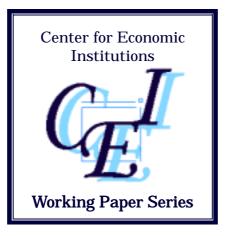
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Controlling Shareholders and Corporate Value: Evidence from Thailand

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Abstract

This study investigates the effects of controlling shareholders on corporate performance. The empirical results, based on a unique database of Thai firms, do not support the hypothesis that controlling shareholders expropriate corporate assets. In fact, the presence of controlling shareholders is associated with higher performance, when measured by accounting measures such as the ROA and the sales-asset ratio. Since most of the firms do not implement control mechanisms to separate voting and cash flow rights, the controlling shareholders might be self-constrained not to extract private benefits. Otherwise, they would internalize higher costs of expropriation from holding high stakes. The controlling shareholders' involvement in the management, however, has a negative effect on the performance. The negative effect is more pronounced when the controlling shareholder-and-manager's ownership is at the 25-50 percent. The evidence also reveals that family controlled firms display significantly higher performance. Foreign controlled firms as well as firms with more than one controlling shareholder also have higher ROA, relative to firms with no controlling shareholder.

JEL Classification: G30, G32

Keywords: Ownership structure, Corporate Control, Agency costs, Corporate Value, Thailand.

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1 Introduction

Recent studies suggest that dispersedly held corporations described in the model of Berle and Means (1932) are actually less common in countries outside the US and UK. Even in other developed countries, concentrated ownership structure is more universal. Specifically about 64 percent of large firms in the 27 most richest countries have controlling shareholders (La Porta et al., 1999). Except Japan, controlling shareholders are dominated by families, who are often the firms' founders or their descendants. For instance, in Germany, families control 20.5 percent of the corporations (Franks and Mayer, 1997). In Italy and Sweden, a majority of the public corporations are controlled by a single shareholder who holds majority voting rights (Zingales, 1994, and Cronqvist and Nilsson, 2000).

In emerging economies, ownership concentration is more pronounced. Khanna and Palepu (1999) find that in India the majority of companies listed in the Bombay Stock Exchange are associated with diversified business groups that are controlled by families. In Thailand, about 80 percent of non-financial companies traded on the Stock Exchange of Thailand are family-owned (Wiwattanakantang, 2000). Similar evidence is shown in cross-country analyses on emerging markets by Claessens et al. (2000b), and Lins (2000). Claessens et al. (2000b) reveal that except Japan, more than 40 percent of publicly traded firms in nine East Asian countries, have a dominant owner who is a family. Similarly, Lins (2000) finds that 58 percent of the firms in 22 emerging economies have at least one blockholder.

The power to control a corporation might give a controlling shareholder use of corporate resources for his own interests while other shareholders as well as other stakeholders of the firm bear the costs (Shleifer and Vishny, 1997, La Porta et al., 1999. and Johnson et al., 2000). The transfer of company resources by controlling shareholders comes in many forms, including consuming perks, setting excessive salaries, stealing investment opportunities, and making inefficient investment. This expropriation problem by controlling shareholders is likely to be more severe in the firms where the controlling shareholders are also in management teams, when controlling shareholders own more voting rights than cash flow rights, and in the countries where the legal protection and enforcement of laws are poor (La Porta et al. 1997, 1999 and Bebchuk et al., 1999).

In countries with poor legal rules protecting public investors, however, concentrated ownership might be an appropriate choice to limit large shareholders' expropriation (La Porta et al., 1999). Bebchuk (1999b) argues that publicly traded companies in countries where private benefits of control are large, or the degree of the agency costs is high, are likely to have a controlling shareholder. Similar to the alignment effect hypothesized by Jensen and Meckling (1976), Gomes (2000) and Bennedsen and Wolfenzon (2000) describe that by holding a large ownership stake, the controlling shareholder internalizes private benefits he extracts, and hence the expropriation costs are reduced.

Since the presence of controlling shareholders are associated with both costs and benefits to the firm, the net effect of controlling shareholders on corporate performance, therefore, is empirical issue. Studies addressing this issue have been increasing rapidly in the past few years. However so far the analysis is incomplete and general conclusions cannot be drawn because most of the studies are based on only one group of countries, i.e. the US, and other developed economies. Studies on emerging economies are still limited (e.g., Claessens et al., 2000a, and Lins, 2000). Most of them are comparable country studies, where differences in legal, taxation and accounting rules as well as institutional frameworks are not controlled. As shown in La Porta et al. (1997), and Bebchuk (1999a), quality of legal rules and enforcement affect the level of expropriation problems. This study, however, takes an alternative approach in the way that the analysis focuses on a given country. In this context, the legal regime, and the country specific factors are held constant, which allows us to investigate the effects of ownership concentration more precisely.

Thai firms provide an ideal setting to study this argument. First there exist two type of firms: one is characterized as high concentrated ownership, and the other is characterized by less concentrated ownership. The latter is dominated by the former, however. Second, in about 75 percent of the firms, the controlling shareholders are involved in the firms' management as officers and directors. Also there are large number of firms that are totally controlled by a single family. In these firms, no other large shareholder exists who might perform monitoring activities. This type of firms accounts for about 34.81 percent of the firms in the sample (Wiwattanakantang, 1999).

I conduct both univariate and multivariate analyses to investigate whether the presence of controlling shareholder has negative effects on the firm's value. If the expropriation problem caused by controlling shareholders is more severe compared to the benefits, firms with controlling shareholders should display poorer performance than firms with no controlling shareholder. The study is based on 270 companies which accounts for 97.08 percent of the market value of all non-financial firms that were listed in the Stock Exchange of Thailand in 1996.

Interestingly, the empirical evidence indicates that controlling shareholders are not detrimental to the corporate value. In contrast, the ownership concentration is positively associated with performance measures: ROA and the sales-asset ratio. The analysis also reveals that implementation of control mechanisms to separate voting rights from cash flow rights is not common. Only 17.4 percent of the firms in the sample use pyramids and cross-shareholdings. The results, therefore, indicate that the controlling shareholders are constrained by holding large stakes, thus cannot externalize most of the costs of self-dealing activities. Furthermore, the evidence indicates that the incidence of controlling shareholders running the firms is associated with lower corporate performance, compared to firms where the controlling shareholders is detrimental to the firm's value only when the controlling shareholders-cum-managers hold the shares of 25-50 percent level. The empirical evidence also reveals that family controlled firms do not display lower performance. Overall, family, foreign controlled firms as well as firms with more than one controlling shareholder have higher ROA, relative to firms with no controlling shareholder.

This study differs from recent studies on the effects of controlling shareholders on the firm's value in

the quality of the data on ownership. This study is based on a a unique database of ownership structure that provides more accurate measures of ownership variables. Most studies on this topic often use ownership databases that include only major shareholders. The use of these databases causes biases when computing ownership variables in at least 3 ways. First, in many cases a firm is owned by a number of small corporate shareholders that have the same ultimate owner. In such a case, if information on those small shareholders is not available, then ownership by the firm's controlling shareholder is likely to be underestimated. Second, in many emerging countries, large companies are often owned indirectly via a chain of companies that are privately held. Their ultimate shareholders. Companies for which ultimate owners cannot be identify are often excluded from the sample. This practice probably creates a sample selection bias. Third, family relationships between the major shareholders and the management were often not traced beyond their surnames. The ownership database used in this study, however, does not suffer from these shortcomings.

This study also differs from other studies in the definition of controlling shareholders or blockholders. Controlling shareholders are defined based on the Thai corporate law. Specifically, a shareholder is a controlling shareholder if he owns at least 25 percent shareholdings. At this level of ownership, a shareholder has a legal right to nullify any corporate decisions. Besides Cronqvist and Nilsson (2000), most studies employ ownership cut-off points at 5, 10 and 20 percent, or use the Herfindhal index in measuring ownership concentration. The reason for the choice of the cut-off points is not clear. It often looks like an at hoc choice. The choice of cut-off points should be based on economic or legal frameworks of the given country.

The remainder of this paper is organized as follows. Section 2 discusses the theoretical background of the study. It reviews how ownership affects the agency costs, and thus corporate performance. This literature review provides the basis for a set of testable hypotheses. Section 3 describes data sources, characteristics of firms in the sample, performance measures, control variables, and definitions of controlling a firm. Section 4 shows the ownership structure of firms in the sample, and contains univariate and multivariate analysis. Finally a summary and conclusion are provided in Section 5.

2 Controlling shareholders and corporate value: Literature review

2.1 Costs and benefits of controlling shareholders

Previous literature documents that there are both costs and benefits associated with ownership concentration. The presence of large shareholders with high stakes or controlling shareholders may be harmful to the firm and the firm's related parties because the controlling shareholders' interests may not align with those of non-controlling shareholders (Shleifer and Vishny, 1997, La Porta et al., 1999, and Bebchuk et al., 1999). In addition, substantial ownership of cash flow rights not only enables the controlling shareholders to conduct activities of their own interests, for example, to place and remove the management teams, but also insulates them from external corporate control mechanisms such as hostile takeovers and tender offers (Stulz, 1988).

Controlling shareholders may pay out the companies' cash flows to themselves in several ways, including simply paying themselves excessive salaries and dividends, and giving top executive positions and board seats to their family members even though they are not capable. Controlling shareholders may pay (receive) inflate (deflate) prices to the companies they own privately. Controlling shareholders may transfer companies shares to their own account at discount prices or engage in insider trading. Other private benefits that controlling shareholders can obtain are employing companies' assets as collateral for their personal bank borrowing, and borrowing company funds for their personal purposes on favorable terms. Controlling shareholders may invest sub-optimally since the costs of the investment if it fails will be shared by the other investors (Jensen and Meckling, 1976, and Bebchuk et al., 1999). If controlling shareholders adopt sub-optimal strategies, we expect to observe the firms under their control to perform poorly.

The presence of controlling shareholders, however, may not necessarily be detrimental to the firm. Shleifer and Vishny (1986) and Admati et al. (1994)) contend that large shareholders mitigate the free rider problem of monitoring a management team, and hence reducing the agency costs. Shareholders with large stakes have incentive to bear monitoring costs because gains from investing in monitoring activities exceed the costs.

