

The Influence of the Degree of State Ownership and the Ownership Concentration on the Performance of Listed Chinese Companies

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Abstract

This study investigates the influence of the degree of state ownership and ownership concentration on firm performance using annual data for 1,034 companies listed on China's two exchanges for the period from 2000 to 2004. We find that, on average, the firm's performance is negatively influenced by the state ownership. However, such a negative relationship is significant only at high levels of government ownership. Moreover, we find that a balanced ownership structure enhances the firm performance and there are indications of detrimental effects of block ownership.

Keywords: Ownership structure; Corporate performance; Chinese equity market

JEL codes: G3; G32

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I. Introduction

Numerous studies conducted in Western capital markets have examined the relationship between the ownership structure and the performance of the firm. The centre of this examination lies on the agency theory (Jensen and Meckling, 1976); when the owners do not manage the firm by themselves, a conflict of interest arises between the owners (principals) and managers (agents). Ownership related arrangements such as ownership concentration and managers owning shares of their own firms have been proposed as some mechanisms that can mitigate the agency conflict. This proposition hypothesises a positive relationship between managerial/block ownership and the performance of the firm. However, the empirical studies which have examined the relationship between the ownership structure and firm performance have provided inconclusive results.

Demsetz and Lehn (1985) argue that the shareholders are aware of the consequences when they agree to transform a concentrated ownership structure to a diffused ownership structure; the costs associated with such a move should be offset by the lower capital acquisition cost or other profit enhancing aspects of diffused ownership. In line with their argument, the authors found no relationship between the profit rate and the fraction of shares held by large shareholders (i.e. top five and top twenty). Morck, Shleifer and Vishny (1988) examined the relationship between insider ownership, represented by the share ownership of board members, and firm performance, represented by Tobin's Q. They found a significant non-monotonic relationship; Tobin's Q increases when the insider ownership is below 5% or above 25%, but declines in between these two levels. The influence of both block ownership and insider ownership on firm performance was also subject to the investigation of McConnell and Servaes (1990) which reported a significant positive influence of

insider ownership, at least at the lower levels of ownership, and an insignificant positive influence of block ownership on firm performance. Further contributions to this debate have been made by Weisbach (1988), Loderer and Martin (1997), Cho (1998), Himmelberg, Hubbard and Palia (1999), Holderness, Kroszner and Sheenan (1999), Demsetz and Villalonga (2001), among many others.

Chinese companies operate under a very unique ownership structure which makes them different from their Western counterparts. A dominant feature of share ownership in China is the non-tradable equity ownership of the state, either through direct investment or indirectly through holdings of domestic institutions (subsequently named legal persons) many of which in turn are partially or wholly owned by the central government or local authorities. This characteristic is the product of an ongoing process of corporatization and partial privatization of former state-owned companies which was initiated with the start of the economic reform process in 1978 but has gathered pace in recent years. A typical listed Chinese company has thus issued shares to five distinct classes of owners: shares are held by (i) the state, (ii) legal persons, (iii) employees, (iv) domestic individuals and, finally, (v) foreign individuals or institutional holders. The ownership of domestic individuals is represented by so-called A shares quoted in CNY while overseas investors are allowed to invest in B, H or N type shares only.¹ Among domestic investors, the state, legal persons and individuals are the dominant three groups, holding in excess of 80% of shares outstanding². This distinctive ownership structure, together with the

¹ B shares are denominated in US or Hong Kong dollars and are traded on the Shanghai and Shenzhen stock exchanges respectively; H shares are denominated in Hong Kong dollars and listed on the Hong Kong stock exchange while N shares are denominated in U.S. dollars and traded on the New York stock exchange. See pertinent literature such as Sun and Tong (2003) for further details. Although historically, B shares were mainly owned by foreign institutions, since February 2001 they can also be held by domestic investors.

² In the sample analysed in this study, during the five-year period from 2000 to 2004, the state, legal persons and individual investors held 37%, 16% and 35% respectively of all shares issued by listed Chinese companies.

influential state ownership which is non-tradable, provides a particular environment to test the relationship between ownership structure and firm performance.

The empirical studies conducted using Chinese data have yielded conflicting results. For example, Sun and Tong (2003) used all companies listed on the Shanghai Stock Exchange (SHSE) and Shenzhen Stock Exchange (SZSE) over the period 1994-1997 and regressed market-to-book ratio on levels of state and legal person ownership while controlling for the effects of firm size, leverage, foreign ownership, location and the regulatory vs. non-regulatory nature of industries. They found a statistically significant positive influence of state and legal person ownership on the performance of the firm. This result remained unchanged irrespective of whether these two ownership variables were used as two separate variables or as a single (i.e. combined) independent variable. In more detail, the authors found an inverted U-shape relationship between government ownership and firm performance which led them to conclude that, while some government ownership was beneficial, excessive equity holdings by the state was detrimental for the firm.

Wei, Xie and Zhang (2005), however, arrived at contrastingly different conclusions when they analysed data of 5,284 firm years for a longer period (1991-2001). As a proxy for firm performance, they regressed Tobin's Q against the state ownership and legal person ownership³ while controlling for effects of foreign ownership and firm size. Their findings revealed a statistically significant negative influence of state and legal person ownership on firm performance, irrespective of whether these two ownership variables were considered as two separate independent variables or as a combined single variable⁴. These findings remained robust even after the effects of macroeconomic environment, industry characteristics and geo-economic

³ The authors used the term 'institutional ownership' rather than the term 'legal person ownership' in their article.

⁴ The statistical significance of legal person ownership is less pronounced in individual years, however.

location were integrated into the analyses. Unlike Sun and Tong (2003), Wei et al. (2005) found indication of a convex relationship, i.e. U-shaped, between ownership and performance; the reflection point for the state (legal person) ownership varied between 31.0% and 36.7% (13.4% and 35.5%) with an average of 35.7% (22.5%).

A third contribution on the subject is from Qi, Wu and Zhang (2000) who applied an accounting-based measure of firm performance for the period from 1991 to 1996. They reported results in between those found in the previous two studies. The authors uncovered a statistically significant negative influence of state ownership yet a significant positive influence of legal person ownership on the return on equity (ROE) of listed Chinese companies. They further found that the dominance of the legal person ownership over the state ownership improves the performance of the firm.

