

OWNERSHIP STRUCTURE AND PERFORMANCE IN FAMILY BUSINESSES AT EARLY DEVELOPMENTAL STAGE: EVIDENCE FROM CHINA

Zhong Qin*, Xin Deng**

Abstract

This paper explores the impact of ownership structure on performance of family businesses at its early developmental stage in a context of under-developed market environment. Using a survey data of 296 private family firms in Ningbo, China, we find both management and single largest shareholder's ownership is positively related to firm's performance. However, family's shareholding does not have significant impact on performance. Further inquiry on firm's willingness to give shares to managers who are not family members indicates that while nearly half of the firms are willing to provide shares to professional managers, weak corporate governance mechanism and under-developed market may discourage such practice.

Keywords: ownership structure, firm performance, corporate governance, family business, agency cost, endogenous ownership, private firms in China, emerging market

* Dr., School of Business, Shantou University

Corresponding author: Dr., School of Commerce, University of South Australia GPO Box 2471, Adelaide, SA 5001, Australia.
Tel: 61-8-83020743 Fax: 61-8-83020992 Email: xin.deng@unisa.edu.au

1 Introduction

The impact of ownership structure on a firm's performance and productivity has been one of the central issues in corporate governance and finance research. Research has supported two opposing views, beginning with the work of Berle and Means (1932), who suggest that an inverse correlation exists between the diffusion of shareholding and firm performance. Alternatively, Demsetz (1983), Demsetz and Lehn (1985) and Demsetz and Villalonga (2001) have argued that there is not a monotonic relationship between firm performance and ownership structure. Since the mid-1990s, family firms, regarded as having concentrated ownership, have been increasingly investigated to evaluate the impact of ownership structure on performance (for example Anderson & Reeb, 2003; Ang *et al.*, 2000; Maury, 2006; McConaughy *et al.*, 1998; Miller *et al.*, 2007). Given the role of family firms in an economy, research extended to this area is well-deserved. However, most studies draw their samples from large, well-established companies. While the benefits of such a sample are obvious, the drawback is that the most prevalent form of enterprise – small and medium-sized family firms, especially those in their early developmental stage – has largely been neglected. According to Lansberg, Perrow and Rogolsky (1988), small and medium-sized family firms have been

neglected because control of these firms will eventually shift to professional managers, because it is difficult to study both family and business systems simultaneously, and it is believed that work and family exist as distinct and self-contained systems. As argued by Daily and Dollinger (1992), these objections to studying smaller firms are unsound, and over-reliance on large firm samples may lead to difficulties in interpreting the results. They further suggest that small firms are preferred for the study of governance issues as they 'tend to have a cleaner proximate environment than larger and more diversified firms' (p. 119).

Adding to their argument, we wish to point out that another benefit of studying family firms at their early stage is the possibility of exploring the evolution of the ownership structure. A significant proportion of listed companies started as family businesses, and evolved into their current form with share diffusion. Even now, family control is still common among listed firms. Therefore, understanding the link between ownership structure and performance in family firms at their early developmental stage will not only include an additional part of the enterprise world, but also help us to understand the determinants of ownership structure change.

The lack of interest among researchers in studying small- and medium-sized family firms may also rest on the assumption that interests between managers and owners in family firms are highly

aligned, and agency costs, if any, would be minimal as many of them are so-called owner-managed firms. Traditionally, owner-managed firms are regarded as having no or insignificant agency costs (Ang et al., 2000; Fama & Jensen, 1983; Jensen & Meckling, 1976). Similarly, agency problem in family firms is regarded as trivial, since altruism among family members causes them to work for the family's interest, and the overlap between family and management ownership aligns the interest of owners and managers (Daily & Dollinger, 1992; Jensen & Meckling, 1976). In other words, a manager is considered as a representative of a family, and there is no need to distinguish management share from family share when examining their impact on performance. This poses two questions: first, will management share and family share have different impacts on performance when there is significant overlap between them? Secondly, as the growth of family firms requires professional managers to be hired, will the agent costs be high enough to lead family owners to award shares to professional managers in order to align their interest with that of the owners? How does external market environment impact this practice?

The dramatic expansion of domestic private enterprises in China since the late 1980s has provided a unique opportunity to explore the above questions. Initially permitted only on the fringes of the economy, the domestic private sector grew rapidly, and was estimated to account for about one-quarter of gross domestic product (GDP) in 2005 (State Administration for Industry and Commerce, 1991-2005). Since their emergence as part of the mainstream economy, the development of China's private enterprises has been characterized by the strong involvement of family members, which is consistent with family-centred Chinese culture. Family businesses are prevalent among private enterprises, comprising about 90% of total private enterprises (Gan, 2002). Within a typical family business, control rights are in the hands of the families whose representative is also the manager. In this sense, the management of such a family business is called 'three roles in one' management (the investor, the owner, and the manager) or 'four roles in one' (adding the producer) in some of the literature (Gan, 2002; Zhang *et al.*, 2001-2004). Those firms represent a unique sample for study of family businesses because most firms have a similar history and have grown in an under-developed market environment. They can elucidate the relationship between ownership structure and performance at a firm's early developmental stage, and will also allow us to investigate the influence of an under-developed market. Built upon agency theory and endogenous ownership theory, this paper investigates the relationship between ownership structure and firm performance among family businesses at their developmental stage using a survey of 296 private

firms in Ningbo City, China.