More recent works model the benefits of large shareholders in a different context. La Porta et al. (1999), Bebchuk (1999b), and Gomes (2000) argue that in the countries when the legal and institutional frameworks do not offer sufficient protection for outside investors, concentrated ownership can mitigate the shareholder conflicts. Gomes (2000) contends that in this kind of environment the only equilibrium is to have controlling shareholders. The basic intuition is that large ownership stakes provide a commitment signal to outside investors that the controlling shareholders would not divert corporate assets. The signal is credible to outside investors because outside investors evaluate the share prices based on their expectations of ex-post expropriation by the controlling shareholders. If the controlling shareholders will end up holding large proportion of the share prices. Consequently, the controlling shareholders will end up holding large proportion of the shares with a discounted price.

These arguments on the presence of controlling shareholders and the consequent corporate value implication lead to the following hypothesis:

H1: The presence of controlling shareholders has no effect on corporate performance.

2.2 Control mechanisms and agency costs

Burkart et al. (1998) and Bebchuk et al. (1999) argue that patterns of corporate ownership are critical to the level of private benefits extracted by the controlling shareholders. Ownership and control patterns such as pyramids, cross-ownership ties and dual-class share structures permit controlling shareholders to reduce the cash flow rights associated with voting rights. In such cases, the controlling shareholders can exercise control while holding small cash flow rights. Here we focus on pyramidal ownership and cross-shareholdings since Thai firms are not allowed to issue dual class voting or non-voting shares.

Pyramidal ownership is the process of controlling via layers of companies. Cross-shareholdings is a mechanism for not only assuming effective control, disproportionate to ownership, but also to protect the power of the controlling shareholders (Bebchuk et al., 1999). These ownership structures exacerbate the expropriation problems because the controlling shareholders while consuming all the private benefits, only internalize part of the expropriation costs, as a proportion to their cash flow rights. In addition, these control mechanisms can be used to assure control, and insulate the controlling shareholders from being monitored by any corporate governance mechanisms.

This argument leads to the following hypothesis:

H2: The separation between voting and cash flow rights via the employment of pyramid and cross-ownership structure has negative effect on the corporate performance,

2.3 Types of controlling shareholders and agency costs

There are at least four different types of controlling shareholders in Thai firms, namely individual or family, foreign investors, the Thai government, and a group of more than one controlling shareholder (Wiwattanakantang, 1999 and 2000)). The effects of the presence of controlling shareholders on performance, however, may differ according to the types of controlling shareholders.

There are two opposite arguments associated with an individual or a group of family as a controlling shareholder. On one hand, family is notorious for putting the interests of the family above the interests of other stakeholders of the firm. Due to immense voting power and frequent involvement in management, families can implement policies that benefit themselves and are detrimental to the firms' performance (La Porta et al., 1999)).

On the other hand, family members provide good monitoring in family-controlled firms, resulting in lower agency costs (Fama and Jensen, 1983, and DeAngelo and DeAngelo, 1985). Family members have incentives to increase the firm's value and be good monitors because their wealth, which includes pecuniary returns as well as non-pecuniary returns, such as benefits from having control over the companies, is linked to the continuation of the companies. The implicit contract among family members, like the responsibility toward the family, may discourage owner-managers from abusing their power and transferring corporate funds to themselves. The family last name is also commonly used in the company name suggesting the close tie between the family and the firm. Further, monitoring and disciplining the management, often family members, by family members may be efficient not only because of the close interaction of family members, but also family members have excellent information on the firm, as a result of a long term relationship with the top management of the firm (Smith and Amoako-Adu, 1999).

There are various factors that may lead to performance differences between foreign and domestic firms. First, foreign-controlled firms possess firm-specific advantages and superior technology know-how (Boardman et al., 1997, and Majumdar, 1997). Second, as far as Thailand is concerned, foreign firms obtain various investment promotion benefits from the Thai government. Third, their controlling are not located in Thailand making monitoring more difficult. Finally, most of the firms that have foreign corporations as their controlling shareholders are run by professionals who own no stakes in the firms. Due to the first and second factors, foreign-controlled firms are likely to display superior performance relative to domestic firms. The latter factors, however, are likely to affect the firms' governance and corporate performance negatively.

Government-controlled firms are considered separate entities because government-controlled firms are operating in a monopoly or regulated duopoly markets, that may give rise to superior performance.

Agency problems and contractual costs of a firm that is controlled by more than one family might not be the same as those with one controlling shareholder. If there exists more than one large shareholder in a firm, the large shareholders may monitor each other, hence reducing the agency costs.

The hypotheses drawn from these arguments are:

H3.1: Family has no effect on corporate performance,

H3.2: Foreign investor has no effect on corporate performance,

H3.3: Government has positive effect on corporate performance,

H3.4: Firms that have more than one controlling shareholder display superior performance.

2.4 Controlling shareholders' involvement in management and agency costs

Recent studies document that controlling shareholders are often involved in running the firms. In this case, controlling shareholders have significant power and discretion in the employment of corporate assets for their own interests, without being pressured from outside corporate control (Stulz, 1988). According to this entrenchment hypothesis, the level of expropriation of private benefits is negatively related to the ownership of management.

On the other hand, the traditional aspect of the agency cost theory suggests that insider ownership aligns the interests of management and other stakeholders of the firm (Jensen and Meckling, 1976). Managers are more likely to become self-constrained and avoid consumption of perquisites as their ownership rises since they have to bear the costs of such activities in a proportion to their shareholdings. DeAngelo and DeAngelo (1985) argue that by holding high stakes of the firm, insiders may solve the asymmetric information problems related to investment opportunities and managerial performance between the insiders and outside shareholders. For example, outside shareholders may have preference for investment projects that provide faster payoffs although their net present values are lower than the investment projects that the controlling shareholders want to carry out. Summing up, the alignment of incentives hypothesis contends a positive and linear relation between top management ownership and the agency costs. Empirical studies support both hypotheses, however. The empirical evidence on the non-linear relationship between ownership by top management and performance can be explained by combining the convergence of incentives and the entrenchment hypotheses (Mórck et al., 1988, and Short and Keasey, 1999). That is, at low levels of ownership, management has the incentive to pursue the firm's value maximization activities. At intermediate levels of ownership, management has enough control and is wealthy enough to exploit the firm to generate private benefits that are not available to outside shareholders (Shleifer and Vishny, 1997). However, at high levels of ownership, self-serving behavior detrimental to the firm's value declines as management owns a higher fraction of the firm's equity, and hence can not externalize the costs of their moral hazard.

From these arguments, I formulate the following hypothesis:

H4: The involvement in management by controlling shareholders is non-linearly related to their ownership. At lower level of ownership, the involvement in management by controlling shareholders has negative effect on performance. At higher level of ownership, the involvement in management by controlling shareholders has positive affect on on performance.

3 Data and measurement techniques

3.1 Data sources

This study uses firm-level data for non-financial companies listed in the Stock Exchange of Thailand in 1996. The data were collected from multiple sources. The equity ownership, members of the board of directors, number of shares outstanding, accounting data (for consolidated companies) and years of incorporation are obtained directly from the Stock Exchange of Thailand and from the I-SIMS database produced by the Stock Exchange of Thailand.

This study is based on a unique database on the ownership. First, the data which was obtained directly from the Stock Exchange of Thailand contains ownership information in great detail. This database provides the information on shareholders with shareholdings of at least 0.5 percent. Second, for each firm, I was able to obtain family relationships between the major shareholders and the management beyond their surnames. The Stock Exchange of Thailand requires listed companies to disclose the information. The library of the Stock Exchange of Thailand keeps this information and allows public access. Additional references for ownership structure and family relationships, especially those affiliated with big business groups are obtained from the Thai newspaper, Krung Thep Turakij (various issues), Prachachat Turakij (various issues), Manager Information Services (1996) Pornkulwat (1996), Suehiro (1989), and Pipatseritham (1981).

Finally, I was able to obtain the information on ownership structure of non-listed companies that are shareholders of companies in the sample. This data was collected manually from the Ministry of Commerce. With this information, I was able to trace ultimate owners of firms. As a result, I managed to include a large number of companies in the sample. The sample includes 270 companies which accounts for 97.08 percent of the market value of all non-financial firms that were listed in the Stock Exchange of Thailand in 1996.

Except data on ownership, the data used are as of the end of 1996. For ownership data, the database provides the ownership information at different time for different companies over the period from January 1 through December 31, 1996.

3.2 Sample description

The characteristics of the companies in the sample are presented in Table 1. Panel A shows the number of companies in the sample classified by industry. The industry groupings follow the classification of the Stock Exchange of Thailand. Panel B presents descriptive statistics for companies in the sample. In general, companies in the sample are not just small or start-up companies. The average number of years since a firm was set up is 21.02 years. The sample includes both large companies and smaller size companies. The book values of total assets vary from 179,785 million Baht to the minimum of 325.82 million Baht, with mean and median values of 7,140.71 million Baht and 2,428.76 million Baht, respectively. Sales revenues and the market value of equity present a similar picture.

The ranking of companies in Thailand, published by Management Information Service (1996b) shows that this sample also includes large companies in Thailand.¹ Specifically, 22 companies in our sample appear in the 100 largest companies in Thailand in 1994. About 35.56 percent of companies in the sample are among the largest 500 companies in Thailand. Approximately 77.78 percent of our sample or 210 companies are in the top 2000 companies.

[Insert Table 1 Here]

3.3 Measurement of corporate performance

This study uses both accounting and market measures of performance. Since the extraction of corporate resources by controlling shareholders, e.g., perk consumption, empire building, asset sales, stealing of investment opportunities, excessive management compensation, and inefficient investment, reflects in both the balance sheets and the income statements, performance measures that incorporate the expropriation in both the balance sheet and the income statement should be more meaningful. In this paper, I use two alternative accounting measures ROA and the sales-asset ratio. To avoid the effect of firms' discretion choices of capital structure, ROA is defined as the ratio of earnings before interests and taxes to total assets.