As to the reasons for the negative impact of state ownership on firm performance, research generally argues that the government ownership is inferior to private ownership in competitive markets due to (i) the government's preference for social and political goals as opposed to the value maximisation, (ii) its influence in the appointment of management and other staff which gives preference to people with political influence rather than the ability to perform and (iii) the higher transaction cost, among other reasons (Vining and Boardman, 1992; Megginson, Nash and Van Randenborgh, 1994; Boycko, Shleifer and Vishny, 1996). Conversely, in the Chinese markets, which is financially and managerially not as competitive as those in more developed countries, the government as the single largest shareholder of the firm, may have the incentive to monitor managers thereby mitigating the agency problem and improving the firm performance (Bös, 1991).

The conflicting findings reached in previous studies highlight the complexity of the relationship between ownership structure and firm performance in a Chinese context. Moreover, the issues relating to (i) the influence of varying degrees of state ownership and (ii) the effects of ownership concentration in general on firm performance have received scant attention in previous investigations. Using a more recent data set, this study examines the performance of Chinese firms as driven by (i) the ownership structure, (ii) the degree of state ownership and, finally, (iii) the ownership concentration of these companies. We employ two principal performance measures – Tobin’s Q and Market-to-Book Ratio – which led two prominent studies to arrive at contrasting conclusions.

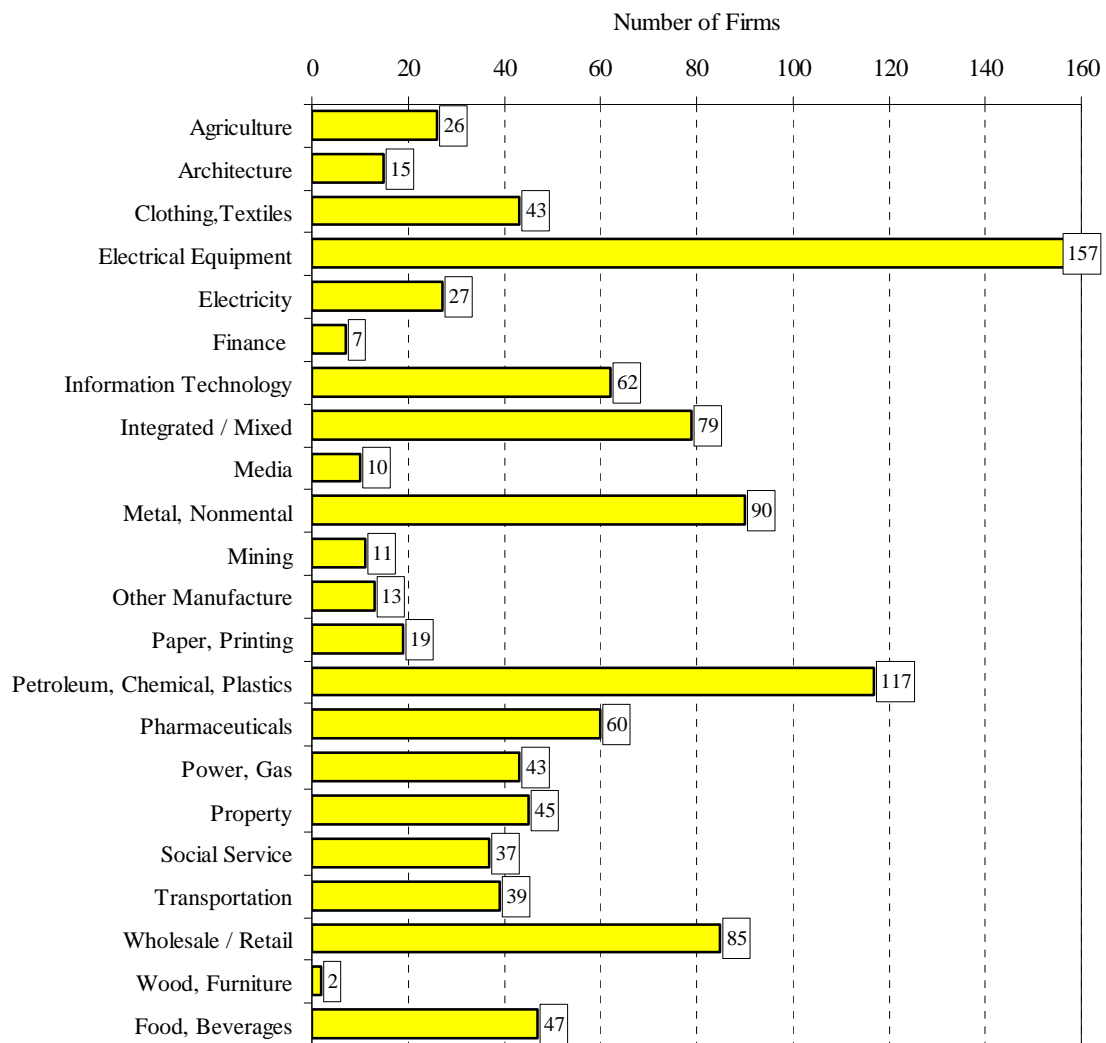
The remainder of the paper is organised as follows: In section II we describe the data collection procedure and provide the summary statistics for the variables analysed. Section III examines the relationship between ownership structure and firm performance using standard methodology of previous literature for comparative purposes. Section IV expands this analysis and examines the effect of the degree of state ownership on firm performance. Section V then tests the influence of ownership concentration on firm performance before the last section offers the conclusions.

II. Data Collection and Summary Statistics

We conduct our analysis with the full set of non-financial companies which were continuously listed on the Shanghai Stock Exchange (SHSE) and the Shenzhen Stock Exchange (SZSE) over the January 2000 to December 2004 sample period. This time period provides more recent data and at the same time avoids duplication of time spans with previous studies. We exclude companies which have issued only B shares as we focus on the influence of state ownership on firm performance. Based on above

criteria, we extract 1034 SHSE and SZSE listed firms, corresponding to 5,170 firm years for our analyses. As shown in Figure 1 below, the sample provides a wide cross section of industries. The largest sectors represented are manufacturers of electrical equipment (15.2%), followed by petroleum, chemical and plastics (11.3%), metal and non-metal (8.7%), wholesale and retail (8.2%) and integrated/mixed (7.6%).

Figure 1
Industry Classification of Sample Firms



We use three sources of information listed below to collect the data required.

