales growth	0.36***	0.35***	0.36***	0.010**
	(3.43)	(3.31)	(3.49)	(2.15)
Leverage	-2.37***	-2.40***	-2.14***	-0.012
	(-5.99)	(-6.09)	(-5.53)	(-0.64)
Ln (Age)	-0.32**	-0.31**	-0.31**	0.008
	(-2.56)	(-2.40)	(-2.49)	(1.20)
Intercept	14.95***	14.87***	11.52***	0.233***
	(13.89)	(14.22)	(10.95)	(4.35)
Adjusted R^2	0.19	0.19	0.17	0.11
Number of observations	826	826	826	830

Table IX
OLS Regressions of Tobin's *q* on the Interaction of Family Ownership,
Control, and Management with Institutional Efficiency

The classification of regions or provinces into the high and low institutional efficiency categories is based on different rankings in the two panels. In Panel A, the high institutional efficiency regions are the top two in the World Bank's (2006) ranking of the investment climate in six regions in China: Southeast and Bohai. The low institutional efficiency regions are the remaining four in this ranking: Central, Northeast, Southwest, and Northwest. In Panel B, the high (low) institutional efficiency provinces are those above (below) the median value in Fan and Wang's (2006) index of market development of Chinese provinces. Family ownership dummy equals one if the company is identified as a family firm, i.e., one whose largest ownership stake can be traced back to an individual, a family, or a team of co-founders or their families. Family ownership stake is the percentage of all shares outstanding owned by the family as a group, directly and indirectly. Family excess voting control is the difference between the family's voting control and its ownership stake, where voting control is measured by the minimum voting stake (i.e., the "weakest link") along the control chain. Family excess board representation is the difference between the percentage of founding family members or representatives in the firm's board of directors and the family's voting control. Tobin's *q* is measured as the ratio of the firm's market value to total assets. Non-tradable shares are priced at book value of equity. The sample comprises 1,453 A-share companies listed on the Chinese stock market in 2007. Observations whose Tobin's *q* is greater than 20, or whose growth rate is greater than 1000% are considered outliers and excluded from estimation. Asterisks denote statistical significance at the 1% (***), 5% (**), and 10% (*) level, respectively.

A. Institutional Efficiency Measured According to The World Bank's Ranking

	Model (1)		Model (2)	
	Coef.	*t*-stat.	Coef.	*t*-stat.
Family ownership dummy	0.71	(2.24) **		
Family ownership stake			1.60	(2.07) **
Family excess voting control dummy	-0.50	(-2.06) **		
Family excess voting control			-2.08	(-1.49)
Family excess board representation dummy	-0.19	(-0.60)		
Family excess board representation			-1.11	(-1.27)
Family CEO dummy	1.13	(2.84) ***	1.09	(2.71) ***
Institutional efficiency dummy	0.20	(1.37)	0.17	(1.26)
Family ownership dummy × Institutional efficiency	-0.17	(-0.52)		
Family ownership stake × Institutional efficiency			-1.23	(-1.30)
Family excess voting control dummy × Institutional efficiency	-0.05	(-0.25)		
Family excess voting control × Institutional efficiency			1.34	(0.77)
Family excess board representation dummy × Institutional efficiency	-0.01	(-0.03)		
Family excess board representation × Institutional efficiency			0.13	(0.12)
Family CEO dummy × Institutional efficiency	-1.12	(-2.39) **	-1.05	(-2.20) **
Ln(Sales)	-0.44	(-11.22) ***	-0.44	(-11.54) ***
PPE/Assets	0.68	(2.22) **	0.73	(2.39) **
Market risk (Beta)	-0.94	(-3.82) ***	-0.93	(-3.80) ***
Sales growth	0.33	(3.88) ***	0.32	(3.70) ***
Leverage	-1.51	(-5.06) ***	-1.55	(-5.20) ***
Ln (Age)	-0.28	(-2.87) ***	-0.25	(-2.55) **
Intercept	13.70	(16.69) ***	13.71	(17.13) ***
Adjusted R^2	0.16		0.16	
Number of observations	1,435		1,435	

Table IX
OLS Regressions of Tobin's *q* on the Interaction of Family Ownership, Control, and Management with Institutional Efficiency—Continued