I employ the sales-asset ratio to compensate the weaknesses of the ROA. The ROA is widely thought that it might not be absolutely accurate in measuring a firm's performance in the case of firms in developing countries including Thai firms where the accounting standard is not well established for several reasons. First, earnings

¹Management Information Service (1996b) lists the 2000 largest companies in Thailand in 1994. The ranking includes both publicly traded and private companies. This source of information is used because there is no information available for 1996. It is the closest data available to 1996. The rankings based on 1994 data probably do not provide exact information for the companies in our sample. Nevertheless, the rankings do help to understand the characteristics of companies in our sample.

are easily manipulated by the management. Second, there is a bias associated with accounting standards, regarding advertising expenses and depreciation costs. Lastly, discretionary reporting choices also affect the level of earnings. Compared to the earnings, sales are less affected by firm-level earnings management. The sales-asset ratio measures the effectiveness of management in utilizing the firm's assets to generate sale revenues. However, as well documented in the case of Japan, the maximization of sales may not necessarily lead to the maximization of profit.

Since not all agency costs are reflected in the accounting measures, I also compute a market measure, Tobin's q. Due to data unavailability, I use the simplified version of Tobin's q, defined as the market value of equity at the end of the accounting year plus the book value of liabilities divided by the book value of total assets.

There is one caveat here on measures of performance. Measures of performance that are commonly used in studies on more developed economies are not absolutely appropriate as far as developing economies are concerned. On one hand, accounting measures are not accurate because they are subject to manipulation by management. On the other hand, the market measure, Tobin's q, cannot be used without creating any measurement bias. For Tobin's q to provide an accurate measure of performance, stock prices have to reflect the true value of the firm (Lindenberg and Ross, 1981). As Khanna and Palepu (1999) point out, this implicit assumption may not be met in the case of emerging economies because the capital markets are illiquid and there is a lack of timely disclosure. So it is not clear whether the market measure or the accounting measures is more accurate in the case of Thai firms.

3.4 Control variables: Firm characteristics and industry effects

A firm's value may be affected directly or indirectly by factors related to the nature of the firm and its industry. To control for such effects, I introduce the following variables: sales growth (the percentage of annual change in sales, averaged over 1992-1996), log (age) which is the log of the number of years since firms were set up, the log of total assets which is the measure of firm's size, the debt-asset ratio (total debt divided by the book value of total assets), and business group. Definitions of all variables used in this study can be referred from Table 2.

The business group is a dummy variable. It is one if the firm is controlled by any of the following 23 families: Asakun, Chirathiwat, Choke Wattana, Chonwicharn, the Crown Property Bureau, Darakanon, Kanasut, Laohathai, Lamsam, Liaophairat, Osathanukhro, Phenchart, Pornprapha, Photirattanangkun, Rattanarak, Sophonpanit, Srifuengfung, Sriwikorn, Uachukiat, Wang Lee, Wiriyaprapaikit, Wattanawekin, and Wongkusolkit. These business groups were among the hundred largest business groups in 1979 (Pipatseritham, 1981²), and the groups survive to the present time.

In order to remove variation from industry effects on the dependent variable, I include 21 industry dummy

 $^{^{2}}$ As far as I know, this is the most recent source of information that can be used as a reference.

variables with agribusiness as the reference industry. The specification of the industries follows that of the Stock Exchange of Thailand (see Section 3).

[Insert Table 2 Here]

3.5 Definition of controlling shareholders

A controlling shareholder is defined as an entity who owns more than 25 percent of firm's shares directly, or indirectly. The 25 percent level is used following the definition of the Stock Exchange of Thailand for controlling shareholders. Under the Public Limited Companies Act, at this level of shareholdings, a shareholder has sufficient voting power to have significant influence on the firm in the following manners. First, a controlling shareholder can nullify any corporate decisions. Second, a controlling shareholder can demand to inspect the business operation and the financial condition of the company, as well as the conduct of the board. Third, a controlling shareholder can call an extraordinary general meetings at any time. Fourth, a controlling shareholder can submit a motion to the court demanding for the dissolution of a company if he thinks that further company operations will bring only losses, and that the company has no chance of recovery. (Stock Exchange of Thailand, 1997a, 1997b, 1997c, 1998, Setsatien, 1992, and Sersansie and Nimmansomboon, 1996).

Note that with 25 percent of the shares, a controlling shareholder does not have absolute control over a firm. For a resolution of a shareholder meeting, the law requires a majority rule. A super-majority of at least 75 percent of the voting rights, however, is required in the following cases: increases and decreases of the equity capital, issuing corporate bonds, changing in the acts of incorporation, merger and acquisition, and dissolution of the company, as well as making, amending or terminating a contract relating to selling, transferring leasing of the company's assets (Sersansie and Nimmansomboon, 1996).

Ownership here is defined based on voting rights not cash flow rights. Direct ownership means that an individual (or a family) holds shares in his own name. Members of a family are treated as a single shareholder since they probably vote as a coalition. Members of a family means those who have the same family name and relatives of in-laws of the family. Although there have been cases of sibling rivalry for obtaining controlling power within a family, here I do not take this topic into consideration.

In the case when a firm's shares are held by a company or through a chain of companies, I search for the ultimate owner (controlling shareholder) of the last company. This indirect ownership is defined in the same way as La Porta et al. (1999). An individual or a family B indirectly controls x percent of company 1 if: i). *B* directly holds more than 25 percent of shares of company 2, which directly holds x percent of company 1; or ii). *B* directly controls company 3 which in turn controls company 2, which directly holds x percent of company 1. The chain of controlling of a firm could consist of many layers. Here we do not place a limit to the number of companies in this control chain as long as each of the companies has controlling power over the next one.

In the cases where the controlling shareholder controls a firm via more than one type of shareholding, the

ultimate ownership is the summation of all the voting rights of the shareholdings via various patterns. For example, if a family B owns directly x percent of shares of company 1, and owns at least 25 percent of the shares of company 2 which in turn owns y percent of shares of company 1, the total voting rights of company 1 owned by B is then x + y percent.

For foreign corporate shareholders, I do not search for to the ultimate control of their parent companies. So it can be the case that firms that have foreign corporations as their controlling shareholders, and hence defined as foreign-controlled firms, may be actually widely-held firms if their parent companies in the home based countries are dispersedly owned.

Firms that do not have an ultimate controlling shareholder, a shareholder of more than 25 percent voting rights, are defined as firms without a controlling shareholder. Firms that are owned by a corporation as well as a financial institution that has no controlling shareholder also fall into this category.

Regarding control mechanisms, I define a pattern of pyramid and cross-shareholding shareholdings in the same manner as La Porta, et al. (1999). Company Z is controlled through a pyramid if it is controlled by *a public company* Y, which is in turn controlled by a family X. Companies in the middle are required to be public companies. If company Y is privately owned by family X, we do not call this ownership structure a pyramid. If firms in the middle of the chain of control are privately owned by a family, the family then is not able to separate cash flow and control rights.

For cross-shareholding structures, company Z has cross-shareholdings if it also holds any shares of its corporate controlling shareholders, or other companies along the chain of control.

The following examples of ownership structure provide better understanding on how Thai firms are owned. Figure. 1 shows the ownership of Italian-Thai Development, one of the largest property and development companies in Thailand. The Kanasut family, one of the founders, directly owns 34.13 percent of Italian-Thai Development. The Kanasut family, however, indirectly controls more votes of Italian-Thai Development. The family controls 25.67 percent of Ital-Thai Holdings, which in turn controls 12 percent of Italian-Thai Development. Italian-Thai Holdings also controls 95.16 percent of Ital-Thai Industrial, another shareholder of Italian-Thai Development with 8.54 percent ownership. The Kanasut family is not the only one controlling shareholder of Italian-Thai Development. The Jaranachit family, also has controlling votes in the firm. The Jaranachit family holds 21.73 percent of Italian-Thai Development directly, and indirectly through controlling 29.71 percent of Ital-Thai Holdings' shares. However the Kanasut family and the Jaranachit family are actually considered as one family because they are related by marriage. One of the daughters of the Kanasut family is married to the Jaranachit family. In this case, the Kanasut family and the Jaranachit family together own 80.81 percent of voting rights of Italian-Thai Development. Because both Ital-Thai Holdings and Ital-Thai Industrial are not publicly traded, the ownership structure of Italian-Thai Development is not a pyramid.

Metro System Corporation is an example of a company that has one controlling shareholder but ultimately is controlled by a group of more than one controlling shareholder (Figure. 2). The major shareholders of Metro System Corporation are Sri Krung Wattana (32.85 percent) and Sahapattanapoon (12.26 percent). Both Sri Krung Wattana and Sahapattanapoon are holding companies of the Sri Krung Wattana group, which is one of the Thai big business groups. This group is controlled by three families, namely the Laohathai family, the Setpornpong Family, and the Tangtrongsak Family. Due to data unavailability, it is not possible to specify fractions of shares of Metro System Corporation owned by the three families, I classify Metro System Corporation as having more than one ultimate controlling shareholder.

An example of a firm that is controlled by two separate groups of shareholders is the Malee Sampran Factory (Figure. 3). The pattern of shareholdings of Malee Sampran Factory gives also an example of control through pyramid companies. There are two different groups of ultimate shareholders with controlling votes: the Kulapiyawaja family who is also the founder of Malee Sampran Factory, and the Chirathiwat family. Both families control Malee Sampran Factory indirectly via holding companies that appear in the first layer of the ownership structure of Malee Sampran Factory. That is, the Kulapiyawaja family controls 100 percent of the Bunmalee Food Processing, which in turn holds 36.03 percent in Malee Sampran Factory' shares. On the other side, the Chirathiwat family controls 49.58 percent of the publicly traded ABICO Holdings, which holds 41.1 percent of Malee Sampran Factory. The controlling mechanism of the Chirathiwat family is a pyramid since a listed company, ABICO Holdings, appears in the chain of control.

The final example is the ownership structure of International Cosmetics (Figure 4). The pattern of shareholding of International Cosmetics illustrates all controlling mechanism types defined in this study, namely direct holdings, indirect holdings via pyramidal holdings, and cross-shareholdings. International Cosmetics is part of the Saha-Pathanapibul group which is one of the Thai big business groups. The founder of Saha-Pathanapibul group is the Chokwattana family. The Chokwattana family owns only 0.96 percent of International Cosmetics directly. However the Chokwattana family controls 20.08 percent of International Cosmetics indirectly by using the group's privately held holding companies. The other two large shareholders of International Cosmetics are Sahapathana Inter-Holdings, and Saha-Pathanapibul and WACOAL. All are controlled by the Chokwattana family directly and indirectly. These three corporate shareholders are publicly traded. Therefore the Chokwattana family owns more votes of International Cosmetics through pyramid companies namely WACOAL, Sahapathana Inter-Holdings, and Saha-Pathanapibul. In total, Chokwattana family controls 48.58 percent of International Cosmetics. International Cosmetics also holds 5.03 percent of Sahapathana Inter-Holdings and 4.44 percent of Saha-Pathanapibul. Hence this is also a case of crossshareholdings.