The remainder of this paper is organized as follows. The next section discusses rationale and develops hypotheses of the study. Section 3 discusses the methodology for examining the relationship between ownership structure and firm performance, describes the data and data collection process. Section 4 presents the empirical results for the relationship between ownership structure and firm performance and analyses the factors leading to the ownership decision to give shares to management. The paper concludes with discussions and implications.

2. Rationale and Hypothesis

2.1. Definition of Family Business

While the term of "family business" has been used widely in different studies, it is difficult to find consensus on the exact definition of a family firm in the literature. Chua, Chrisman, & Sharma (1999) produce a list of 21 different definitions used in 250 papers published up to the mid-1990s. More recent publications, as reviewed in Miller *et al.* (2007), still show large disparity among the definitions. Chrisman, Chua, & Sharma (2005) classified the wide-range of definitions into two categories: components-of-involvement approach and essence approach, and advocated for the latter. Such classification is useful to filter out firms where families are not actively involved even though they still hold a small fraction of the shares. Such a definition is also useful to explain the mixed results reported by research comparing performance between family and non-family firms. However, this study investigates firms at their early developmental stage, where the family's involvement is heavy (families owned 100 per cent of the shares in more than 80 per cent of the surveyed firms). Therefore, we simply define family firms as firms in which families control a certain amount of shares. The amount of shares required to qualify a family business also varies from study to study. We believe it is sensible to claim family business status if families own at least a 50% stake. In this study, among the 296 firms surveyed, only 13 firms have family shares lower than 50%. The statistical significance of explanatory variables does not change by excluding these 13 firms; therefore, we present statistical outcomes that include all surveyed firms.

2.2. Rationale and Hypothesis

Agency theory is frequently cited as a foundation for research on ownership structure and performance. The principal-agent problem arises from the conflict of interests between owners or shareholders as the principals and the managers as the agents. Consequently, residual control rights fall into the hands of management instead of the residual cash flow claimants. Jensen and Meckling (1976) further describe the cost of agency as the sum of monitoring

expenditures incurred by the principal, bonding expenditures incurred by the agent, and the value of the lost residual borne by the principal.

In general, when ownership of a firm becomes more diffuse, the agency problem will be exacerbated due to the inability of the relatively small shareholders to police the behaviour of management. The monitoring of managers by shareholders is also weakened by the well-known free-rider problem. Empirically, Ang et al. (2000), and Denis and Sarin (1999) find an inverse relationship between the manager's ownership share and agency costs. To mitigate the problem of agency, an obvious remedy is to increase management shareholding, making the manager a significant residual claimant.

In accordance with Berle and Means (1932), Shleifer and Vishny (1986) and McConnell and Servaes (1990) find a strong positive relationship between ownership concentration and corporate performance in the United States and other market economies and attribute this result to the impact of better monitoring. In transitional economies, Xu and Wang (1999), and Chen (2001) find a positive relationship between actual firm performance and ownership concentration for listed Chinese companies. Following such logic, a positive relationship between ownership concentration and firm performance is expected.

Another theoretical base for research on ownership structure and performance is endogenous ownership theory, which emphasizes the role of market discipline. Demsetz (1983) argues that ownership structure is endogenously determined in equilibrium. The ownership structure of a corporation should be thought of as an endogenous outcome of decisions that reflect the influence of shareholders and of trading on the market for shares. Thus, there is not a monotonic relationship between firm performance and ownership structure. This view has been supported by other scholars (e.g. Barth, Gulbrandsen, & Schone, 2005; Himmelberg, Hubbard, & Palia, 1999). However, these studies use samples of large companies in market economies and assume the endogenous ownership structure to be the outcome of a well-developed market. Therefore, it is interesting to explore the applicability of the theory in an under-developed market like China, where government plays a dominant role in ownership arrangements.

As pointed out previously, the uniqueness of family firms in China is their relatively short history (legalised only in the late 1980s), relatively smaller size, and the unique external market environment in which they operate, that has experienced significant transformation from planned economy to market economy as the private sector expanded. We envisage that if endogenous ownership theory reflects outcome of market forces, it should hold in an under-developed market environment like China.

Combining both agency theory and endogenous ownership theory, we examine three types of explanatory variables: ownership structure variables, firm specific variables and external business environment variables. Ownership was considered in terms of the single largest shareholder, family shareholding, and management shareholding. Size and age are included as firm specific variables and fluctuation of sales is used as an indication of external business environment.

Single largest shareholder. This variable serves as a proxy for ownership concentration, and was used in Chen's (2001) study of Chinese publicly listed companies and other studies on developing countries (e.g. Faccio *et al.*, 2001). As discussed above, agency theory predicts a positive relationship between ownership concentration and firm performance, and this is confirmed by previous studies in developing countries, which is attributed to the impact of better monitoring of the management and status of the business's essential parameters (Chen, 2001; Xu & Wang, 1999). Therefore, a positive relationship between firm performance and the single largest shareholder was expected.

Family Shares. There is a sizeable literature that examines the effect of family ownership on firm performance, but the outcome has been mixed. Fama and Jensen (1983) note that combining ownership and control allows concentrated shareholders to exchange profits for private rents, while Demsetz (1983) argues that such owners may choose non-pecuniary consumption and thereby draw scarce resources away from profitable projects. However, Demsetz and Lehn (1985) note that combining ownership and control can be advantageous, as large shareholders can act to mitigate managerial expropriation. James (1999) posits that families have longer investment horizons, leading to greater investment efficiency.