- 1) China Stock Market and Accounting Research (CSMAR) database⁵.
This database is used to collect the accounting data such as book values of assets, equity, short-term and long-term debt.
- 2) Gildata Financial Database⁶. This database is used to collect shareholder information such as the fraction of shares owned by different types of shareholders, the fraction and types of shares owned by the top 10 shareholders.
- 3) Datastream International. This database is used to collect monthly closing share prices and the year end market capitalization values.

Based on these information sources, the following variables were determined for each year end of the investigation period.

Q	Tobin's Q, calculated as the sum of market value of equity and book value of debt (i.e. book value of long-term debt + book value of short-term debt) divided by the replacement value of assets, proxied by the book value of assets.
MBR	The market-to-book ratio calculated as the market value of equity divided by the book value of equity ⁷ .
FST	Fraction of shares owned by the state, measured as the number of shares held by the state divided by the total number of shares outstanding.
FLP	Fraction of shares owned by legal persons, measured as the number of shares held by the legal persons divided by the total number of shares outstanding.

⁵ The CSMAR database is designed by the China Accounting and Finance Research Centre of the Hong Kong Polytechnic University and developed by Shenzhen GTA Information Technology Corporation Limited. It encompasses both trading data and financial statements of all listed Chinese companies since their Initial Public Offerings (IPOs).

⁶ Gildata is developed by Shanghai Gildata Service Co. Ltd. This database provides basic information of listed companies (contact information, company background, registration information, etc.) together with accounting data and shareholder information.

⁷ The maximum value for MBR was limited to 50 in order to account for extreme outliers. In the case of a negative book value of equity, MBR was also set to 50. Out of 5170 observations, 135 were thus adjusted.

FIN	Fraction of shares owned by the individual investors, measured as the sum of tradable A and B shares held by individual investors divided by the total number of shares outstanding.
LEVERAGE	Financial leverage represented by debt-equity ratio calculated by dividing the book value of long-term debt by the market value of equity.
SIZE	Natural logarithm of total assets (in CNY thousand).
SDRET36	Annualized standard deviation of monthly share returns for the 36 months preceding the end of the year. ⁸

Table 1 provides some summary statistics for the above variables. As revealed by Panel A of the table, these 1,034 companies have an average Tobin's Q (Q ratio) of 2.48 and an average market-to-book ratio of 5.74. Our Q ratio is much similar to that reported in Wei et al. (2005) (i.e. 2.92) for the period 1991-2001 but much higher than the Q ratio of U.S. companies reported by Demsetz and Villalonga (2001) (i.e. 1.13) for the period 1976-1980. On the other hand, the average market-to-book ratio of our sample is much higher than that reported in Sun and Tong (2003) (i.e. 3.65) for the period 1994-1997. These two statistics imply that (i) a much higher growth rate is priced into the valuation of Chinese companies than that of their more mature U.S. counterparts and (ii) growth has gained momentum into the millennium as reflected in record GDP growth and share market performance in China.

The proportion of shares held by the state (legal persons) ranged between a minimum of zero (zero) and a maximum of 88.6% (85.0%) with a mean of 30.4% (19.4%). Together these two groups owned the majority of shares, accounting for nearly 50% of the outstanding equity. Individual investors were the second largest group of investors; their ownership ranged between 3.1% and 100% with an average

⁸ Not all companies have price histories for the 36 months preceding each year end 2000 to 2004. Some observations using SDRET36 as a risk proxy in the regression are thus lost.

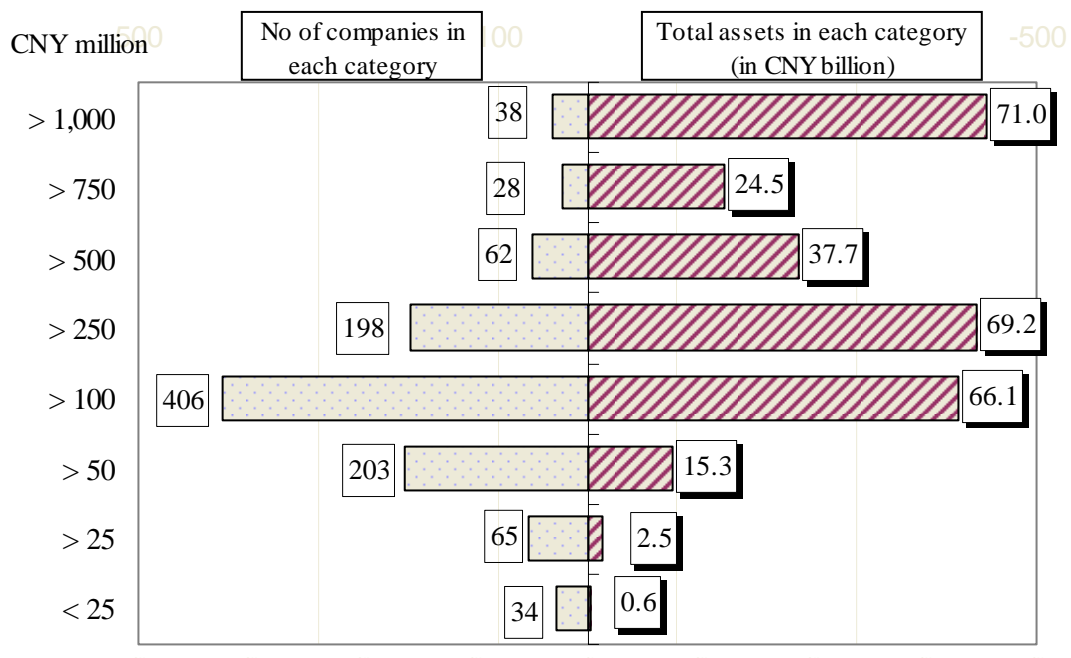
of 39.4%. This means that only a minority proportion of total shares issued are in fact true free float. Panel B of Table 1 provides a frequency analysis of the ownership of the three main categories of investors. There are 1,522 (1,883) firm-year observations with zero state (legal person) ownership. Individuals have a stake in every company; in 25 firm-year observations, they owned the entire company.

On average, companies employed assets merely worth CNY 132 million (USD 16 million) but as can be seen in Figure 2, there is a small number of large firms with a much more significant asset base. The bulk of firms have nonetheless assets in a range between CNY 100 and 750 million.

Finally, the mean debt ratio (LEVERAGE) in the sample is as low as 6.1%, which reflects a low reliance on debt financing, and the volatility of share returns (SDRET36) of these companies amounted to an average of 35.9%.