> [Insert Figure 1 Here] [Insert Figure 2 Here] [Insert Figure 3 Here] [Insert Figure 4 Here]

4 Results and analysis

4.1 Description of controlling shareholders

Table 3 shows that out of 270 firms, 221 firms or 81.85 percent of the firms have controlling shareholders. Only 49 firms or 18.15 percent of the firms do not have any single shareholder who holds more than 25 percent of the firms' shares.³

The number of firms that are controlled by a single family is the highest. There are 155 firms that are controlled by a family, or 55.93 percent of firms in the sample. The second largest group of investors that appear as controlling shareholders are foreign investors. There are 36 firms that are foreign-controlled, or 13.33 percent of the firms. The Thai government controls 5 firms, or 2.22 percent. A total of 28 companies, or 10.37 percent of the sample, are controlled by more than one group of investors. These companies are controlled in one of the following ways: (i) By at least two groups of individuals or families, (ii) by an individual or a family group and a group of foreign investors, or, (iii) by two groups of foreign investors.

Controlling shareholders involvement in top management varies according to the types of controlling shareholders. Top management includes the following positions: chairman, honorary chairman, vice-chairman, president, vice-president, CEO or managing director, and directors of the board. Table 3 shows that out of 223 firms where a controlling shareholder is present, the controlling shareholder in 185 firms is involved in top management. This accounts for 82.51 percent. In family-controlled firms, the proportion of controlling shareholder involvement in management is 92.90 percent, whereas in firms with more than one controlling shareholder, it is 89.29 percent. In 45.71 percent of foreign-controlled firms, the controlling shareholder participates in management.

Panel B shows the incidence of separation of voting and control rights via the adoption of pyramid and cross-shareholding structures. Surprisingly only 47 companies, or 17.4 percent of the firms in the sample deviate from the one-share-one-vote rule.⁴ Similar to the findings of La Porta et al. (1999), a pyramid structure is used more often (40 companies). Only 2 companies implement cross-shareholding structure. And five companies are controlled by both pyramid and cross-shareholding structures. Separation of the voting and cash flow rights occurs more often in family-controlled companies. Out of the 40 firms with pyramidal ownership, 28 firms are family-controlled, 1 is government-controlled, 3 are foreign-controlled, and 7 are more-than-one-investor-controlled.

[Insert Table 3 Here]

 $^{^{3}}$ These firms are not actually widely held. Average ownership of the largest shareholder of these firms is 19.24 percent, with median 18.84 percent (Wiwattanakantang, 2000).

 $^{^{4}}$ In the study based on 27 wealthy countries, La Porta et al. (1999) find that 26 percent of firms that have controlling shareholders are controlled by pyramids. In the cross-country analysis based on nine East Asian countries, Claessens et al. (2000a) document 40.75 percent of firms in the sample having the voting rights higher than the cash flow rights.

4.2 Univariate analysis

I begin the analysis by comparing the characteristics, and performance of firms with and without controlling shareholders. Firms with controlling shareholders are sub-divided into firms that are controlled by family, government, foreign investors and firms with more than one controlling shareholders. Next, I compare the performance of firms where the controlling shareholder is involved in management with those where the controlling shareholder is not involved in management.

4.2.1 Firms characteristics: With controlling shareholder vs without controlling shareholder

Table 4 presents summary statistics of firm characteristics for the 270 firms in the sample. Compared to firms without a controlling shareholder, firms that have controlling shareholders are much larger in size, measured by either total assets or sales. For example, the mean value of sales of the firms that have controlling shareholders is Baht 3,974.93 million, and the median value is Baht 1,707.24 million. The mean and median sales of the firms that have no controlling shareholder are Baht 1,427.65 million and Baht 1,156.46 million, respectively. Regarding other firms' characteristics namely age, sales growth and the debt-asset ratio, the differences between firms with and without controlling shareholders are not statistically significant.

[Insert Table 4 Here]

4.2.2 The effects of controlling shareholders on performance

Table 5 summarizes the performance of firms with and without controlling shareholders. The average values of both the accounting based measures of performance are significantly higher for firms with controlling shareholders. The average ROA is 7.67 percent for firms with controlling shareholders, compared to 4.84 percent for firms without controlling shareholder. The mean sales-asset ratio for firms with controlling shareholders is 0.80 for firms with controlling shareholders, compared to 0.60 firms with no controlling shareholder. The sample means of Tobin's q for firms with and without controlling shareholders are not significantly different, however. With respect to the median values, the differences in the median values of all the performance measures for firms with and without controlling shareholders are not significant at the conventional levels.

Comparing the performance of firms with different types of controlling shareholders and that of firms with no controlling shareholder, only foreign controlled firms perform significantly different from firms with no controlling shareholder, when the performance measures are the ROA and the sales-asset ratios. The mean and median ROA for foreign controlled firms are 10.54 and 10.03 percent, respectively. These two values are significantly higher than the mean and median ROA of 4.84 and 6.79 percent for firms with no controlling shareholder, respectively. In fact, the mean ROA for foreign-controlled firms is also superior to that of firms that are controlled by family and government. The results also show that firms with more than one controlling shareholder have an average sales-asset ratio higher than firms with no controlling shareholder. Table 6 shows a comparison of the performance of firms where the controlling shareholders hold the top executive positions and those where the controlling shareholders do not. Panel A and B are the pairwise comparisons based on the mean and median values of the performance measures, respectively. The mean and median values of both accounting based measures are significantly higher for firms where the controlling shareholders are not involved in management. For example, the mean ROA for firms where the controlling shareholder is involved in management is 4 percent with median 4.20 percent, whereas the mean ROA for firms where the controlling shareholder is not involved in management is 7.82 percent with median 7.07 percent.

With respect to Tobin's q, the differences in both the mean and median values when the firms are managed by the controlling shareholders or not are not statistically significant from zero.

Foreign investors' involvement in management is associated with significantly lower performance measured by the accounting measures: the ROA and sales-asset ratio. For example, firms that are owned but not run by foreign investors have a mean ROA of 12.46 percent, significantly higher than the mean ROA of 7.98 percent for the firms where the controlling shareholder is involved in management.

In summary, applying univariate tests, we do not find evidence to support the argument that controlling shareholders divert corporate assets in such a way that the firms turn out to have poorer performance. In fact, when performance measures are the accounting ones, firms where controlling shareholders exist have means ROA and the sales-asset ratio significantly higher than those of firms without controlling shareholder. The evidence suggests that family and foreign controlled firms have significantly higher sales-asset ratio, relative to firms with no controlling shareholder. The univariate comparisons show, however, that firms where the controlling shareholders participate in management do perform worse than firms where the controlling shareholders do not participate in management.

[Insert Table 5 Here]

[Insert Table 6 Here]

4.3 Multivariate regression analysis

4.3.1 The effects of the presence of controlling shareholders and the control mechanisms

The multivariate analysis of the effect of controlling shareholders n performance are presented in Table 7. Panel A reports the results when the performance measures are accounting based: the ROA, and sales-asset ratios. Panel B reports the results when the performance measures are Tobin's q. The effect of the presence of controlling shareholder is represented by the dummy variable, *Presence of controlling shareholder*. The estimated coefficients are positive and significant at the 5 and 10 percent levels, when the dependent variables are the ROA, and the sales-asset ratio, respectively (model (1) and (4)). When the performance measure is Tobin's q, the coefficients are positive but not significant. The results indicate that after controlling for other effects, firms with controlling shareholders are significantly more profitable based on the accounting measures, than firms with no controlling shareholder.

Previous studies argue that controlling shareholders might extract more private benefits and divert corporate assets at some level of shareholdings. To account for the possibility that variation in ownership levels affects corporate value, firms are categorized into 4 groups according to the shares held by the largest shareholder group. The levels of ownership are [25-50), [50-75), and [75-100]. In other words, the coefficients on these dummy variables measure the performance of each category of controlling shareholders relative to firms where the ownership of the largest shareholder is less than 25 percent. The cut-off levels of the ownership is chosen based on the Thai public company law. The legal rights of each category of ownership can be referred in Section 3.5.

The estimated coefficients on these three variables are positive in all the regressions. There is a very strong and significant positive relation between the first two ownership levels and the ROA, at the 1 and 5 percent levels, respectively. The relation between the [75-100] category of ownership and the ROA is weaker, significant at the 10 percent level, however. Regarding the relation between the ownership categories and the sales-asset ratio, only the coefficients on the ownership levels of [50-75) and [75-100] are significant at the 10, and 5 percent levels, respectively. In the Tobin's q regressions, the coefficients on the ownership levels are significant only when the ownership level is [25-50), at the 9 percent level.

These results indicate that the firm's value is not negatively affected by the presence of controlling shareholders. In fact, the evidence shows that firms with concentrated ownership outperform firms where the largest shareholder has smaller stakes. The results are consistent with the hypothesis that the expropriation problems are less serious if the controlling shareholders hold a large proportion of the shares, thereby internalizing a higher proportion of any expropriation costs they incur. The results are similar to Claessens et al. (2000a), Lins (2000) and Yeh and Lee (2000). Claessens et al. (2000a) use data on nine East Asian countries. Lins (2000) uses data on 22 emerging economies. And Yeh and Lee (2000) use data on Taiwanese firms.

These findings, however, are different from the findings of Cronqvist and Nilsson (2000). Using data of Swedish firms, they find that ownership of the controlling shareholders is negatively associated with Tobin's q. The results are different probably due to the differences in the ownership and control structures used by Thai and Swedish firms. In Sweden, the deviation from one share one vote rule is extensively used via dual-class shares. In contrast, as shown previously the practice is relatively rare in Thailand. Therefore, compared to Thai firms, in Sweden the expropriation problem is likely to be more serious because the controlling shareholders are able to externalize most of costs of any self-dealing activities they carry out.

To test the effect of control mechanisms used to deviate from one-share-one-vote on performance, I create a dummy variable, *Pyramids*, to differentiate between firms that implement pyramid and/or cross-shareholding structures and those that do not. The results are shown in model (3) and (6) in Panel A, and model (3) in Panel B. The estimated coefficients are insignificant in all models. That is, the evidence does not support the argument that the the mechanisms employed to separation voting and cash flow rights reduces corporate

value. This finding is in line with the cross-country regression in Lins (2000), who uses similar measure.