Using data for the United States, Morck et al. (2000) find that continued founding-family ownership is an organizational form that leads to poor firm performance. In contrast, McConaughy et al. (1998), and Anderson and Reeb (2003) find that family-controlled firms perform better than non-family firms. Their explanation for this finding is that family relationships improve monitoring while also providing incentives that are associated with better firm performance. Using data for developing countries, Faccio et al. (2001) studied family firms in East Asian companies and reported that family control leads to wealth expropriation in the presence of less than transparent financial markets, thus harming firm performance. However, Faccio et al. (2001) used a sample of large corporations with a relatively low proportion of family shares compared with our sample. Khaemasunun (2004) argues that family firms in Thailand perform better because they are relatively small in size, and family members working in the firm

tend to attach importance to firm performance since they have a high proportion of the total shares. Based on agency theory and the similarity between family firms in China and Thailand, we expected a similar positive relationship between family ownership and firm performance.

Management shares: Jensen and Meckling (1976) stress that managers act in their own self-interest and argue that they perform better the higher their ownership stake within the firm. Ownership as a moderator of the agent's behaviour is more important in developing than developed economies because emerging markets experience greater problems in agency agreements due to the absence of strong legal protection and other governance mechanisms. The higher the percentage of shares owned by management, the harder managers will work to improve firm performance, which leads to an increase in firm value and, hence, an increase in the manager's private wealth.

Dyck and Zingales (2004) have studied the benefits of private control around the world and find that the more significant benefits of control are associated with less developed capital markets and more concentrated ownership. Chen (2001) finds that an increase in management shareholding improves firm performance for publicly listed companies in China. These findings suggest that increasing management shareholding can mitigate the problem of agency. Therefore, we expected to find a positive relationship between firm performance and management shareholding in this study.

Firm Age. Ang et al. (2000) argue that due to the effects of a learning curve and survival bias, older firms are likely to be more efficient than younger ones. Thus, firm performance should improve with age. However, Chen (2001) has noted that the performance of Chinese publicly listed companies declines with their listed age, mainly due to problems of adverse selection and moral hazard subsequent to listing. Anderson and Reeb (2003) attribute better firm performance primarily to the youngest firms in their sample because the new founders bring unique, value-

adding skills to the firms that result in superior accounting performance and market valuations - in short, younger firms seem more efficient. On the basis of the extant literature, a negative relationship between firm age and firm performance was expected.

Firm Size. Some researchers argue that firm size negatively affects not only firm performance, but also ownership concentration (Demsetz, 1983; Demsetz and Lehn, 1985; Demsetz and Villalonga, 2001). The same correlation was observed in samples of Chinese publicly listed companies (Chen, 2001) and family firms in the United States (Anderson & Reeb, 2003) and Norway (Barth *et al.*, 2005). Based on the literature, we expected to find a negative relationship between firm performance and firm size.

External Business Environment: Demsetz (1983), Demsetz and Lehn (1985), and Demsetz and Villalonga (2001) argue that changes in business circumstances, which are defined as the standard deviations of monthly stock market rates of return or annual accounting profit rates, are not beneficial for the performance of firms. We expected, therefore, to observe a negative relationship between firm performance and the instability of the business environment.

Based on the discussions above, we propose the following hypotheses:

Hypothesis 1a: Shares held by the single largest shareholder will positively contribute to firm's performance.

Hypothesis 1b: Shares held by family will positively contribute to firm's performance.

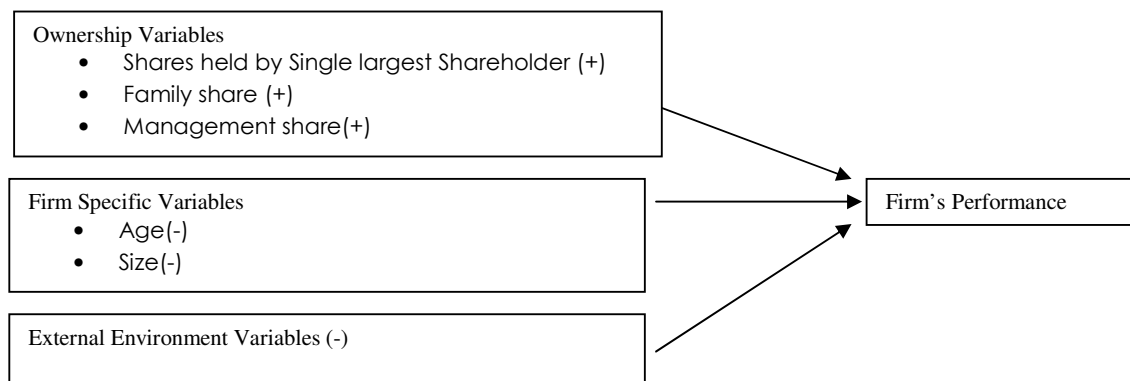
Hypothesis 1c: Shares held by management will positively contribute to firm's performance.

Hypothesis 1d: There exists a negative relationship between firm age and firm performance.

Hypothesis 1e: Size will be negatively related to the performance of the firm.

Hypothesis 1f: The instability of the business environment will negatively influence firm's performance.

The above hypotheses can be summarised by the chart below.