Figure 2

Total Assets and the Number of Firms in each Size Category



Note: Chart prepared with data per year end 2004.

III. Ownership Structure and Firm Performance

In order to examine the direct relationship between the ownership structure and firm performance, we estimate the following pooled regression models, which have been the subject of a number of previous studies:

$$Per_{it} = \alpha + \beta_1(FST_{it}) + \beta_2(FST_{it}^2) + \beta_3(FIN_{it}) + \beta_4(SIZE_{it}) + \varepsilon_{it} \quad (1)$$

$$Per_{it} = \alpha + \beta_1(FLP_{it}) + \beta_2(FLP_{it}^2) + \beta_3(FIN_{it}) + \beta_4(SIZE_{it}) + \varepsilon_{it} \quad (2)$$

$$Per_{it} = \alpha + \beta_1[(FST + FLP)_{it}] + \beta_2[(FST + FLP)_{it}^2] + \beta_3(FIN_{it}) + \beta_4(SIZE_{it}) + \varepsilon_{it} \quad (3)$$

where Per_{it} is the performance of firm i in period t represented by either Tobin's Q (Q) or market-to-book ratio (MBR). FST_{it} is the fraction of state ownership, FLP_{it} is the fraction of legal person ownership, FIN_{it} is the fraction of individual ownership and $SIZE_{it}$ is the firm size represented by the natural logarithm of total assets. In these models, the only independent variable outside ownership is firm size; we include the size factor in our model as all of the previous studies have found a significant negative influence of firm size on firm performance, in particular when the performance is measured by Q and MBR ratios (see Xu and Wang, 1999; Qi et al., 2000; Sun and Tong, 2003; Wei et al., 2005).

The results of these regressions are reported in Table 2. Panel A first presents the correlations between the independent variable in this regression. Apart from the expected highly negative correlation between FST and FLP⁹, all other correlations are clearly less than 50%. Panel B shows the estimated coefficients using Q as a performance measure. The three ownership variables (FST, FLP and FST+FLP) have negative coefficients of -2.10, -1.90 and -2.78 and all are significant at the 1% level.

⁹ We mentioned that the state exerts its control either through direct ownership or through intermediate institutional shareholders.

Panel C repeats these regressions for MBR. Two coefficients (FST and FST+FLP) turn out negative (-4.39 and -14.17 respectively) and are statistically significant. This means the firm performance, measured by Tobin's Q and market-to-book ratio, appear to be negatively influenced by the level of ownership by state and legal persons. However, this relationship seems non-linear; all but one of the six coefficients of squared ownership variables have positive values and are statistically significant¹⁰.

These findings are in line with the negative effect of state ownership reported in Xu and Wang (1999) and Wei et al. (2005) – who also used market-to-book ratio and Tobin's Q as the measures of performance – but they contradict the positive influence uncovered by Sun and Tong (2003) who used market-to-book ratio as performance variable only. Likewise, the negative influence of FLP found in our study is in agreement with similar results in Wei et al. (2005) but diverges from the positive influence reported in Xu and Wang (1999) and Sun and Tong. (2003).

All the FIN coefficients are negative and statistically significant at the 1% level; which, like in cases of high state ownership, indicates a negative influence of dispersed shareholding structure on the performance of the firm. These results imply a better performance for companies with a balanced ownership including corner holdings by the state and legal persons. Companies controlled by comparably powerless individual shareholders, however, provide managers a greater opportunity to pursue their own objectives rather than improving firm performance.

As also evidenced in previous studies, firm size has a significant negative influence on both Tobin's Q and market-to-book ratio; the values of SIZE coefficients range between -3.77 (MBR) and -1.12 (Q). For perspective, these coefficients mean

¹⁰ Negative coefficients for the linear ownership variable together with positive values for this same variable squared imply that the incremental deterioration in firm performance slows (or even reverses) as we move to higher levels state ownership. This is in line with the convex relationship found by Wei et al. (2005)

that by doubling a firm's assets, an initial (hypothetical) MBR ratio of 5 will decrease to 2.4 (-52%) and an initial Q of 2.5 will decrease to 1.7 (-32%)¹¹.

Overall, the model F-statistics are significant at the 1% level. The ownership variables and firm size explain 22-23% of the variation in Tobin's Q, respectively 17-18% of the market-to-book ratio.

IV. Degree of State Ownership and Firm Performance

In the previous section we found some evidence for the existence of a non-linear relationship between state/legal person ownership and the firm's performance. In this section, we investigate this issue further by analysing the effect of different levels of state ownership on performance. The combined ownership of the state and legal person (i.e. FST+FLP) is used however, as the squared value of this variable is highly significant in model (3). We use three levels of FST+FLP – (i) ownership below 5%, (ii) ownership between 5 and 36% and (iii) ownership above 36%. The two cut-off points were selected on the following basis: (i) the U.S. evidence suggests a positive relationship when management holdings of shares is between zero and 5% (Morck et al., 1985) and (ii) Wei et al. (2005) find an average reflection point of 35.7% for the state ownership of Chinese companies. The model estimated thus takes the following form:

$$\begin{aligned}
 Per_{it} = & \alpha + \beta_1 (STLPSMALL_{it}) + \beta_2 (STLPMED_{it}) + \beta_3 (STLPLARGE_{it}) \\
 & + \beta_4 (FIN) + \beta_5 (SIZE_{it}) + \beta_6 (LEVERAGE_{it}) + \beta_7 (SDRET36_{it}) + \\
 & \beta_8 (ID_M_{it}) + \beta_9 (ID_WR_{it}) + \beta_{10} (ID_MN_{it}) + \beta_{11} (ID_PCP_{it}) + \beta_{12} (ID_EE_{it}) \\
 & + \varepsilon_{it}
 \end{aligned} \tag{4}$$

¹¹ Note that the sample mean value for Q = 2.5 and for MBR = 5.7.

In the above model, *STLPSMALL* represents the small state ownership dummy which takes the value of 1 if the combined ownership of the state and legal person (*FST+FLP*) is greater than zero and less than 5%. Similarly, *STLPMED* (between 5 and 36%) and *STLPLARGE* (above 36%) are dummy variables for medium and high levels of state ownership. We also estimate the above model replacing *STLPSMALL* by *STLPZERO* (no state and legal person ownership) to examine the effect on firm performance in the case of a complete absence of state and legal entities as shareholders. As in models (1) to (3), the variable *FIN* represents the portion of shares held by individual investors.