The results in this study, however, are different from Claessens et al. (2000a). They find that the deviations from cash flow rights and voting rights is value decreasing in Japan, Indonesia, Thailand and Philippines. The analysis in this study differs from Claessens et al. (2000a) in the variable used to measure the violation of control and cash flow rights. Claessens et al. (2000a) try to measure the degree of expropriation via the separation of ownership and control by introducing a variable: the ratio of cash flow rights to voting rights. In this study, however, the *Pyramids* variable represents only firms that use pyramid or cross-shareholding structures, and it does not incorporate the magnitude of the deviation between voting and cash flow rights. I do not try to measure the degree of the deviation between voting and cash flow rights because I do not have a theoretically appropriate methodology. Existing theory does not provide appropriate guidance for computing accurate measures.

[Insert Table 7 Here]

4.3.2 The effects of controlling shareholders' involvement in management

The effect of controlling shareholders' involvement in management is captured by a dummy variable, CS involvement in management, which indicates whether the firm is run by the controlling shareholder and members of his family. Regression results are reported in specification (1), (3), and (5) of Table 8. The estimated coefficient of CS involvement in management is negative and significant only when the dependent variables are the accounting measures, at the 10 percent level. The regression results support the findings based on the univariate tests. That is, controlling shareholders who run the firms are likely to consume private benefits, therefore are detrimental to the firm value. Similar results are also shown in Cronqvist and Nilsson (2000) in the case of Swedish firms.

Additional test is conducted to analyze whether the agency costs incurred by controlling shareholderand-managers occur uniformly over all the range of ownership level. To address the issue, I create 3 dummy variables, *CS-manager owners [25-50)*, *CS-manager owners [50-75)*, and *CS-manager owners[75-100]*. These variables represent firms where the level of ownership of the controlling shareholders who are the firm's managers are [25-50), [50-75), and [75-100]. Note that in this study, the ownership by the management (who are also the controlling shareholders) is a block shareholding. This variable is different from most studies in this area, where insider ownership is often the aggregation of the managers.

Estimated results are shown in the models (2), (4) and (6). The results suggest that firms where the controlling-shareholder-and-managers own between 25-50 percent have lower ROA and sales-asset ratios, compared to firms where the controlling shareholders do not hold management positions. In the Tobin's q model, the coefficient associate with the dummy variable indicating the ownership level [75-100] is positive, but is weakly significant at the 13 percent level.

Overall, the results show that the expropriation problems seem to be more serious when the controlling

shareholders are involved in the management. The agency costs, however, are not linearly related to the ownership of the management. Based on the results from the regressions using the accounting measures of performance, the management group who is also the controlling shareholder is likely to be entrenched when they have 25-50 percent stakes of the firms. Based on the results from the Tobin's q regressions, when the controlling shareholder-and-managers have extremely concentrated ownership (between 75-100 percent), their interests might align to those of outside investors which is consistent with the hypothesis of Jensen and Meckling (1976).

[Insert Table 8 Here]

4.3.3 The effects of the types of controlling shareholders

Table 9 explores the effects of types of controlling shareholders on corporate performance. Four dummy variables are used to differentiate between the effects of the groups. Specifically, these variables indicating whether the firms are controlled by family, government, foreign investor, and firms with more than one controlling shareholder. The estimated results are somewhat consistent with the findings the univariate test. In the ROA regression, the coefficients of *family*, *foreign investor*, and *firms with more than one controlling shareholder* are positive and significant at conventional levels (model (1)). The results suggest that family and foreign controlled firms as well as firms with more than one controlling shareholder have higher ROA, relative to firms with no controlling shareholder.

Regression results when the sales-asset ratio and Tobin's q are the dependent variables yield similar findings (model (3) and (5)). Firms with with more than one controlling shareholder have significantly superior performance than those with no controlling shareholder. The coefficients, however, are weakly significant at the 10, and 12 percent levels in the model when the regressors are the sales-asset ratio and Tobin's q, respectively.

In unreported regressions, I changed the underlying category from firms with no controlling shareholder to foreign-controlled firms. The results are unchanged. More specifically, the coefficients of the variable *firms* with no controlling shareholder are negative and significant at the 5 and 12 percent when the performance is measured by the ROA and sales-asset ratio, respectively. No significant result was observed when the dependent variable was the Tobin's q. In addition, I did not find any evidence that family-controlled firms have significant lower performance, as measures by the ROA, sales-asset ratio and Tobin's q. The results reveal that family-controlled firms do not poorly perform, compared to foreign-controlled firms and firms with no controlling shareholder. The evidence, therefore, suggests that we cannot accept the hypothesis that families are opportunistic, and expropriate corporate assets for their own purposes, that are detrimental to corporate performance. In contrast, family relationship might provide incentives and improve monitoring.

The finding that foreign ownership concentration is positively related to performance is similar to the findings of Boardman et al. (1997), and Chhibber and Majumdar (1999). The superior performance of

foreign-controlled firms reflects that foreign ownership mitigates the agency problem, the superior technology foreign firms have as well as the the tax and other benefits obtaining from the investment promotion schemes of the Thai government. This issue needs further investigation.

In model (2), (4), and (6), I test whether the ownership held by each category of controlling shareholder affects the firm's value. No significant results are observed, however. When the level of ownership variables are included in the regressions, only the estimated coefficient of the variable indicating family-controlled firms remains significantly at the 5 percent (model (2)). The result indicates that family-controlled firms are associated with higher ROA, relative to firms with no controlling shareholder. This result confirms the previous finding that family-owned firms do not have severe the agency problems.

I replicate the regression as in Table 8 to test whether the involvement in management by the four types of controlling shareholders affects performance. The results are reported in Table 10. The results in specification (1), (3), and (5) show that the coefficients are significant (at the 1 percent) only when the sales-asset ratio is the dependent variable. Specifically, only coefficients associated with the variable that indicates firms where foreign controlling shareholders are in the management team (*Foreign investor*Involved*) are significant. The results reveal that firms that are controlled and managed by a group of foreign investors have significantly lower sales-asset ratio than foreign firms that are not run by their controlling shareholders. The evidence are in line with the results of the univariate analysis.

To test whether ownership by manager-and-controlling shareholder in each category of the controlling shareholders effect performance, I interact the 4 dummy variables representing types of controlling shareholders, *Involved*, and their shareholdings. Specification (2), (4), and (6) report the results of this analysis. The results show that there is a significant negative relation between the ownership of manager-and-controlling shareholders who are foreign investors and the two accounting measures of performance. The coefficients are strongly significant at the 1 percent level in the model when the dependent variable is the sales-asset ratio, but weakly significant at the 14 percent level in the model when the ROA is the regressors. The findings support our previous evidence that foreign controlled firms where the controlling shareholders are involved in management are associated with larger expropriation problems than those that are not run by their controlling shareholders. Carefully examining these firms, I found that foreign-controlled firms that are run and not run by their controlling shareholders have somewhat different characteristics. The controlling shareholders of those foreign-controlled firms that are run by their controlling shareholders are individuals who are foreigners. Foreign-controlled firms that are run by professional managers have multinational corporations as controlling shareholders. These managers own no stakes in the firms.

The regression results again reveal that there is no evidence of expropriation by families. Family's involvement in running the firm is not associated with lower corporate value. The results, however, show a weak relationship between the sale-asset ratio and the ownership by manager-and-controlling shareholders in family-controlled firms. The estimated coefficient is positive and significant at the 11 percent level (model (4)).

[Insert Table 9 Here]

[Insert Table 10 Here]

4.4 Sensitivity checks

There are at least 2 issues to consider when evaluating ownership-performance analysis. First whether the results are robust to performance measurement. In unreported tests, I replicate the regressions in this section using the ratio of income before tax to total assets. The results remain unchanged across these alternative measures.

Second is the issue that is often raised in the US based studies. That is, whether ownership and performance are endogenously determined. In such a case, the causality might not always run from ownership to performance. The reverse direction might also be true. For example, the positive relationship between performance and ownership might reflect that better performing firms are attractive to investors, causing investors to purchase more shares. It may also reflect that better performing firms award equity shares to the management. Because of the following differences in institutions, the endogeneity problem might not be relevant in the case of Thailand. First, similar to other developing economies, the use of stock options to provide incentives to management is not common. Second, the ownership structure of Thai firms has been stable over time. Change of controlling shareholders is rare. There are only 10 companies in the sample that have had a complete change in the controlling shareholder groups since going public. Most of the firms have had the same controlling shareholders since establishment.

This phenomenon is indeed consistent with the hypothesis of Gomes (2000). He contends that in choosing the optimal levels of ownership structure before the IPO, owners maximize their net private benefits of control and their shares of the cash flows. In the complete information model, the model predicts that the owners divest large stakes soon after the IPO, and tend to keep their ownership constant and remain as the controlling shareholders of the firms afterwards. In the incomplete model, the ownership by the controlling shareholders, however, decreases with the level of the agency costs.

5 Summary and conclusion

This study investigates the effects of ownership concentration on agency costs. Based on both the univariate and multivariate analyses, we do not find that the evidence supports the hypothesis that controlling shareholders expropriate corporate assets, hence resulting in lower firm value. In contrast, firms where controlling shareholders exist have superior performance, when measured by the accounting measures: the ROA and the sales-asset ratio. The implementation of control mechanisms to separate control rights from cash flow rights is not common. Only 17.4 percent of firms in the sample use pyramid and cross-shareholding structures. The regression results indicate that the separation of voting and cash flow rights has no significant effect on the performance. The firms that adopt pyramid and cross-shareholding structure do not perform significantly different from firms that do not employ these control mechanisms.

These results suggest that the controlling shareholders seem to be self-constrained not to extract private benefits for themselves. Since in most of the firms, voting and cash flow rights are not separated, the controlling shareholders, hence, cannot externalize most of the costs of expropriation. The results reveal that instead of diverting corporate assets, the controlling shareholders seem to act as monitors who increase the value of the firm for other stakeholders.