Even if the positive relationship between ownership concentration and performance predicted by agency theory can be supported by the data in this study, it still poses a question: why do diffuse ownership structures survive over time, as has occurred in many Western enterprises? There are two possible explanations, the first of which is that firms with dominant family share are able to maintain control with diffused ownership. Conceptually, the proportion of family shareholding may be an important factor in determining the willingness to give ownership shares to managers outside the owner's family. If the family holds a solid control position, it may grant ownership shares to hired managers without being concerned about losing control and would treat such share-granting as an incentive plan. In contrast, if the family's share proportion is at, or lower than, a certain critical point, it would not grant any shares to hired managers due to the cost of losing control. This rationale leads to our first hypothesis:

Hypothesis 2a: The higher the family share of a firm, the higher the willingness to reward shares to managers who are not family members.

The second explanation for the survival of diffuse ownership structures is that firms are forced to reward shares to professional managers to improve performance. In practice, family managers might lack sufficient management skills, thus reducing the profitability of family firms. Barth et al. (2005) find that Norwegian family-owned firms are less productive than non-family-owned firms and attribute this outcome to the skill-gap between family managers and outside professionals, which is consistent with the argument about the specialization of agents. Therefore, family firms may recruit outside professionals to management. Demsetz and Villalonga (2001) point out that firm performance is at least as likely to affect ownership structure as ownership structure is to affect performance, suggesting that poor performance may lead to change of ownership structure. Claessens and Djankov (1999) suggest that profitability affects ownership structure in the Czech Republic and findings on Norwegian family firms by Barth et al. (2005) also suggest that professional managers are called for in difficult times, while family owners enjoy maintaining control in good times or in good firms.

Hypothesis 2b: The more unstable the external environment is, the higher the willingness to reward shares to managers who are not a family member.

Hypothesis 2c: The poorer the performance, the more likely the firm to reward shares to managers who are not a family member.

3. Method and Data

3.1 Data

A survey was used to collect data. 400 questionnaires were distributed to the CEOs of a sample of the

private firms in Ningbo city of Zhejiang Province in China.

3.1.1 Sample Selection

Ningbo city of Zhejiang Province was selected as the location for the research because the type of family-owned firms located there could provide a representative sample to survey in order to answer the research questions. The development of private enterprises differs from region to region in China, and three patterns have been identified. The Zhejiang pattern is characterized by primitive self-accumulating capital in private enterprises that have grown naturally from businesses run by an individual or a family. Zhejiang differs from the Sunan pattern typical in Jiangsu, where private enterprises are usually spin-offs from state and collective enterprises, and it also differs from the Pearl River Delta pattern in Guangdong, where private enterprises are often promoted by Hong Kong, Macao and foreign capital. Therefore, private firms in Zhejiang province can best illustrate the effect on a business of family ownership under market forces.

After more than two decades of development, domestic private enterprises have made significant contribution to the provincial economy. They contributed 55.1% of the GDP in Zhejiang in 2004. Between 1990 and 2004, total output of private enterprises increased more than 30 fold, from USD 1.7 billion to USD 56.8 billion (in 1990 dollars). During the same period, private sector retail sales grew at an average annual rate of 24.9%, and tax revenue from private enterprises grew at an average annual rate of 23.5% (Zhejiang Provincial Statistics Bureau, 2005).

Ningbo, the second largest city in Zhejiang province, had a population of 5.53 million in 2004. The development of private enterprises in Ningbo corresponds generally with that of private enterprises in the whole of Zhejiang province, and is an important factor propelling local economic growth. In 2004, the industrial output, retail sales, tax revenue and export of private enterprises in Ningbo were USD 22.5 billion, USD 7 billion, USD 672 million and USD 5.58 billion respectively⁸⁷, accounting for 86%, 97%, 35.05% and 33% of the total (Ningbo Administration for Industry and Commerce, 2005).

3.1.2. Description of the survey

The survey questionnaire consisted of 12 questions designed to elicit information about the private businesses that formed the sample (see Appendix Two for the questionnaire). Questions sought answers regarding the length of operation, the ownership type prior to the current registration, the legal form of the firm, the main industry or sector in which the firm

⁸⁷ These figures are converted from Chinese currency (RMB), the exchange rate then was 1US=8.3 RMB.

operates, and the number of employees at work with the firm over the past three years. Respondents were specifically requested to provide information about the initial (at the beginning of operation) and current ownership structure. Since share price of the firms was not available as they were not publicly listed, the respondents were asked to provide information about gross assets, sales revenue and net profits over the past three years. The survey also examined the firm's willingness to reward professional managers with shares.

The survey was administered to private enterprises in Ningbo between December 2005 and February 2006. The questionnaire was first translated into Chinese and translated back into English to ensure the accuracy of the original translation. The questionnaires were distributed to the CEOs of 400 private enterprises (excluding individual businesses employing eight or fewer employees) that were randomly selected from the databases of the Ningbo's Bureau of Industrial and Commercial Administration and the Association of Ningbo's Private Enterprises. There were 68,500 private firms in Ningbo at the end of 2004. By the end of the survey period, 327 copies of the questionnaire had been collected, accounting for 82% of the total number distributed. After removing incomplete questionnaires, there were 296 valid responses representing 91% of the total collected copies and 74% of the total distributed copies.