B. Institutional Efficiency Measured According to Fan and Wang's Index

	Model (1)		Model (2)	
	Coef.	*t*-stat.	Coef.	*t*-stat.
Family ownership dummy	0.69	(2.40) **		
Family ownership stake			1.31	(1.89) *
Family excess voting control dummy	-0.61	(-2.54) **		
Family excess voting control			-2.64	(-1.96) **
Family excess board representation dummy	-0.25	(-0.87)		
Family excess board representation			-1.80	(-2.23) **
Family CEO dummy	0.99	(2.72) ***	0.90	(2.45) **
Institutional efficiency dummy	-0.01	(-0.10)	0.07	(0.55)
Family ownership dummy × Institutional efficiency	-0.11	(-0.36)		
Family ownership stake × Institutional efficiency			-1.02	(-1.13)
Family excess voting control dummy × Institutional efficiency	0.21	(1.08)		
Family excess voting control × Institutional efficiency			2.65	(1.54)
Family excess board representation dummy × Institutional efficiency	0.14	(0.34)		
Family excess board representation × Institutional efficiency			1.35	(1.30)
Family CEO dummy × Institutional efficiency	-1.03	(-2.30) **	-0.85	(-1.87) *
Ln(Sales)	-0.43	(-11.14) ***	-0.44	(-11.54) ***
PPE/Assets	0.61	(2.02) **	0.64	(2.14) **
Market risk (Beta)	-0.93	(-3.79) ***	-0.93	(-3.82) ***
Sales growth	0.33	(3.86) ***	0.31	(3.63) ***
Leverage	-1.54	(-5.14) ***	-1.55	(-5.21) ***
Ln (Age)	-0.28	(-2.84) ***	-0.26	(-2.67) ***
Intercept	13.65	(16.61) ***	13.74	(17.18) ***
Adjusted R^2	0.16		0.16	
Number of observations	1,435		1,435	

Table X
Treatment Effects Regressions of Tobin's *q* on Family Ownership, Control, and Management

Treatment effects regressions of Tobin's *q* on family ownership, control, and management, where the treatment is a family ownership dummy that equals one if the company is identified as a family firm, i.e., one whose largest ownership stake can be traced back to an individual, a family, or a team of co-founders or their families. A dummy variable that equals one if the institutional efficiency of the region or province in which the firm is headquartered is high (and zero if it is low) is used as an instrument. The classification of regions or provinces into the high and low institutional efficiency categories is based on different rankings in the two panels. In Panel A, the high institutional efficiency regions are the top two in the World Bank's (2006) ranking of the investment climate in six regions in China: Southeast and Bohai. The low institutional efficiency regions are the remaining four in this ranking: Central, Northeast, Southwest, and Northwest. In Panel B, the high (low) institutional efficiency provinces are those above (below) the median value in Fan and Wang's (2006) index of market development of Chinese provinces. Family excess voting control is the difference between the family's voting control and its ownership stake, where voting control is measured by the minimum voting stake (i.e., the "weakest link") along the control chain. Family excess board representation is the difference between the percentage of founding family members or representatives in the firm's board of directors and the family's voting control. Tobin's *q* is measured as the ratio of the firm's market value to total assets. Non-tradable shares are priced at book value of equity. The sample comprises 1,453 A-share companies listed on the Chinese stock market in 2007. Observations whose Tobin's *q* is greater than 20, or whose growth rate is greater than 1000% are considered outliers and excluded from estimation. Asterisks denote statistical significance at the 1% (***), 5% (**), and 10% (*) level, respectively.

A. Institutional Efficiency Measured According to The World Bank's Ranking

	First Stage: Pr[Family Firm]		Second Stage			
			Model (1)		Model (2)	
	Coef.	*t*-stat.	Coef.	*t*-stat.	Coef.	*t*-stat.
Family ownership dummy (treatment)			2.42	(2.79) ***	1.99	(2.32) **
Family excess voting control dummy			-0.49	(-2.39) **		
Family excess voting control					-1.73	(-1.71) *
Family excess board representation dummy			-0.12	(-0.61)		
Family excess board representation					-1.05	(-2.30) **
Family CEO dummy			0.27	(1.31)	0.30	(1.45)
Institutional efficiency dummy	0.33	(4.17) ***				
Ln(Sales)	-0.32	(-10.78) ***	-0.27	(-3.19) ***	-0.28	(-3.31) ***
PPE/Assets	-1.23	(-5.60) ***	1.37	(2.85) ***	1.36	(2.86) ***
Market risk (Beta)	-0.03	(-0.14)	-0.88	(-3.35) ***	-0.87	(-3.35) ***
Sales growth	0.08	(1.42)	0.28	(3.02) ***	0.28	(2.96) ***
Leverage	0.66	(2.89) ***	-1.85	(-5.20) ***	-1.85	(-5.29) ***
Ln (Age)	-0.36	(-5.44) ***	-0.05	(-0.33)	-0.05	(-0.36)
Intercept	7.00	(11.76) ***	9.02	(3.86) ***	9.24	(3.98) ***
λ			-1.12	(-2.17) **	-1.05	(-2.04) **
Wald χ^2 (*p*-value)			440.01	(0.00) ***	445.56	(0.00) ***
Number of observations	1,435		1,435		1,435	