In addition to these ownership variables and firm size, we incorporate a number of further control variables into the model (as defined in section II). The financial leverage represented by the debt-equity ratio (*LEVERAGE*) is used because a large body of literature favours debt contracts as a strong mechanism for solving agency problems as they may prevent managers from investing in value destroying projects (see Townsend, 1978; Jensen, 1986; Bolton and Scharfstein, 1990; Harris and Raviv, 1990; Stultz, 1990; Diamond, 1991; and Aghion and Bolton, 1992 among others).

Next, the standard deviation of stock returns (*SDRET36*) is used to control for risk, i.e. to capture the trade-off between the risk and firm performance. As a paradigm in finance, companies that invest in high risk projects will exhibit higher asset volatility but should demonstrate a better performance than those that invest in low risk projects.

There is evidence that the membership of an industry influences the performance of firms. For example, Schmalensee (1985) found that the accounting rate of return at business unit level is strongly influenced by the industry in which the company operates. Likewise, Wernerfelt and Montgomery (1988) discovered that the

industry effect accounts for majority of the explained variance in Tobin's Q. Accordingly, dummy variables for the five main industries categories as shown in Figure 1 in section II are included in the model. Combined they contribute more than 50% to total assets of sample firms. Specifically the industry dummies are: ID_EE (electrical equipment); ID_PCP (petroleum, chemical and plastics); ID_MN (metal and non-metal); ID_WR (wholesale and retail); ID_M (mixed / integrated).

The estimation results of equation (4) are reported in Table 3. While Panel A of this table again shows the correlations between independent model variables, the regression results in Panel B suggest that small state ownership seems to have no significant positive influence on firm performance as neither coefficient generated for STLP SMALL or STLP ZERO show any statistical significance. However, there is stronger evidence to suggest that medium and high state ownership have a negative influence on firm performance. All eight coefficients estimated have negative signs and one STLP MED coefficient (-2.21) and three STLP LARGE coefficients (-3.00, -0.57 and -3.75) are significant at the conventional levels. Further two STLP MED coefficients (-1.56 and -0.46) are significant at the 10% level. Clearly, there is not only a relationship between the degree of state ownership and the firm performance but the negative influence of state ownership appears more severe in companies with more than 36% state ownership. This can be seen from consistently more negative coefficients for the STLP LARGE variable. Such a result would disagree with Wei et al. (2005, p.96) who, based on their older 1991 to 2001 data sample, found a reflection point for firm performance at 35.7%, i.e. a substantial involvement of the state increases shareholder value.

One can interpret this difference in two ways, both related to the more recent data used for this study. Firstly, it could hint at effects of the ongoing government

drive to divest of non-strategic state assets. The number of companies with high levels of state ownership would thus have been declining. However, and this is quite natural, the Chinese agency in charge of ‘corporatization’¹² will find it harder to dispose of badly performing holdings which now underperform their newly privatized peers. Secondly, it would mean that the benefits of having a substantial or even dominant government stakeholder on board could be dwindling with the strengthening of Chinese legal framework. More so than in the mature legal system of the Western world, Chinese firms have needed the cooperation of government gatekeepers in order to operate successfully¹³. The results found here could thus forebode an era of a plain level playing field for all Chinese firms, irrespective of their ownership structure.

In confirmation of the results of section III and with all the additional control variables introduced, the coefficients of FIN variable are still consistently negative and statistically significant at a 1% level. Individual investors either do not have the leverage to influence their firm’s performance or they do not seem to be concerned about it. It seems as if dispersed ownership of outside investors exacerbates the free rider problem.

Among other control variables, firm size (SIZE) again generates negatively significant coefficients in all models; large firms perform poorly compared to their small counterparts. The financial leverage coefficient (LEVERAGE) is positive and significant in market-to-book models pointing to a positive effect of the monitoring imposed by debt obligations on the performance. As expected, higher risk firms seem

¹² The ‘State Asset Monitoring and Management Commission’ as agency in charge does not use the term privatisation but rather ‘corporatization’ or ‘share holding system’ to refer to the sale of state assets to private investors.

¹³ “Favours” provided by such gatekeepers would have included removing regulatory bottlenecks, help in acquiring business assets under a regime of ambiguous property rights, perhaps even gaining sources of finance.

to perform better than those investing in lower risk projects; all four SDRET36 coefficients are positive and significant at the 1% level.

Fourteen out of twenty industry dummies are negative and ten of them are significant indicating the importance of having them as control variables in order to control for spurious correlations between ownership structure and firm performance stemming from industry effects. An example is the industry effect for companies in the capital intensive petroleum, chemical and plastics sector which has consistently been underperforming the overall market.

V. Ownership Concentration and Firm Performance

In this section we investigate the related issue of how ownership concentration affects firm performance, a topic which has received only limited attention by the corporate governance literature on the Chinese market.

We estimate the following model:

$$\begin{aligned}
 Per_{it} = & \alpha + \beta_1(OCON_{it}) + \beta_2(SIZE_{it}) + \beta_3(LEVERAGE_{it}) + \\
 & + \beta_4(SDRET36_{it}) + \beta_5(ID_M_{it}) + \beta_6(ID_WR_{it}) + \beta_7(ID_MN_{it}) \\
 & + \beta_8(ID_PCP_{it}) + \beta_9(ID_EE_{it}) + \varepsilon_{it}
 \end{aligned} \tag{5}$$

In the above model, OCON is the ownership concentration variable represented by one of the following proxies: (i) the fraction of shares held by the largest shareholder (L1); (ii) the largest five shareholders (L5); (iii) the largest ten shareholders (L10); (iv) the balance ratio defined as the ratio of total number of shares held by second to fifth largest owners to the shares held by the largest owner. The balance ratio is included to examine if the power sharing among the largest shareholders was a better mechanism of corporate governance, rather than letting one

shareholder own the dominant stake of outstanding equity. All other dependent and control variables have been explained together with models (1) to (4).

The findings of the above analysis are reported in Table 4. While Panel A of this table lists the correlations between the explanatory variables, Panel B shows the regression results for the full sample. Note that the range of data used for this regression includes only 4 years from 2001 to 2004 (4136 firm years).