In the sample of 296 firms from which valid results were obtained, there were 283 firms where families controlled at least 50% of the shares, accounting for 95.6% of the total. The lowest proportion of shares held by the family reported was 20%. Therefore, using equity held by family as criteria, all firms in the sample can be characterized as family businesses, as discussed in Section 2.1. In terms of legal form, there were 97 solely-owned companies, 14 partnerships, and 185 limited liability companies, accounting for 32.8%, 4.7%, and 62.5%, respectively. There were no firms in the survey limited by shares. The sector distribution of these 296 firms was consistent with the sector distribution of private enterprises in Ningbo as a whole, as shown in Table 1. The average number of employees was 66, confirming that most of our sampled firms are small and medium-sized firms. Overall, the 296 firms in the survey were generally representative of the basic characteristics of private enterprises in Ningbo. Although it is desirable to compare our sample to nation-wide statistics on private enterprises the Statistical Bureau of China only releases data on firms whose annual sales revenue is above RMB 5 million (USD 602,000). Therefore, our sample is not comparable to the official statistics which only include large private firms. The lack of official statistics on small and medium-sized private firms makes our research a valuable contribution to the literature.

Insert table 1

3.2 Econometric Analysis

Since there are two sets of hypotheses to be examined, we have developed two separate models. To examine the relationship between firm performance and ownership arrangements, an Ordinary Least Squares (OLS) model was employed:

$$AvPR = \alpha + \beta_1^i DTO + \beta_2 Age + \beta_3 LnAsset + \beta_4 Instability + \mu_j \quad (i=1-3)$$

where α is the intercept; $\beta_1^i, \beta_2, \beta_3, \beta_4$ are the regression coefficients to be estimated; μ_j is the random error term; and DTO is a vector of three different types of ownership shares; that is, shares owned by the single largest owner (T1), the shares jointly owned by the largest owner and family members, and the shares owned by top management. As a result, β_1^i has three different coefficients corresponding to different ownership categories. Other independent variables were firm age (Age), firm size (LnAsset), the instability of the business environment (Instability). Firm's performance (AvPR) is the dependent variable.

A probit model was used to examine the determinants of willingness to give ownership shares to management personnel outside the owner's family.

$$P(GM = 1) = \frac{1}{1 + \exp(-(a + b'x_i))}$$

where the dependent variable- the willingness to give ownership shares to managers outside the owner's family (GM), was a binary variable set equal to 1 if the answer for the question 'Do you plan to give shares in the firm to management personnel other than family members?' was 'yes' and to zero otherwise. The independent variables (x_i) were family shareholding (Family), firm age (Age), firm size (LnAsset), the instability of the business environment (Instability), and firm's performance (AvPR).

3.3 Specification of variables

Measurement of firm performance: This is the dependent variable for the first model. Firm performance was measured by the average profit rate (AvPR) of the firm, which is defined as the annual average rate of net profits to gross assets over the three years prior to the survey. Since none of the surveyed firms are listed in stock exchange, Tobin's Q cannot be used.

The single largest shareholder (T1). This variable is defined as percentage of shares held by the single largest owner. The average shareholding of the largest owner was 78.36% in our sample, reflecting a high ownership concentration.

Insert table 2

Percentage of shares jointly owned by the largest owner and each of his/her family members (Family). As shown in Table 2, the average shares jointly owned by the largest owner and his/her family members are 92.87%.

Percentage of shares owned by senior management (Management) refers to the percentage of shares owned by CEOs, deputy CEOs, general managers, and deputy general managers. As shown in Table 2, the average shareholding of top management in the sample was 58.63%, suggesting that a significant proportion of surveyed firms fall into the category of owner-managed firms.

Firm age (Age). Firm age is measured as the number of years that the firm has been registered as a private enterprise. The age variable was included to test whether firms with shorter histories have better performance records.

Firm size (LnAsset). Firm size is measured by the natural logarithm of annual average total assets over the previous three years. As shown in Table 2, our sampled firms are relatively small, which is not surprising given their shorter history.

Instability of the business environment (Instability). Standard deviations of changes in a firm's sales revenue over the past three years were used to proxy the instability of the business environment, as utilised in Chen's (2001) study of Chinese listed firms. As shown in Table 2, the instability indicator is quite large, with a mean of 75.99 in a range of 0.02 to 3,032.07, indicating a volatile business environment in China.

To assess potential bias due to multicollinearity, we examined the pair-wise correlation coefficients between each pair of variables. Gujarati (1995, pp.335-336) suggests that multicollinearity is of concern if the simple correlation is higher than 0.6 and is a serious problem if the simple correlation is higher than 0.8. In their seminal study of firm performance and ownership structure in the United States, Demsetz and Lehn (1985) run separate models when the simple correlation between ownership variables is 0.71. More recently, Demsetz and Villalonga (2001) consider multicollinearity to be a problem requiring remedy when the simple correlation is greater than 0.6.

Table 3 shows the correlation matrix for the sample used here. The only simple correlation in excess of 0.6 is between the single largest shareholder (T1) and family shareholding (Family). To address the issue of multicollinearity in our study, the effect of these two ownership variables have been estimated separately. We conducted two hypothesis tests with the ownership structure variables. In the first OLS regression, the ownership variables include the single largest shareholder (T1) and top management shareholding (Management); in the second OLS regression, the ownership variables include family shareholding (Family) and top management

shareholding (Management). Among these three ownership variables, top management shareholding (Management) was examined in both tests.