The analysis casts some doubt on the argument that controlling shareholder involvement in management has a negative effect on the performance. The univariate and multivariate analyses suggest that the accounting measures of performance of firms managed by their controlling shareholders are lower than that of firms where controlling shareholders do not participate in management. The evidence reveals that controlling shareholderand-managers become entrenched at the 25-50 percent ownership level. At this level of shareholdings, the controlling shareholder-and-managers gain significant control over the firm and may utilize this power to divert corporate resources to his own interests. When their ownership is extremely concentrated at higher than 75 percent, the ownership is positively associated with Tobin's q. Even though the result is weakly significant at the 13 percent level, it implies that for managers who own a larger fraction of the firms' shares, the results of non-value maximization activities will be finally borne by themselves according to the proportion of their stakes. Consequently, the interests of owner-managers and outside shareholders converge.

Firms that are controlled by families, the government and firms with more than one controlling shareholders have significantly higher profitability than firms with no controlling shareholder. The empirical evidence also shows that firms that are controlled by families do not have significantly lower performance than foreigncontrolled firms. The involvement of families in managing the firms is not significantly associated with all performance measures. The results, therefore, indicate that families do not incur higher expropriation costs. Instead, families seem to provide good monitoring and incentive alignment to that of other stakeholders.

Due to data limitations, this study focuses on the cross-sectional relation among the variables. Further investigation using panel data certainly should give better understanding about the effects of ownership on the firm's value.

More work remains to be done on the net effects of concentrated ownership in emerging markets. Up to date, research has focused on the direct relationship between ownership and performance. It is also of interest to investigate the indirect relationship via the behavior of the controlling shareholders. For example, controlling shareholders' discretion over corporate decisions, such as capital structure, investment decisions, compensation schemes, management successions, and dividend policy.

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Table 1: Sample Description

This table presents characteristics of 270 companies in the sample. The sample consists of non-financial companies listed in the Stock Exchange of Thailand in 1996. Accounting data is for consolidated companies, obtained from the Stock Exchange of Thailand.

Industry	No. of companies
Agribusiness	28
Building materials	29
Chemicals and plastics	11
Commerce	12
Communication	10
Electrical products and computer	9
Electrical components	5
Energy	5
Entertainment and recreation	6
Food and beverages	20
Health care services	12
Hotel and travel services	9
Household goods	5
Machinery and equipment	5
Packaging	16
Printing and publishing	9
Property development	29
Pulp and paper	5
Textile	20
Transportation	6
Vehicles and parts	8
Others	11
Total	270

Panel A: Companies in the sample, classified by industries

Panel B: Descript	ive Statistic	s for the Sa	ample	
	Mean	Median	Max	Min
Book value of total assets	$7,\!140.71$	$2,\!428.76$	179,785	325.81
Sales revenue	$3,\!531.52$	$1,\!544.03$	$107,\!273.01$	11.31
Market value of equity	$4,\!485.53$	926.94	$118,\!930.5$	47.20
Number of years incorporated	21.02	17	120	2

Note: Values are in million Baht.

Variable	Description
Performance measures	
ROA	Ratio of profit before interest and tax to total assets
Sales-asset ratio	Ratio of sales to total assets
Tobin's q	Ratio of the market to the book value of equity.
Independent variables Ownership variables	
Presence of controlling shareholder	Dummy variable, indicating if the firm has a controlling shareholder.
Family	Dummy variable, indicating if the firm has a controlling shareholder who is an individual.
Government	Dummy variable, indicating if the firm has a controlling shareholder who is the government
Foreign investor	Dummy variable, indicating if the firm has a controlling shareholder who is a foreign investor.
More than one controlling shareholder	Dummy variable, indicating if the firm has more than one controlling shareholder.
Controlling shareholder owns [25-50)	Dummy variable, indicating if the controlling shareholder owns [25-50) of the shares
Controlling shareholder owns [50-75)	Dummy variable, indicating if the controlling shareholder owns [50-75) of the shares
Controlling shareholder owns [75-100]	Dummy variable, indicating if the controlling shareholder owns [75-100] of the shares
CS involvement in management	Dummy variable, indicating if the controlling shareholder and his family are present among the firm's top management.
CS-manager owners [25-50)	Dummy variable, indicating if the controlling shareholder is involved in the management and owns [25-50) of the shares
CS-manager owners [50-75)	Dummy variable, indicating if the controlling shareholder is involved in the management and owns [50-75) of the shares
CS-manager owners [75-100]	Dummy variable, indicating if the controlling shareholder is involved in the management and owns [75-100] of the shares
Pyramids	Dummy variable, indicating if there exists pyramids and/or cross-shareholdings
Control variables	
Sales growth	Percentage change in sales,
a:	averaged over the period 1992-96.
Size	Log of total assets.
Age Debt accet matic	Number of years since incorporation.
Debt-asset ratio Business group	Ratio of debt to total assets. Dummy variable, taking the value of 1 if the firm
	- $ -$

Table 2: Description of Variables used in This Study

Table 3: Description of Controlling Shareholder

This table presents the characteristics of controlling shareholders. Panel A shows the identity of controlling shareholders, and the extent of their involvement in management. Firms are classified into each category according to their controlling shareholders. *Involved* represents the case when controlling shareholders are involved in management as officers and directors. The table also shows the percentage of firms where the controlling shareholders are involved in the management. Panel B presents the number of firms that use control mechanisms such as pyramids and cross-shareholdings. Firms that do not implement pyramids and cross-shareholdings are categorized as using a simple structure. The "%" column presents the percentage of firms with conrolling shareholders that implement a given control mechanism.

	No. of	. of Involved		Not involved		
	firms	No. of firms	%	No. of firms	%	
Full sample	270	185	68.52	85	31.48	
Firms with controlling shareholder	223	185	82.96	38	17.04	
Family	155	144	92.90	11	7.10	
Government	5	-	-	5	100.00	
Foreign investors	35	16	45.71	19	54.29	
More than one controlling shareholder	28	25	89.29	3	10.71	
Firms with no controlling shareholder	47	-	-	-	-	

Panel B: Controlling Shareholders and the Control Mechanisms

	Simple (1)		Cross-sl	Cross-share (2)		Pyramids (3)		2) and(3)
Type of controlling	No. of	%	No. of	%	No. of	%	No. of	%
shareholder	firms		firms		firms		firms	
	101	~~ ~~	0	0.00	20	10.00	0	1.0.1
Family	124	80.00	0	0.00	28	18.06	3	1.94
Government	4	80.00	0	0.00	1	20.00	0	0.00
Foreign investor	32	91.43	0	0.00	3	8.57	0	0.00
More than one	16	57.14	2	7.14	8	28.57	2	7.14
controlling shareholder								
Firms with controlling	176	78.92	2	9.00	40	17.94	5	2.24
shareholder								

Table 4: Summary Statistics of Firms Characteristics

Firms are classified into 2 categories: firms with controlling shareholders and firms with no controlling shareholder. A controlling shareholder is a shareholder who owns at least 25 percent of a firm's shares. The summary statistics in this table are the mean and median of variables based on 1996 values. Total assets and sales are in millions of Baht, with an approximate exchange rate at the end of 1996 of one U.S.\$ equal to 26 Baht. Mean (median) differences are tested using the t-test and the Wilcoxon signed rank test. ***, ** indicate statistically significant differences when compared with the firms with no controlling shareholder at the 1 and 5 percent levels, respectively.

Variable	All firms	With controlling shareholders	Without controlling shareholders
	Mean	Mean	Mean
	(Median)	(Median)	(Median)
Agenta (Daht million)	7 140 71	7 759 00**	4 990 97
Assets (Baht million)	$7,140.71 \\ (2,428.76)$	$7,752.09^{**}$ (2,428.87)***	$\begin{array}{c} 4,239.87 \\ (2,006.34) \end{array}$
Sales (Baht million)	3,531.52	$3,974.93^{***}$	1,427.65
	(1,544.03)	$(1,707.24)^{***}$	(1,156.46)
Age of firms (years)	21.02	21.41	19.17
	(17.00)	(17.00)	(17.5)
Sales growth	0.28	0.28	0.29
0	(0.16)	(0.16)	(0.16)
Debt-asset ratio	0.43	0.44	0.38
	(0.44)	(0.46)	(0.38)
Number of firms	270	223	47

Table 5: A Comparison of Performance: Firms with Controlling Shareholder versus Firms with no Controlling Shareholder

This table provides a comparison of the performance of firms with and without controlling shareholders. Performance is measured by ROA, Sales/asset and Tobin's *q*. Significance level refers to the difference of mean and median tests between firms with controlling shareholders, including the four groups of controlling shareholders, and firms without controlling shareholder. Two-tailed t-statistic from a parametric test are used for the pairwise comparison of means. Wilcoxon signed rank tests are used for the pairwise comparison of means. Wilcoxon signed rank tests are used for the pairwise comparison of means attain difference when compared with the firms with no controlling shareholder at the 10, 5 and 1 percent levels, respectively.

	ROA	A (%)	Sales/asset		Tob	oin's q
	Mean	Median	Mean	Median	Mean	Median
Full sample	7.18	7.47	0.77	0.62	1.17	0.98
Firms with controlling shareholder	7.67**	7.64	0.80**	0.64	1.18	0.98
Family	7.03	7.21	0.78^{**}	0.62	1.18	0.97
Government	5.12	9.43	0.55	0.43^{*}	1.65	0.98
Foreign investor	10.54^{**}	10.03^{***}	0.90^{***}	0.79^{***}	1.12	0.98
More than one controlling shareholder	8.11	6.70	0.81^{*}	0.70^{***}	1.23	1.13
Firms with no controlling shareholder	4.84	6.79	0.60	0.48	1.14	0.94

Table 6: A Comparison of Performance: Involvement in Management versus not Involvement This table provides a comparison of the performance of firms where controlling shareholders are involved in management against firms where controlling shareholders are not involved in top management. Top management includes officers and directors. Panel A and B show the results of mean and median comparisons, respectively. Two-tailed t-statistic from a parametric test are used for the pairwise comparison of means. Wilcoxon signed rank tests are used for the pairwise comparison of medians. *, **, *** indicates statistically significant difference when compared with firms where the controlling shareholder is involved in management at the 10, 5 and 1 percent levels, respectively.