The coefficients of the L1, L5 and L10 variables have no uniform sign. While they are consistently positive and partially significant for Tobin's Q, they are all negative and significant if market-to-book was used as the dependent variable. There is thus no conclusive evidence whether block ownership imposes a negative or positive influence on the performance of these Chinese companies. What is more interesting, however, is that both coefficients of the balance ratio are positive and statistically significant at the 1% level. The positive influence of the balance ratio on firm performance seems to indicate that the power sharing among the largest shareholders provides a good mechanism of governance and in turn protects the interests of smaller investors.

The other control variables such as financial leverage, firm size, firm risk and industry dummies produce similar coefficients to those reported for model (4). All of the model *F*-statistics are significant and the explanatory power of different model specifications ranged between 20% for models using Tobin's Q to 22% for MBR.

Large block holdings by the state are a peculiar feature in ownership structure of Chinese companies. Therefore, it could be argued that the negative L1 to L10 coefficients on the MBR performance are a mere reflection of the negative influence of the state ownership on firm performance that was observed in Table 3. To exclude this possibility, we estimate equation (5) using a sub sample of firms in which the

state does not own any shares (i.e. state ownership $FST = 0$). Ideally we should also exclude firms with great involvement by legal persons (FLP), i.e. indirect control by the state, but the resulting sample would become very small.

The Results for this smaller sample of 1,122 firm years are reported in Panel C of Table 4. The coefficients generated for L1, L5 and L10 again differ whether Tobin's Q or MBR is used as a performance measure. There are conflicting signs and no significance in the regression with Tobin's Q. Conversely, coefficients in the market-to-book model are all negative and statistically significant, two of them at a 99% confidence level. All in all, these results thus point to the possibility of some performance penalty for firms with block ownership. In confirmation of the results for the full sample, the balance ratio coefficients are again positive and highly significant even more pronounced than for the analysis with the full sample. With all other control variables yielding similar signs to those reported in Panel A, one can thus conclude that a balanced shareholder structure appears to be the best guarantor for a good performance.

As outlined in Demsetz and Villalonga (2001), who find no systematic relation between ownership structure and firm performance, block ownership create agency problems generally compensated by advantages very specific to the particular firm. For mature economies, it is generally argued that this balance is found when ownership structures emerge which are shaped by forces of the market that create structures, whether diffuse or concentrated, maximizing shareholder expected returns. In the case of China, current ownership structures have been created artificially by the highly politicized process of recent privatisations. Market forces endogenously reshaping these structures would thus have been acting for a comparably short time

only. This means agency problems combined with a weak protection of minority shareholders could possibly still dominate and negatively affect firm performance.

VI. Conclusion

This study investigates the influence of the degree of state ownership and the ownership concentration on the performance of listed Chinese companies. Previous research on this subject has provided conflicting results with regard to such effects on firm performance in China. In line with Wei et al, (2005), we find a consistently negative impact of state ownership on firm performance even after controlling for factors such as firm size, industry membership, firm risk and leverage as well as industry membership.

Unlike in some earlier literature, we can no longer detect a performance advantage for firms in which the state holds a very substantial stake. It had been argued that such strong connections to the state provided the company with more leverage to deal with government bureaucracy or even to gain special favours. We attribute our conflicting finding to two factors which both relate to our much more recent data set, covering the period from 2000 up to and including 2004. Firstly, it is reasonable to assume that “marketable” state holdings have in the meantime been successfully spun off. This means state companies, where the state still holds substantial shares, might not have the attractiveness – i.e. performance – demanded by investors. Secondly, the disappearance of special advantages for firms well connected to the state authorities could also be a first sign of a more mature and predictable operating environment for Chinese firms. This would imply that the programmes for the strengthening of the legal system and improved accountability by government officials, including campaigns to fight corruption, had their desired effects.

This article finally looks at effects of ownership concentration on firm performance, a topic which, to our knowledge, has received no particular attention for the Chinese market. Based on a pooled regression we find some weak indications of a negative effect of block ownership, both for the full sample and a reduced sample which includes firms without shares held by the state. We opt for this dual test because we do not wish to confound the negative effect of state ownership found above with the pure effect of ownership concentration. More interestingly, we find strong evidence that a balanced shareholder structure as proxied by the number of shares held by the 2nd to 5th shareholder in relation to the number of shares held by largest shareholder (balance ratio) is beneficial for the performance of Chinese firms.

In summary, this study adds to the body of performance literature of Chinese firms with a more recent data set which captures newer developments in the market. Moreover, it provides an assessment of the effect of block ownership in China also for firms where the state does not own any shares. This is, to our knowledge, the first time such an effect has been studied for the Chinese market.

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Table 1
Summary Statistics and Ownership Information

Panel A: Summary Statistics for Variables								
Variable	Mean	Median	Max	Min	STD	Skewness	Kurtosis	J-B Stat.
Q	2.4843	1.9219	56.1942	0.3448	2.2297	7.8522	128.5832	3,450,496
MBR	5.7443	3.4597	50.0000	0.6693	8.3565	4.3189	22.3526	96751.30
FST	0.3042	0.3049	0.8858	0.0000	0.2635	0.1762	1.5877	456.44
FLP	0.1939	0.0542	0.8497	0.0000	0.2415	0.9504	2.4591	841.26
FIN	0.3942	0.3778	1.0000	0.0308	0.1284	0.7833	4.9810	1,374.05
LEVERAGE	0.0610	0.0155	4.9390	-0.0242	0.1491	12.6685	314.4981	2,104,392
SIZE	11.85	11.79	15.6758	7.8509	0.9059	0.2207	3.7322	157.46
SDRET36	0.3593	0.3437	1.0494	0.0671	0.0947	1.2168	6.0770	2,858.14
Panel B: Frequency Analysis of State, Legal Person and Individual Ownership								
Ownership Band	State	Legal Person	Individual	Ownership Band	State	Legal Person	Individual	
0%	1,522	1,883	0	50%	247	157	529	
5%	128	649	6	55%	320	218	330	
10%	215	349	50	60%	299	161	298	
15%	131	215	25	65%	324	158	187	
20%	142	191	113	70%	282	152	72	
25%	178	173	202	75%	251	179	34	
30%	255	191	791	80%	35	16	19	
35%	215	101	870	85%	42	8	4	
40%	294	200	914	90%	2	0	1	
45%	288	169	700	>95%	0	0	25	