Insert table 3

Models employing cross-sectional data may be affected by heteroskedasticity. This problem is especially serious when a sample is used that includes firms with large differences in size and variation in sales. Checking for heteroskedasticity using the Breusch-Pagan / Cook-Weisberg test in the two OLS regression models described above, it was found that these OLS models were affected by heteroskedasticity. Diagnostic testing showed that each test rejects the null hypothesis of constant variance for fitted values of the average profit rate. To address this problem, a robust regression model with White's heteroskedastic consistent t-statistics was employed, and the results are reported in Table 4.

Insert Table 4

4. Results

4.1 Relationship between Ownership Structure and Firm Performance

The results of the two OLS regressions are reported in Table 5. The coefficient on the single largest shareholder (T1) is positive and significant in the OLS model with robust estimation, suggesting that a higher percentage of shares held by the largest shareholders will lead to better performance, hence confirming our Hypothesis 1a. This finding is consistent with many studies of business in developing countries. Among the surveyed firms, the average shareholding of the single largest owner increased from 74.63% when starting a private business to 78.36% by the end of 2004.

Insert Table 5

The top management shareholding (Management) displays a statistically significant positive coefficient in both of the firm performance regressions, which is consistent with expectations (Hypothesis 1b). That is, increasing the proportion of shares owned by top management might significantly strengthen managers' incentive to improve firm performance. Among the firms surveyed, the top management share increased from 54.93% at the beginning of private business start-up to 58.73% by 2004, showing a steady increase in management control.

Interestingly, there is a statistically significant positive relationship between firm performance and the instability of the business environment in both models, rejecting our hypothesis 1f, and also contradicting the findings in previous literature. There

are two possible reasons for the different results obtained in this study. Firstly, the business environment in a developing market such as China is more uncertain relative to many developed markets, and higher risks necessitate higher returns. Secondly, and more significantly, the results may have reflected endogenous ownership theory. Our findings show that a higher ownership concentration is associated with a more unstable business environment, which is consistent with endogenous ownership theory and indicates that private firms have to adopt an appropriate corporate governance mechanism to adapt to changing business circumstances. Ownership shares are likely to be concentrated in the hands of the decision makers in the firm, usually the owner and the manager, who are often the same individual in many private firms in China. The results of this study, therefore, extend orthodox ownership theory to reflect conditions in developing markets.

Contrary to expectation, family shareholding jointly owned by the largest owner and all family members (Family) had no significant effect on firm performance in the OLS robust regression. Given the controversial findings of previous studies, this is not unexpected. This indicates that family ownership itself might not have much impact on firm performance. In fact, shares owned by family members, except for the largest shareholder, dropped 0.14 per cent from 14.65% at the start of operation to 14.51% in 2004, suggesting that only active ownership (shares owned by single largest shareholder and management) will contribute to firm's performance. Firm age (Age) does not have a significant effect on firm performance in either OLS model; as a result, hypothesis 1d cannot be confirmed. A possible explanation for this result is that most private firms in the sample had relatively short histories, so firm age cannot be a proper explanatory variable. The size variable is positively related to performance, suggesting that larger firms perform better, rejecting our Hypothesis 1e. Reasons for this finding could be that capital resources are critical for the development of private firms (Sun & Wong, 2002), particularly for small firms, while larger firms are better placed to access capital and banks are more ready to lend to large firms in China. This also indicates that increased agency costs associated with larger size may be offset by the benefits brought by economy of scale.

4.2. The Determinants of Giving Ownership Shares to Management outside the Family

The results of the second model are reported in Table 6. The relationship between family shareholding and GM is not statistically significant, indicating that the family's share position does not have much impact on firm's willingness to give shares to outsiders. One

possible explanation is that in the sample of 296 firms, there are 241 firms that have a total family shareholding of 100%. As a result, there is a lack of variation in the sample. Nevertheless, we are unable to confirm hypothesis 2a.

Insert Table 6

The positive relationship between GM and the changes in business environment (Instability) shows that the owners of the firm will be more likely to give shares to managers outside the family under conditions of increasing instability in the business environment. This is also supported by a significant negative relationship between GM and firm performance (AvPR), indicating that management shareholding is perceived as a critical factor for better performance. In other words, when the performance of the firm worsens, owners will be more likely to provide ownership shares to managers outside the family. These findings support hypothesis 2b and 2c.

The model above allows us to identify determinants of firms likely to give shares to managers who are non-family members. However, it does not provide answers about the motivations for such share diffusion. To examine the motivations in greater depth, we listed five reasons each for respondents who either chose 'yes' or 'no'. Among 141 firms that planned to give shares to professional managers, the most important reason was to 'facilitate a convergence of interests between owner(s) and manager(s)' (42 firms or 29.8%), followed by 'manager(s) will be more responsible if they have shares in the firm' (38 firms, or 27%).

These answers indicate that family firms are fully aware of agent costs in their businesses, and are willing to provide shares to professional managers to align their interests with the owners, or to increase the likelihood that they make decisions that are in the best interests of the owners (be more responsible). On the other hand, for the 155 firms who did not plan to proceed with a non-family member share scheme, the major reasons listed were 'it may create disputes within the firm' (50 firms, or 32.3%) and 'harder to dismiss underperforming managers' (49 firms, or 31.6%).