Table X
Treatment Effects Regressions of Tobin's *q* on Family Ownership,
Control, and Management—Continued

B. Institutional Efficiency Measured According to Fan and Wang's Index

	First Stage: Pr[Family Firm]		Second Stage Model (1)		Second Stage Model (2)	
	Coef.	*t*-stat.	Coef.	*t*-stat.	Coef.	*t*-stat.
Family ownership dummy (treatment)			2.06	(2.67) ***	1.64	(2.14) **
Family excess voting control dummy			-0.49	(-2.40) **		
Family excess voting control					-1.77	(-1.74) *
Family excess board representation dummy			-0.12	(-0.59)		
Family excess board representation					-1.05	(-2.29) **
Family CEO dummy			0.27	(1.26)	0.29	(1.40)
Institutional efficiency dummy	0.10	(4.89) ***				
Ln(Sales)	-0.32	(-10.83) ***	-0.30	(-3.92) ***	-0.31	(-4.06) ***
PPE/Assets	-1.19	(-5.36) ***	1.22	(2.74) ***	1.21	(2.75) ***
Market risk (Beta)	-0.05	(-0.31)	-0.89	(-3.47) ***	-0.88	(-3.46) ***
Sales growth	0.08	(1.44)	0.29	(3.20) ***	0.29	(3.14) ***
Leverage	0.65	(2.85) ***	-1.79	(-5.23) ***	-1.80	(-5.32) ***
Ln (Age)	-0.36	(-5.54) ***	-0.09	(-0.68)	-0.10	(-0.71)
Intercept	6.55	(10.98) ***	9.93	(4.74) ***	10.15	(4.87) ***
λ			-0.90	(-1.97) **	-0.83	(-1.82) *
Wald χ^2 (*p*-value)			451.01	(0.00) ***	456.08	(0.00) ***
Number of observations	1,435		1,435		1,435	

Table XI
Treatment Effects Regressions of Tobin's *q* on the Interaction of Family Ownership, Control, and Management with Institutional Efficiency

Treatment effects regressions of Tobin's *q* on family ownership, control, and management, and their interactions with institutional efficiency. The treatment is a dummy variable that equals one if the company is identified as a family firm, i.e., one whose largest ownership stake can be traced back to an individual, a family, or a team of co-founders or their families. Institutional efficiency is measured by a dummy variable that equals one if the institutional efficiency of the region or province in which the firm is headquartered is high. The classification of regions or provinces into the high and low efficiency categories is based on different rankings in the two panels. In Panel A, the high institutional efficiency regions are the top two in the World Bank's (2006) ranking of the investment climate in six regions in China: Southeast and Bohai. The low institutional efficiency regions are the remaining four in this ranking: Central, Northeast, Southwest, and Northwest. In Panel B, the high (low) institutional efficiency provinces are those above (below) the median value in Fan and Wang's (2006) index of market development of Chinese provinces. Family excess voting control is the difference between the family's voting control and its ownership stake, where voting control is measured by the minimum voting stake (i.e., the "weakest link") along the control chain. Family excess board representation is the difference between the percentage of founding family members or representatives in the firm's board of directors and the family's voting control. Tobin's *q* is measured as the ratio of the firm's market value to total assets. Non-tradable shares are priced at book value of equity. The sample comprises 1,453 A-share companies listed on the Chinese stock market in 2007. Observations whose Tobin's *q* is greater than 20, or whose growth rate is greater than 1000% are considered outliers and excluded from estimation. Asterisks denote statistical significance at the 1% (***), 5% (**), and 10% (*) level, respectively.