	Not in	volved in mar	nagement	Inv	Involved in management		
	ROA	Sales/asset	Tobin's q	ROA	Sales/asset	Tobin's q	
	(%)			(%)	•		
Firms with controlling share-	10.45**	0.85^{*}	1.27	7.10	0.79	1.16	
holder							
Family	9.07	0.48	1.24	6.88	0.80	1.16	
Government	5.12	0.55	1.65	-	-	-	
Foreign investor	12.46^{*}	1.12^{***}	1.23	7.98	0.62	0.96	
More than one controlling shareholder	11.34	0.96	0.92	7.86	0.80	1.29	

Panel B: A Comparison of Medians

	Not in	volved in mar	agement	Inv	Involved in management			
	ROA	Sales/asset	Tobin's q	ROA	Sales/asset	Tobin's q		
	(%)			(%)	,	_		
Firms with controlling share- holder	9.63***	0.69*	1.02	7.21	0.63	0.97		
Family	7.64^{*}	0.44	1.03	7.21	0.65	0.97		
Government	9.43	0.43	0.98	-	-	-		
Foreign investor	10.60	1.00	1.05	9.08	0.48	0.86		
More than one controlling shareholder	11.34	0.96	0.92	6.66	0.64	1.16		

Table 7: The Effects of Controlling Shareholders on performance

ROA is the ratio of profit before interest and tax to total assets. Sales-asset ratio is the ratio of sales to total assets. Tobin's q is the ratio of the market to the book value of equity. In Panel A, the dependent variables are the accounting performance: the ROA and sales-asset ratio. In model (1)-(3), the dependent variable is the ROA. In model (4)-(6), the dependent variable is the sales-asset ratio. In Panel B, the dependent variable is Tobin's q. *Presence of controlling shareholder* is a dummy variable, taking the value of 1 if the firm has a controlling shareholder. *Controlling shareholder owns* [25-50), *Controlling shareholder owns* [50-75), and *Controlling shareholder owns* [75-100] are dummy variables, taking the value of 1 if the controlling shareholder owns [25-50), [50-75), and [75-100] of the shares, respectively. *Pyramids* is a dummy variable, taking the value of 1 if the firm implements pyramid and/or cross-shareholding structure. The regression method is the *OLS*. Each specification includes a set of 21 industry dummies but the results are suppressed. *p-values* for two-tailed t-test are in parentheses. *, **, *** indicate significance at the 10, 5 and 1 percent levels, respectively.

Panel A: The Dependent Variables are ROA and Sales-Asset Ratio

		ROA		S	ales-asset ra	tio
	(1)	(2)	(3)	(4)	(5)	(6)
Presence of controlling shareholder	0.035**		0.036**	0.140^{*}		0.127
	(0.02)		(0.02)	(0.09)		(0.13)
Controlling shareholder owns [25-50)		0.031^{**} (0.05)			0.097 (0.27)	
Controlling shareholder owns [50-75)		0.042***			0.171^{*}	
Controlling shareholder owns [75-100]		(0.01) 0.051^*			(0.06) 0.387^{**}	
		(0.09)			(0.02)	
Pyramids			0.0001			0.106
			(1.00)			(0.23)
Sales growth	0.03**	0.029**	0.033**	0.114	0.105	0.112
	(0.02)	(0.03)	(0.02)	(0.13)	(0.16)	(0.14)
Log (age)	0.018**	0.018**	0.019^{**}	0.060	0.052	0.060
T ((0.05)	(0.05)	(0.04)	(0.24)	(0.31)	(0.25)
Log (asset)	0.012^{**}	0.013^{**}	0.012^{**} (0.04)	-0.049 0.15	-0.043 0.20	-0.048 0.15
Debt/asset	(0.04) -0.113***	(0.03) - 0.116^{***}	(0.04) - 0.113^{***}	-0.74^{***}	0.20 -0.778***	-0.728^{***}
Debt/asset	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Business group	-0.009	-0.008	-0.009	-0.008	-0.016	-0.050
Dusiness group	(0.54)	(0.54)	(0.55)	(0.92)	(0.84)	(0.56)
Intercept	-0.132	-0.141	-0.137	2.366***	2.299^{***}	2.354^{***}
	(0.11)	(0.09)	(0.10)	(0.00)	(0.00)	(0.00)
Adjusted R^2	0.142	0.141	0.139	0.421	0.427	0.422
F-statistic	2.64	2.520	2.550	8.25	7.910	8.02
<i>p-value</i>	0.00	0.00	0.00	0.00	0.00	0.00

	(1)	(2)	(3)
Presence of controlling shareholder	0.097		0.107
	(0.40)		(0.35)
Controlling shareholder owns [25-50)	()	0.015	
с <i>г ,</i>		(0.90)	
Controlling shareholder owns [50-75)		0.147	
		(0.24)	
Controlling shareholder owns [75-100]		0.255	
		(0.27)	
Pyramids			-0.076
			(0.53)
Sales growth	0.296^{***}	-0.039***	0.297^{***}
	(0.00)	(0.01)	(0.00)
Log (age)	-0.032	0.011	-0.031
	(0.65)	(0.58)	(0.66)
Log (asset)	0.007	-0.400	0.006
	(0.88)	(0.81)	(0.90)
Debt/asset	-0.380^{*}	0.007^{*}	-0.387^{*}
	(0.09)	(0.08)	(0.09)
Bussiness group	0.006	0.007	0.036
	(0.96)	(0.95)	(0.76)
Intercept	1.056^{*}	1.023	1.069^{*}
	(0.10)	(0.11)	(0.09)
Adjusted R2	0.134	0.136	0.131
F-statistic	2.6	2.52	2.51
p-value	0.00	0.00	0.00

Panel B: The Dependent Variable is Tobin's q

Table 8: The Effect of Controlling Shareholders' Involvement in Management

ROA is the ratio of profit before interest and tax to total assets. Sales-asset ratio is the ratio of sales to total assets. Tobin's q is the ratio of the market to the book value of equity. In model (1)-(2), the dependent variables are the ROA. In model (3)-(4), the dependent variables are the sales to total assets ratio. In model (5)-(6), the dependent variables are Tobin's q. Family, Government, Foreign investor, and More than one CS are dummy variables, indicating if the firm has a controlling shareholder who is an individual, the government, a foreign investor, and the firm with more than one controlling shareholder, respectively. CS involvement in management is a dummy variable, indicating if the controlling shareholder and his family are present among the firm's top management. CS-manager owns [25-50), CS-manager owns [50-75), and CS-manager owns [75-100] are dummy variables, indicating if the controlling shareholder owns [25-50), [50-75), and [75-100] of the shares, respectively. The regression method is the OLS. Each specification includes a set of 21 industry dummies but the results are suppressed. p-values for two-tailed t-test are in parentheses. *, **, *** indicate significance at the 10, 5 and 1 percent levels, respectively.

	R	DA	Sales-as	set ratio	Tobin's q		
Variable	(1)	(2)	(3)	(4)	(5)	(6)	
Presence of controlling shareholder	0.057***	0.053***	0.261**	0.247**	0.102	0.094	
	(0.00)	(0.01)	(0.02)	(0.03)	(0.50)	(0.54)	
CS involvement in management	-0.027*	× /	-0.151*	× ,	-0.004	· /	
Ŭ,	(0.10)		(0.10)		(0.97)		
CS-manager owns [25-50)	× /	-0.029*	· · · ·	-0.171^{*}		-0.099	
		(0.10)		(0.08)		(0.46)	
CS-manager owns [50-75)		-0.019		-0.114		0.089	
с с <i>,</i>		(0.28)		(0.24)		(0.50)	
CS-manager owns [75-100]		0.002		0.059		0.368	
		(0.94)		(0.74)		(0.13)	
Sales growth	0.030^{**}	0.029**	0.115	0.108	0.296^{***}	0.275***	
0	(0.02)	(0.03)	(0.12)	(0.15)	(0.01)	(0.01)	
Log (age)	0.017^{*}	0.016^{*}	0.054	0.047	-0.032	-0.045	
8(8)	(0.06)	(0.08)	(0.30)	(0.37)	(0.65)	(0.53)	
Log (asset)	0.010^{*}	0.011^{*}	-0.060*	-0.056*	0.004	0.010	
	(0.09)	(0.07)	(0.08)	(0.10)	(0.93)	(0.83)	
Debt/asset	-0.101***	-0.106***	-0.673***	-0.706***	-0.373	-0.45*	
,	(0.00)	(0.00)	(0.00)	(0.00)	(0.11)	(0.06)	
Business group	-0.004	-0.006	0.018	0.001	0.008	-0.018	
0	(0.78)	(0.66)	(0.82)	(0.99)	(0.94)	(0.69)	
Intercept	-0.103	-0.111	2.530***	2.481***	1.078*	1.002	
	0.22	0.19	(0.00)	(0.00)	(0.10)	(0.13)	
Adjusted R^2	0.148	0.144	0.425	0.425	0.147	0.144	
F-statistic	2.66	2.50	8.11	7.630	2.54	2.5	
<i>p</i> -value	0.00	0.00	0.00	0.00	0.001	0.00	

Table 9: The Effects of Types of Controlling Shareholders

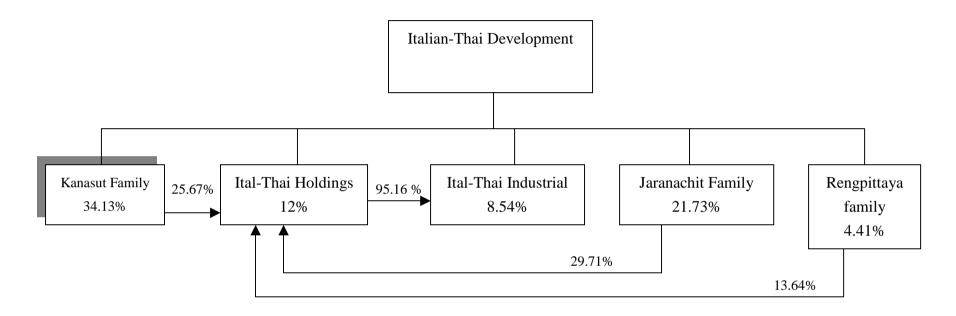
ROA is the ratio of profit before interest and tax to total assets. Sales-asset ratio is the ratio of sales to total assets. Tobin's q is the ratio of the market to the book value of equity. In model (1)-(2), the dependent variables are the ROA. In model (3)-(4), the dependent variables are the sales to total assets ratio. In model (5)-(6), the dependent variables are Tobin's q. *Family, Government, Foreign investor*, and *More than one CS* are dummy variables, indicating if the firm has a controlling shareholder who is an individual, the government, a foreign investor, and the firm with more than one controlling shareholder, respectively. *Ownership* is the percentage of shares held by the controlling shareholder. The regression method is the *OLS*. Each specification includes a set of 21 industry dummies but the results are suppressed. *p-values* for two-tailed t-test are in parentheses. *, **, *** indicate significance at the 10, 5 and 1 percent levels, respectively.