Such answers indicate the weakness of the corporate governance mechanism among family firms. In a company governed by modern corporate mechanisms, it is difficult to imagine that small shares held by professional managers would create disputes between managers and owners, or even lead to an inability to dismiss underperforming managers. However, both can be reasonable concerns in an under-developed market environment where proper corporate governance mechanism is absent, and a family firm needs to control almost 100 percent of the shares to ensure decisions can be made promptly without external interference.

⁸⁸5. Discussions and Conclusions

Family businesses (as a subset of private businesses) were eliminated in China in the 1950s. After more than 30 years, the government has allowed creation of new private enterprise. These enterprises have provided an opportunity to study family firms at their early developmental stage. Moreover, these family businesses have grown in a period when China was transforming from a planned economy to a market economy. It is interesting to test established theories of family businesses in such a unique setting. Utilising a sample of private firms in China, this paper reports results from a study of ownership structure and the performance of family firms at their early developmental stage in the context of an underdeveloped market. It reveals significant relationships between governance variables and firm's performance, and explores factors that may contribute to the change of ownership structure. The study suggests that the impact of ownership structure is more complicated than previously understood.

In summary, this study has contributed to the literature in three ways. Firstly, our findings suggest that more concentrated ownership in the hands of decision-makers is preferred in an under-developed market environment where firms are facing instability. Among the three owner groups identified, shares held by the single largest shareholder and management are positively related to performance, but no such relationship has been found for family shares despite significant overlap among the three categories. This finding challenges the widely held assumption that the single largest shareholders can be treated as representatives of the family. The fact that family shares do not have significant impact on performance also suggests that passive holding does not improve a firm's performance.

Secondly, the determinants of providing shares to professional managers who are non-family members were explored and results indicate that an unstable market and declining profitability are the most important factors for share diffusion. The findings suggest that family firms are more likely to use awarding of shares as an incentive mechanism for professional managers when their operation is in trouble or when they face volatile market conditions. This suggests that seeking and motivating external talent is an important factor contributing to ownership structure involvement.

Thirdly, our findings highlight the importance of proper corporate governance mechanisms in implementation of share incentive schemes. This study confirms that attempts to align the interests of managers and owners remains the major motivation for distributing shares, as predicted by agency theory.

However, it also illustrates the difficulty of implementing such schemes in the absence of well-developed governance mechanisms that specify the rights and responsibilities of shareholders and managers. In an underdeveloped market economy like China, family firms tend to operate in so-called "three-roles-in-one" and "four-roles-in-one" models at their early developmental stage. These models are unlikely to be sustained when firms expand, and firms need to establish formal mechanisms to support further expansion.

Apart from its theoretical contributions, our research also provides insights for owners of family firms – especially those who are operating in an under-developed market environment. First, our research shows that a firm's performance is improved by concentrating shares in family members who are actively engaged in the firm's management. One of the notable features of an underdeveloped market is that the unstable external environment requires managers to make decisions fairly quickly. A highly concentrated ownership structure will ensure that decisions are made in a timely manner. Secondly, family firms need to have a pool of professional managers who are not family members. While it makes sense to utilise human capital within the family when firms are relatively small, it is more realistic to seek external talent as firms grow. Instead of using a professional manager as a problem-fixer in a troubled time, family firms will benefit more with on-going access to professionals. Lastly, even at their early developmental stage, it is important for family firms to set up a corporate governance mechanism that articulates the responsibilities and liabilities of stakeholders of the firm. With such mechanisms in place, it will be easier to utilise incentives such as shares to reward professional managers as the firm grows.

In terms of limitations to the study, we acknowledge that data were collected from a relatively small sample in a single Chinese city, and small samples always pose potential problems. Furthermore, China is a developing country where market and corporate mechanisms are still in the process of development. As a result, findings in this study need to be interpreted in such a context. The limitations also highlight the need for further research.

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Appendix 1: Tables

Table 1. Industrial Distributions of Ningbo's Private Enterprises and Survey Firms by the End of 2004

	Ningbo City		Survey Firms	
	firms	proportion	firms	proportion
Total firms	68,500		296	
Primary Industry	840	1.20%	8	2.70%
Secondary Industry	39,860	58.20%	163	55.07%
Of the total: Manufacturing	37,395	54.59%	152	51.35%
Construction	2,090	3.05%	10	3.38%
Tertiary Industry	27,800	40.60%	125	42.23%
Of the total: Wholesale and retail trade and catering service	17,590	25.68%	66	22.30%

(Source: Report of Development of Ningbo's Private Enterprises (2005) and Researchers' Survey)

Table 2. Descriptive Statistics for the 296 Survey Firms

Variables	Mean	SD	Min	Max
AvPR (%)	4.20	25.92	-306.42	114.91
T1 (%)	78.36	21.79	10	100
Family (%)	92.87	17.94	10	100
Management (%)	58.63	36.79	0	100
Age (Year)	6.44	3.33	2.08	20.17
AvEm (Persons)	66	16.01	8	478
LnAsset	-1.32	1.57	-6.28	4.01
Instability (%)	75.99	356.25	0.02	3 032.07

AvPR: Average profit to assets ratio in three years prior to the survey; T1: shares held by the largest shareholder; Family: Family shares (including the largest shareholder and family members); Management: Shares of top management; Age (Year): Years registered as a private firm; AvEm: Average number of employees in three years prior to the survey; LnAsset: Natural log of average gross assets in three years prior to the survey (million USD); Instability: Standard deviation of sales in three years prior to the survey.