A. Institutional Efficiency Measured According to The World Bank's Ranking

	First Stage: Pr[Family Firm]	Second Stage Model (1)	Second Stage Model (2)
	Coef. *t*-stat.	Coef. *t*-stat.	Coef. *t*-stat.
Family ownership dummy (treatment)		2.69 (2.70) ***	1.89 (2.07) **
Family excess voting control dummy		-0.50 (-2.14) **	
Family excess voting control			-2.84 (-1.76) *
Family excess board representation dummy		-0.16 (-0.53)	
Family excess board representation			-1.57 (-1.90) *
Family CEO dummy		1.13 (2.93) ***	1.22 (3.21) ***
Family ownership dummy × Institutional efficiency		-0.20 (-0.66)	
Family ownership stake × Institutional efficiency			-0.53 (-0.75)
Family excess voting control dummy × Inst. efficiency		-0.03 (-0.18)	
Family excess voting control × Institutional efficiency			1.17 (0.69)
Family excess board rep. dummy × Inst. efficiency		-0.04 (-0.10)	
Family excess board representation × Inst. efficiency			0.37 (0.35)
Family CEO dummy × Institutional efficiency		-1.13 (-2.49) **	-1.22 (-2.69) **
Institutional efficiency dummy	0.10 (4.45) ***		
Ln(Sales)	-0.32 (-10.78) ***	-0.25 (-2.78) ***	-0.29 (-3.39) ***
PPE/Assets	-1.22 (-5.56) ***	1.39 (2.82) ***	1.28 (2.70) ***
Market risk (Beta)	-0.05 (-0.26)	-0.90 (-3.40) ***	-0.89 (-3.47) ***
Sales growth	0.08 (1.47)	0.28 (2.90) ***	0.28 (3.05) ***
Leverage	0.66 (2.92) ***	-1.88 (-5.18) ***	-1.86 (-5.30) ***
Ln (Age)	-0.36 (-5.43) ***	-0.04 (-0.23)	-0.08 (-0.59)
Intercept	6.80 (11.44) ***	8.63 (3.44) ***	9.71 (4.10) ***
λ		-1.18 (-2.13) **	-0.91 (-1.74) *
Wald χ^2 (*p*-value)		445.6 (0.00) ***	461.9 (0.00) ***
Number of observations	1,435	1,435	1,435

Table XI
Treatment Effects Regressions of Tobin's *q* on the Interaction of Family Ownership,
Control, and Management with Institutional Efficiency—Continued

B. Institutional Efficiency Measured According to Fan and Wang's Index

	First Stage: Pr[Family Firm]		Second Stage			
			Model (1)		Model (2)	
	Coef.	*t*-stat.	Coef.	*t*-stat.	Coef.	*t*-stat.
Family ownership dummy (treatment)			2.47	(2.73) ***	2.09	(2.56) ***
Family excess voting control dummy			-0.53	(-2.26) **		
Family excess voting control					-3.28	(-2.09) **
Family excess board representation dummy			-0.25	(-0.90)		
Family excess board representation					-2.31	(-3.18) ***
Family CEO dummy			1.01	(2.87) ***	1.03	(2.99) ***
Family ownership dummy × Institutional efficiency			-0.31	(-1.03)		
Family ownership stake × Institutional efficiency					-0.94	(-1.28)
Family excess voting control dummy × Inst. efficiency			0.10	(0.51)		
Family excess voting control × Institutional efficiency					1.99	(1.18)
Family excess board rep. dummy × Inst. efficiency			0.15	(0.39)		
Family excess board representation × Inst. efficiency					1.58	(1.61)
Family CEO dummy × Institutional efficiency			-1.06	(-2.44) **	-1.03	(-2.41) **
Institutional efficiency dummy	0.44	(5.83) ***				
Ln(Sales)	-0.32	(-10.75) ***	-0.28	(-3.28) ***	-0.28	(-3.51) ***
PPE/Assets	-1.26	(-5.75) ***	1.30	(2.82) ***	1.31	(2.94) ***
Market risk (Beta)	-0.06	(-0.35)	-0.88	(-3.40) ***	-0.88	(-3.40) ***
Sales growth	0.09	(1.55)	0.28	(3.02) ***	0.28	(2.98) ***
Leverage	0.65	(2.83) ***	-1.85	(-5.27) ***	-1.89	(-5.48) ***
Ln (Age)	-0.38	(-5.69) ***	-0.07	(-0.50)	-0.08	(-0.57)
Intercept	7.08	(11.78) ***	9.25	(2.73) ***	9.33	(4.34) ***
λ			-1.04	(-4.02) **	-1.01	(-2.16) **
Wald χ^2 (*p*-value)			457.0	(0.00) ***	468.0	(0.00) ***
Number of observations	1,435		1,435		1,435	