Table 2
The Influence of Ownership Structure on Firm Performance

Panel A: Correlation Matrix for Independent Variables

	FIN	FLP	FST	SIZE
FIN	1.0000	-0.1490	-0.2956	-0.0007
FLP	-0.1490	1.0000	-0.7075	-0.1038
FST	-0.2956	-0.7075	1.0000	0.1879
SIZE	-0.0007	-0.1038	0.1879	1.0000

Panel B: Dependent Variable – Tobin's Q

Independent Variable	Model 1	Model 2	Model 3
Constant	16.6753** (45.09)	16.5675** (43.94)	16.9698** (44.02)
FST	-2.0995** (-5.66)		
FLP		-1.9036** (-4.59)	
FST+FLP			-2.7829** (-5.02)
FST ²	2.7630** (4.91)		
FLP ²		3.6005** (5.54)	
FST+FLP ²			3.1966** (4.92)
FIN	-1.9831** (-8.37)	-1.7908** (-8.11)	-1.9479** (-7.08)
SIZE	-1.1151** (-35.95)	-1.1265** (-36.90)	-1.1174** (-36.54)
Adjusted R ²	0.2249	0.2254	0.2335
Model F-Statistic	375.99**	376.97**	373.02**

Panel C: Dependent Variable – Market-to-Book Ratio

Independent Variable	Model 1	Model 2	Model 3
Constant	50.6463** (35.25)	50.9934** (34.77)	54.4994** (36.67)
FST	-4.3928** (-3.05)		
FLP		-0.0735 (-0.456)	
FST+FLP			-14.1705** (-6.63)
FST ²	4.8446* (2.22)		
FLP ²		-1.3943 (-0.55)	
FST+FLP ²			10.6481** (4.24)
FIN	-0.8003 (-0.87)	-1.0391 (-1.21)	-4.3256** (-4.08)
SIZE	-3.7149** (-30.83)	-3.7703** (-31.76)	-3.6306** (-30.79)
Adjusted R ²	0.1672	0.1657	0.1785
Model F-Statistic	260.61**	257.60**	281.75**

Note: The table reports coefficient estimates of pooled regression equations (1) to (3) for the full set of 1032 non-financial companies continuously listed on SHSE and SZSE for the five years 2000 to 2004 (5170 firm years).

An **(**)** denotes statistical significance at the 5% (1%) level. The t-statistics are given in parentheses.

Table 3
The influence of the Degree of State Ownership on Firm Performance
(based on data for years 2000 to 2004)

Panel A: Correlation Matrix for Independent Variables in Model 4

	FIN	SIZE	LEVERAGE	SDRET36
FIN	1.0000	-0.0007	0.0516	0.0186
SIZE	-0.0007	1.0000	0.3071	-0.3075
LEVERAGE	0.0516	0.3071	1.0000	-0.1064
SDRET36	0.0186	-0.3075	-0.1064	1.0000

Panel B: Results for Regression Model 4

Independent Variable	Dependent Variable: Q	Dependent Variable: MBR	Dependent Variable: Q	Dependent Variable: MBR
Constant	13.3046** (26.40)	42.2030** (20.90)	13.6373** (26.94)	42.9490** (21.17)
STLPZERO	-	-	-0.3328 (-1.10)	-0.7460 (-0.61)
STLPSMALL	0.3328 (1.10)	0.7460 (0.61)	-	-
STLPMED	-0.1275 (-0.63)	-1.5605 (-1.93)	-0.4603 (-1.90)	-2.3064* (-2.37)
STLPLARGE	-0.2385 (-1.19)	-3.0000** (-3.74)	-0.5713* (-2.40)	-3.7456** (-3.93)
FIN	-1.8059** (-7.39)	-3.8038** (-3.89)	-1.8059** (-7.39)	-3.8038** (-3.89)
SIZE	-0.9579** (-27.80)	-3.3954** (-24.58)	-0.9579** (-27.80)	-3.3954** (-24.58)
LEVERAGE	-0.2148 (-1.09)	3.9257** (4.98)	-0.2148 (-1.09)	-3.9257** (-4.98)
SDRET36	4.3079** (13.24)	21.8445** (16.76)	4.3079** (13.24)	21.8445** (16.76)
ID_M	-0.1551 (-1.41)	0.8584 (1.94)	-0.1551 (-1.41)	0.8584 (1.94)
ID_WR	-0.7253** (-6.71)	-0.9506* (-2.19)	-0.7253** (-6.71)	-0.9506* (-2.19)
ID_MN	-0.1541 (-1.40)	0.2224 (0.51)	-0.1541 (-1.40)	0.2224 (0.51)
ID_PCP	-0.3989** (-4.15)	-1.4501** (-3.77)	-0.3989** (-4.15)	-1.4501** (-3.77)
ID_EE	-0.2664** (-3.11)	0.5600 (1.63)	-0.2664** (-3.11)	0.5600 (1.63)
Adjusted R ²	0.2585	0.2420	0.2585	0.2420
Model F-Stat.	130.48**	119.57**	130.48**	119.57**

Note: The table reports the estimates of equation (4) using both Tobin's Q and Market-to-Book ratio as independent variables. Due to missing observations of the SDRET36 variable, only 4457 (of 5170) firm years were available for these pooled regression estimates.

An (**) denotes statistical significance at the 5% (1%) level. The t-statistics are given in parentheses.

Table 4
The Influence of Ownership Concentration on Firm Performance (based on data for years 2001 to 2004)

Panel A: Correlation Matrix for Independent Variables

	L1	L5	L10	BALANCE RATIO	LEVERAGE	SIZE	SDRET36
L1	1.0000	0.6945	0.6324	-0.7575	-0.0157	0.2303	-0.1526
L5	0.6945	1.0000	0.9821	-0.1665	-0.0321	0.1097	-0.0928
L10	0.6324	0.9821	1.0000	-0.0828	-0.0385	0.0876	-0.0789
BALANCE RATIO	-0.7575	-0.1665	-0.0828	1.0000	0.0035	-0.2023	0.1363
LEVERAGE	-0.0157	-0.0321	-0.0385	0.0035	1.0000	0.3098	-0.0882
SIZE	0.2303	0.1097	0.0876	-0.2023	0.3098	1.0000	-0.3061
SDRET36	-0.1526	-0.0928	-0.0789	0.1363	-0.0882	-0.3061	1.0000