Table 3. Correlation Matrix

	AvPR	T1	Family	Management	Age	LnAsset	Instability
AvPR	1						
T1	0.09	1					
Family	0.08	0.68	1				
Management	0.19	0.25	0.35	1			
Age	0.02	0.32	0.12	0.14	1		
LnAsset	0.26	-0.26	-0.12	0.21	-0.08	1	
Instability	0.27	-0.07	-0.08	0.06	-0.06	0.50	1

Table 4. Breusch-Pagan / Cook-Weisberg Test for Heteroskedasticity of OLS

Ho: Constant variance Variables: fitted values of AvPR		
	First OLS with T1 and Management	Second OLS with Family and Management
Chi2(1)	266.64	201.88
Prob>Chi2	0.000	0.000
Results	Reject Ho	Reject Ho

Table 5. Firm Performance and the Ownership Variables

OLS with robust S.E.	AvPR	
T1	0.14*	
Family		0.11
Management	0.08**	0.08**
Age	-0.07	0.14
LnAsset	2.95*	2.49**
Instability	0.01***	0.01***
Constant	-8.34*	-9.23*
R ²	0.13	0.12
F-statistic	8.36	7.85
P-value	0.000	0.000

Notes: ***, ** and * stand for significant at 1%, 5%, and 10% level respectively. t-statistics are in parentheses.

Table 6. Probit Regression for the Determinants of Giving Ownership Shares to Management outside the Family (GM)

Probit regression	GM
Family	0.0006 (0.14)
Age	0.02 (1.03)
LnAsset	0.069 (1.18)
Instability	0.0001** (2.20)
AvPR	-0.02** (-2.46)
Constant	-0.15 (-0.68)
Number of firms	296
Log likelihood	-194.77
Pseudo R ²	0.05
LR chi2(5)	20.14
Prob>chi2	0.0012

Notes: ** stands for significance levels at 5%. z-statistics are in parentheses.

Appendix 2: Survey Questionnaire

Dear Sir or Madam,

Thank you for your help with this study. Please answer all questions as accurately as possible. We guarantee the confidentiality of your answers. Your cooperation is highly appreciated.

In the following questionnaire, please circle your choice or complete your answers on the line as appropriate (the unit of amount is RMB 10 thousand).

- When did your firm register as a private enterprise?
____ Year ____ Month
- What was the ownership form of your enterprise before it became a privately-run enterprise?
 - Registered as a privately-run enterprise from the beginning
 - An individual business previously employing no more than eight people
 - State-owned
 - Collective-owned (including township- or village-owned)
 - Joint venture with a foreign company
- What is the legal form of your firm?
 - Solely-owned
 - Partnership
 - Limited liability
 - Company limited by shares (joint-stock company)
- What is the main industry or sector in which your firm operates?
 - Farming, forestry, animal husbandry and fishery
 - Mining and quarrying
 - Manufacturing
 - Construction
 - Transport, storage, postal and telecommunication service
 - Wholesale and retail trade and catering services
 - Social services
 - Others
- What was the structure of the shares in your firm (in percentages) when it started as a private enterprise?
 - Shares of all individuals (including jointly owned by family members): ____%
Of which, the biggest shareholder: ____%
Shares held by family members: ____%
 - Shares of government agencies (including the central and local governments, collectives, and government institutions such as banks): ____%
 - Among total shares, shares of top management (including CEOs, general managers, and other high level managers) in your firm: ____%

6. What is the current structure of the shares in your firm (in percentages) if there are any changes compared with when your firm commenced as a private enterprise?

1) Shares of all individuals (including jointly owned by family members): _____%

Of which, the biggest shareholder: _____%

Shares held by family members: _____%

2) Shares of government agencies (including central and local governments, collectives, and government institutions such as banks): _____%

3) Among total shares, shares of top management (including CEOs, general managers, and other high level managers) in your firm: _____%

7. What was the total employment in your firm in the past three years?

2002: _____ employees

2003: _____ employees

2004: _____ employees

8. What were the gross assets of your firm in the past three years?

2002: _____

2003: _____

2004: _____

9. What was your firm's sales revenue over the past three years?

2002: _____

2003: _____

2004: _____

10. What were your firm's net profits over the past three years?

2002: _____

2003: _____

2004: _____

11. When your firm selects management personnel, which one of the following factors is considered to be the most important?

- 1) Integrity (consistency and congruity)
- 2) Benevolence (caring for others and loyalty to the firm)
- 3) Competence (professional skills)
- 4) Responsibility (devotion and hard work)
- 5) Predictability (past experience)

12. Do you plan to give shares in the firm to management personnel other than family members?

_____ Yes _____ No

A. The main reason for choosing "yes" (choose one):

- 1) It facilitates a convergence of interests between owner(s) and manager(s)
- 2) Manager(s) will be more responsible if they have shares in the firm.
- 3) It shares the risk between owner(s) and manager(s).
- 4) It reduces managerial turnover
- 5) It improves decision making

B. The main reason for choosing "no" (choose one):

- 1) The profits should be restricted to the owner(s)
- 2) Concerned about the loyalty and capability of the manager(s)
- 3) Paying a high salary is enough to motivate management
- 4) If you give manager(s) shares it makes it harder to dismiss them if they under-perform
- 5) It would create disputes within the firm