Table XII

Heckman Regressions of Tobin's *q* on Family Ownership, Control,
and Management on a Selected Sample of Non-State-Owned Firms

Heckman two-stage estimates from sample selection models of Tobin's *q* on family ownership, control, and management, and their interaction with institutional efficiency. Family firms are those whose largest ownership stake can be traced back to an individual, a family, or a team of co-founders or their families. Non-family firms include those that are either widely held or controlled by (1) a university; (2) a foreign owner; or (3) a collective organization (a hybrid between an SOE and a private firm). The selection equation models the propensity of a firm to be (a) non-state-owned (which includes collective organizations); or (b) in the private sector (which excludes collective organizations). The instrument is a dummy variable that equals one if the institutional efficiency of the region in which the firm is headquartered is one of the top two in the World Bank's (2006) ranking of the investment climate in six regions in China. Family ownership stake is the percentage of all shares outstanding owned by the family as a group, directly and indirectly. Family excess voting control is the difference between the family's voting control and its ownership stake, where voting control is measured by the minimum voting stake (i.e., the "weakest link") along the control chain. Family excess board representation is the difference between the percentage of founding family members or representatives in the firm's board of directors and the family's voting control. Tobin's *q* is measured as the ratio of the firm's market value to total assets. The sample comprises 1,453 A-share companies listed on the Chinese stock market in 2007. Observations whose Tobin's *q* is greater than 20, or whose growth rate is greater than 1000% are considered outliers and excluded from estimation in the *q* regression. Asterisks denote statistical significance at the 1% (***), 5% (**), and 10% (*) level, respectively.

	Non-State-Owned				Private	
	Coef.	*t*-stat.	Coef.	*t*-stat.	Coef.	*t*-stat.
First Stage:						
Institutional efficiency dummy	0.38	(4.99) ***	0.38	(4.99) ***	0.34	(4.44) ***
Ln(Sales)	-0.31	(-11.02) ***	-0.31	(-11.02) ***	-0.31	(-10.74) ***
PPE/Assets	-1.08	(-5.17) ***	-1.08	(-5.17) ***	-1.29	(-5.96) ***
Market risk (Beta)	0.02	(0.09)	0.02	(0.09)	-0.12	(-0.69)
Sales growth	0.05	(0.94)	0.05	(0.94)	0.07	(1.24)
Leverage	0.39	(1.83) *	0.39	(1.83) *	0.63	(2.80) ***
Ln (Age)	-0.28	(-4.30) ***	-0.28	(-4.30) ***	-0.31	(-4.83) ***
Intercept	6.79	(11.78) ***	6.79	(11.78) ***	6.88	(11.79) ***
Number of observations	1,435		1,435		1,442	
Second Stage:						
Family ownership stake	1.19	(1.69) *	1.31	(1.22)	1.33	(1.21)
Family excess voting control	-1.42	(-1.26)	-3.50	(-1.95) *	-3.40	(-1.83) *
Family excess board representation	-0.96	(-1.65) *	-1.12	(-1.12)	-1.10	(-1.08)
Family CEO dummy	0.31	(1.27)	0.97	(2.16) **	0.97	(2.12) **
Family ownership stake × Inst. effi.			-0.16	(-0.13)	-0.14	(-0.12)
Family excess voting control × Inst. effi.			3.19	(1.50)	3.16	(1.48) **
Family excess board rep. dummy × Inst. effi.			0.21	(0.17)	0.22	(0.17)
Family CEO dummy × Inst. effi.			-0.93	(-1.75)	-0.92	(-1.69) *
Ln(Sales)	-0.90	(-5.52) ***	-0.92	(-3.69) ***	-0.94	(-3.68) ***
PPE/Assets	-0.12	(-0.14)	-0.06	(-0.05)	-0.41	(-0.33)
Market risk (Beta)	-0.35	(-0.83)	-0.36	(-0.82)	-0.42	(-0.96)
Sales growth	0.33	(2.00) **	0.32	(1.93) *	0.33	(1.88) *
Leverage	0.05	(0.10)	0.02	(-0.04)	0.25	(0.38)
Ln (Age)	-0.05	(-0.26)	-0.06	(-0.24)	-0.14	(-0.49)
Intercept	21.01	(7.22) ***	21.27	(4.82) ***	21.79	(4.74) ***
λ	1.07	(1.33)	1.14	(0.90)	1.28	(0.99)
Wald χ² (*p*-value)	65.35	(0.00) ***	71.39	(0.00) ***	22.77	(0.00) ***
Number of observations	544		544		513	