	ROA		Sales-asset ratio		Tobin's q	
	(1)	(2)	(3)	(4)	(5)	(6)
Family	0.033**	0.032**	0.123	0.114	0.087	0.096
	(0.03)	(0.04)	(0.16)	(0.19)	(0.47)	(0.43)
Government	0.020	-0.034	0.105	-0.478	0.101	0.682
	(0.65)	(0.72)	(0.67)	(0.38)	(0.77)	(0.36)
Foreign investor	0.047**	0.043	0.181	-0.055	0.066	0.277
	(0.02)	(0.47)	(0.12)	(0.87)	(0.68)	(0.54)
More than one CS	0.036*	0.089	0.204*	-0.056	0.265	-0.196
	(0.10)	(0.15)	(0.10)	(0.87)	(0.12)	(0.68)
Family * Ownership	()	0.001	()	0.008	(-)	-0.004
		(0.47)		(0.39)		(0.73)
Government * Ownership		0.128		1.425		-1.419
		(0.55)		(0.23)		(0.39)
Foreign investor * Ownership		0.007		0.505		-0.453
		(0.95)		(0.46)		(0.63)
More than one CS * Ownership		-0.119		0.576		1.039
		(0.36)		(0.43)		(0.30)
Sales growth	0.032^{**}	0.030**	0.110	0.110	0.299***	0.291**
0	(0.03)	(0.03)	(0.14)	(0.15)	(0.00)	(0.00)
Log (age)	0.018^{*}	0.017^{*}	0.053	0.049	-0.032	-0.031
	(0.06)	(0.07)	(0.32)	(0.36)	(0.66)	(0.68)
Log (asset)	0.012^{**}	0.013^{**}	-0.051	-0.052	0.004	0.001
	0.05	(0.04)	(0.14)	(0.14)	(0.93)	(0.98)
Debt/asset	-0.109***	-0.111***	-0.725***	-0.723***	-0.379*	-0.379
,	(0.00)	(0.00)	(0.00)	(0.00)	(0.1)	(0.11)
Business group	-0.006	-0.006	-0.004	-0.007	-0.027	-0.033
	(0.70)	(0.71)	(0.96)	(0.93)	(0.82)	(0.78)
Intercept	-0.130	-0.139	2.409***	2.444***	1.078^{*}	1.124^{*}
	(0.13)	(0.11)	(0.00)	(0.00)	(0.10)	(0.10)
Adjusted R^2	0.1345	0.125	0.4161	0.415	0.126	0.119
F-statistic	2.39	2.130	7.39	6.600	2.29	2.070
<i>p</i> -value	0.00	0.00	0.00	0.00	0.00	0.001

Table 10: Types of Controlling Shareholders and their Involvement in Management ROA is the ratio of profit before interest and tax to total assets. Sales-asset ratio is the ratio of sales to total assets. Tobin's q is the ratio of the market to the book value of equity. In model (1)-(2), the dependent variables are the ROA. In model (3)-(4), the dependent variables are the sales to total assets ratio. In model (5)-(6), the dependent variables are Tobin's q. *Family, Government, Foreign investor*, and *More than one CS* are dummy variables, indicating if the firm has a controlling shareholder who is an individual, the government, a foreign investor, and the firm with more than one controlling shareholder, respectively. *Involved* is a dummy variable, indicating if the controlling shareholder and his family are present among the firm's top management. *Ownership* is the percentage of shares held by the management who is the controlling shareholder. The regression method is the *OLS*. Each specification includes a set of 21 industry dummies but the results are suppressed. *p-values* for two-tailed t-test are in parentheses. *, **, *** indicate significance at the 10, 5 and 1 percent levels, respectively.

	ROA		Sales-asset ratio		Tobin's q	
	(1)	(2)	(3)	(4)	(5)	(6)
Family	0.063**	0.050**	0.112	-0.030	0.107	-0.054
	(0.04)	(0.03)	(0.51)	(0.82)	(0.65)	(0.77)
Government	0.018	0.019	0.106	0.108	0.098	0.98
	(0.68)	(0.67)	(0.66)	(0.66)	(0.78)	(0.77)
Foreign investor	0.064***	0.064***	0.413***	0.407***	0.131	0.125
	(0.01)	(0.01)	(0.00)	(0.00)	(0.50)	(0.51)
More than one controlling shareholder	0.047	0.027	0.105	0.004	-0.066	-0.047
0	(0.45)	(0.53)	(0.76)	(0.99)	(0.89)	(0.89)
Family * Involved	-0.032	()	0.011	()	-0.02	()
	(0.25)		(0.94)		(0.93)	
Foreign investors * Involved	-0.043		-0.533***		-0.154	
	(0.16)		(0.00)		(0.52)	
More than one CS $*$ Involved	-0.012		0.106		0.359	
	(0.85)		(0.77)		(0.47)	
Family * Involved * Ownership	()	-0.036	()	0.328		0.307
v i		(0.33)		(0.11)		(0.30)
Foreign investors * Involved * Ownership		-0.093		-1.108***		-0.299
		(0.14)		(0.00)		(0.55)
More than one CS * Involved * Ownership		0.019		0.433		0.675
1		(0.80)		(0.31)		(0.26)
Sales growth	0.030**	0.030**	0.103	0.092	0.299^{***}	0.283***
0	(0.03)	(0.03)	(0.17)	(0.21)	(0.01)	(0.01)
Log (age)	0.016^{*}	0.018^{*}	0.048	0.046	-0.032	-0.035
0(0)	0.08	(0.06)	0.36	0.37	0.66	0.63
Log (asset)	0.011^{*}	0.012^{*}	-0.053	-0.049	0.004	0.009
5 ()	(0.07)	(0.06)	(0.12)	(0.15)	(0.93)	(0.85)
Debt/asset	-0.099***	-0.10***	-0.649***	-0.691***	-0.368	-0.416*
/	(0.00)	(0.00)	(0.00)	(0.00)	(0.12)	(0.08)
Business group	-0.006	-0.005	-0.001	-0.005	-0.038	-0.039
0 1	(0.70)	(0.73)	(0.99)	(0.96)	(0.75)	(0.74)
Intercept	-0.114	-0.121	2.435***	2.371***	1.082	1.012
	(0.19)	(0.16)	(0.00)	(0.00)	(0.11)	(0.13)
Adjusted R^2	0.134	0.134	0.433	0.442	0.118	0.125
F-statistic	2.260	2.260	7.230	7.460	2.090	2.160
<i>p-value</i>	0.00	0.00	0.00	0.00	0.001	0.001

Figure 1: Italian-Thai Development



Business: Property development

Market Capitalization: B41,000 Mil.

Year founded: 1958

Founder: Kanasut Family

Figure 2: Metro System Corporation

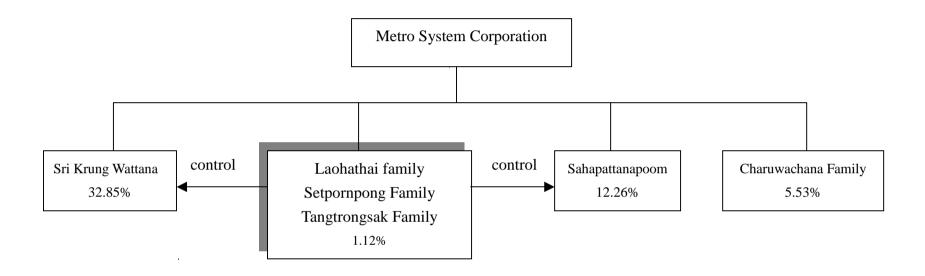
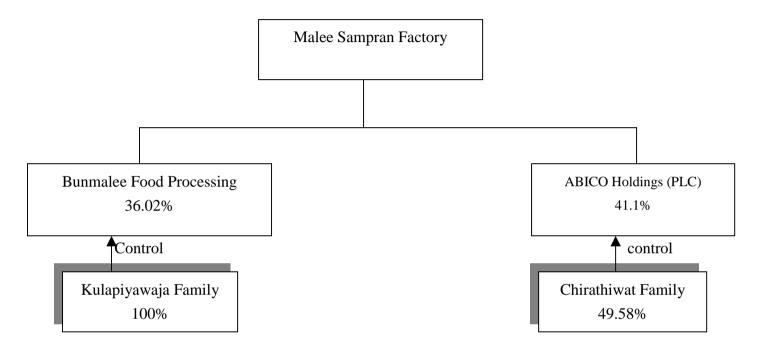


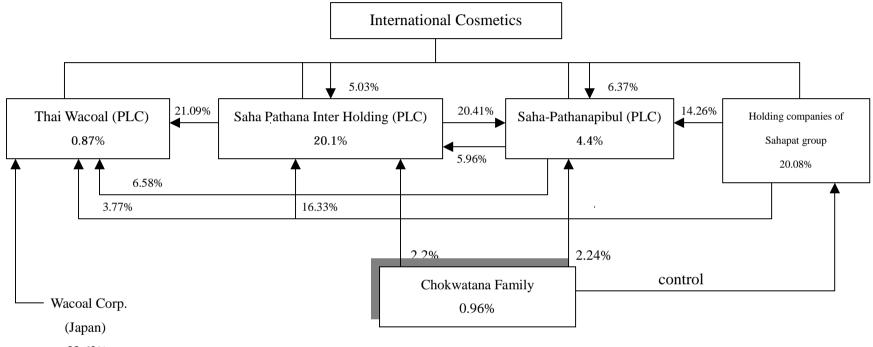


Figure 3: Malee Sampran Factory



Business: Food and beverages Market Capitalization: B537.5 Mil. Year founded: 1978 Founder: Kulapiyawaja family

Figure 4: International Cosmetics



33.62%

Business: Commerce

Market Capitalization: B3,400 Mil.

Year founded: 1964

Founder: Chokwatana family