Panel B: Full Sample

Independent Variable	Dependent Variable: Q				Dependent Variable: MBR			
	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4
Constant	12.0586** (25.11)	11.8069** (24.05)	11.5361** (23.32)	11.5995** (23.66)	39.1204** (19.73)	40.5669** (20.03)	40.1636** (19.63)	37.6146** (18.57)
L1	0.2747 (1.45)				-1.7198* (-2.20)			
L5		0.5626* (2.42)				-3.2304** (-3.37)		
L10			1.0315** (4.24)				-2.0396* (-2.03)	
BALANCE RATIO				0.2468** (4.41)				0.8219** (3.55)
LEVERAGE	-0.1801 (-0.92)	-0.1736 (-0.89)	-0.1513 (-0.78)	-0.2646 (-1.36)	3.5820** (4.44)	3.5581** (4.42)	3.6340** (4.52)	3.5577** (4.42)
SIZE	-0.9006** (-24.36)	-0.8972** (-24.72)	-0.9001** (-24.88)	-0.8594** (-23.40)	-3.3909** (-22.22)	-3.4159** (-22.81)	-3.4393** (-22.98)	-3.3600** (-22.14)
SDRET36	2.3053** (6.47)	2.3100** (6.50)	2.3323** (6.57)	2.1624** (6.09)	20.4900** (13.93)	20.4813** (13.96)	20.5962** (14.03)	20.3729** (13.87)

ID_M	-0.1568 (-1.33)	-0.1372 (-1.16)	-0.1156 (-0.95)	-0.2181 (-1.86)	0.8432 (1.73)	0.7434 (1.52)	0.8585 (1.76)	0.8735 (1.81)
ID_WR	-0.7111** (-6.18)	-0.6891** (-5.96)	-0.6683** (-5.79)	-0.7204** (-6.29)	-1.0684* (-2.25)	-1.1879** (-2.48)	-1.0968* (-2.30)	-0.9729* (-2.06)
ID_MN	-0.0746 (-0.6464)	-0.0814 (-0.71)	-0.0921 (-0.80)	-0.0425 (-0.37)	0.4280 (0.90)	0.4595 (0.97)	0.3993 (0.84)	0.3930 (0.83)
ID_PCP	-0.3741** (-3.66)	-0.3722** (-3.66)	-0.3786** (-3.73)	-0.3191** (-3.14)	-1.4266** (-3.38)	-1.4460** (-3.44)	-1.4885** (-3.54)	-1.4021** (-3.33)
ID_EE	-0.2785** (-3.07)	-0.2764** (-3.05)	-0.2798** (-3.10)	-0.2496** (-2.76)	0.3250 (0.87)	0.3098 (0.83)	0.2999 (0.80)	0.3593 (0.96)
Adjusted R ²	0.2005	0.1995	0.2020	0.2023	0.2229	0.2242	0.2227	0.2245
Model <i>F</i> -Stat.	104.66**	105.18**	106.87**	107.07**	120.90**	121.84**	120.80**	122.02**

Panel C: Non-State Ownership Sample

Independent Variable	Dependent Variable: Q				Dependent Variable: MBR			
	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4
Constant	16.2551** (14.12)	16.2392** (13.17)	15.3742** (12.26)	14.7305** (12.67)	45.7359** (13.00)	50.5517** (13.40)	48.5465** (12.56)	39.4520** (11.07)
L1	-0.6026** (-1.21)				-7.4589** (-4.89)			
L5		-0.0864** (-0.14)				-7.9132** (-4.27)		
L10			1.0038 (1.59)				-4.7475* (-2.45)	
BALANCE RATIO				0.7677** (5.66)				2.8168** (6.77)
LEVERAGE	0.6450 (0.79)	0.6923 (0.85)	0.6681 (0.82)	0.5190 (0.65)	12.3061** (4.96)	13.0185** (5.23)	12.9781** (5.19)	12.2416** (4.98)
SIZE	-1.2105** (-13.59)	-1.2272** (-13.87)	-1.2106** (-13.66)	-1.1302** (-12.76)	-3.9312** (-14.44)	-4.2185** (-15.58)	-4.1994** (-15.38)	-3.7733** (-13.89)
SDRET36	2.1123* (2.44)	2.1978* (2.55)	2.3003** (2.67)	1.6666 (1.95)	24.3361** (9.23)	24.5998** (9.32)	25.0829** (9.46)	23.5339** (9.00)

ID_M	-0.2924 (-1.15)	-0.2474 (-0.96)	-0.1668 (-0.65)	-0.3294 (-1.33)	0.4629 (0.59)	0.4388 (0.56)	0.7649 (0.97)	0.7836 (1.03)
ID_WR	-0.8758 (-1.95)	-0.8934* (-2.00)	-0.8894* (-1.98)	-0.8075 (-1.82)	2.8691* (2.09)	2.6287 (1.91)	2.6381 (1.91)	2.9696* (2.19)
ID_MN	-0.4941 (-1.47)	-0.4861 (-1.45)	-0.4749 (-1.41)	-0.5829 (-1.76)	-2.2356* (-2.18)	-2.1625* (-2.10)	-2.1832* (-2.11)	-2.4884* (-2.44)
ID_PCP	-0.3818 (-1.39)	-0.4404 (-1.62)	-0.4922 (-1.82)	-0.2588 (-0.97)	-0.2030 (-0.24)	-0.5545 (-0.67)	-0.7641 (-0.92)	-0.3033 (-0.37)
ID_EE	-0.3136 (-1.38)	-0.3356 (-1.48)	-0.3520 (-1.55)	-0.2481 (-1.10)	1.0665 (1.53)	0.8931 (1.28)	0.8503 (1.21)	1.1042 (1.60)
Adjusted R ²	0.1898	0.1888	0.1906	0.2115	0.3034	0.2999	0.2922	0.3166
Model <i>F</i> -Stat	30.18**	29.98**	30.33**	34.40**	55.25**	54.35**	52.43**	58.70**

Note: The table reports the estimates of equation (5) using both Tobin's Q and Market-to-Book ratio as independent variables.

Due to missing observations of the SDRET36 variable, only 3,764 (of 4,136) firm years were available for the pooled regression estimates of Panel A.

Panel B includes 1,122 firm years for firms with state ownership (FST = 0%)

An ^(**) denotes statistical significance at the 5% (1%) level. The t-statistics are given in parentheses.