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China's Decentralized Privatization and Change of Control Rights

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Abstract

A distinctive feature of China's privatization is that both its design and its implementation are highly decentralized and are administered by the local governments. Based on a survey of three thousand firms in over one hundred Chinese cities, this paper studies how city governments choose among various privatization methods, how these different methods transfer control rights from the government to private owners, and how various privatization methods lead to different restructuring and performance. Our data indicates that while privatization in China has made substantial progress in reallocating control rights from the government to private owners, there are significant variations in the degree of remaining government influence in corporate decisions across different privatization methods. More importantly, city governments' decisions on how to privatize are critically determined by the political and fiscal constraints. In cities where there is less political oppositions to labor shedding and where the government has stronger fiscal capacity, it tends to choose direct sales to insiders (MBOs) as the privatization method, which transfers control rights to private owners most completely. As a result, MBO firms restructure most effectively and achieve the greatest performance improvement.

Keywords: Privatization, Control Rights, Management Buyouts (MBO), China.

JEL classification codes: D22, D23, L29, H19, P31, P39.

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Introduction

This paper examines China's decentralized privatization. China's privatization during the late 1990s and the mid-2000s is, arguably, the largest one in the world.[2] In contrast to most other privatization programs, which are national policies and are implemented in a top-down manner (e.g. in CEE-CIS nations, Mexico, India, and Brazil), there is no *de jure* national privatization policy in China. Instead, China's *de facto* privatization was first initiated by a few city governments at a time when the central government was cautious about privatization due to its ideological aversion to capitalism. Later, after the central government endorsed the practice of selling SOE assets to private owners, for most SOEs, it was up to the city governments to decide whether to privatize or not; and, if yes, what privatization approach to adopt. As a result, there is a large variation in privatization methods across Chinese cities. This decentralized feature of China's privatization is not only of vital importance for understanding the Chinese economy, but also provides an excellent laboratory to research privatization and institutions in general. However, there has not been any systematic research on this important topic.

Based on a large-scale nationwide survey of three thousand firms in more than one hundred cities, this paper conducts a systematic study of China's decentralized privatization, with an attempt to draw implications for privatization design and, more generally, the design of economic institutions. We seek to understand how local governments chose different privatization methods and how these various methods lead to different mechanisms with respect to restructuring and performance. Specifically, we ask the following questions. Why do city governments choose a diversity of privatization methods? How do different privatization methods re-allocate control rights

[2] Based on the data that we collected from a nationwide random survey of all Chinese industrial firms conducted in 2006, in 2005, about two-thirds of the Chinese SOEs and COEs with annual turnover of more than 5 million RMB Yuan (about $620,000) have been privatized and the total asset value involved in the process was about 11.4 trillion RMB (or 1.63 trillion USD) in 2005.

among the government, the party committee, the CEOs, and the boards? Which methods result in post-privatization restructuring that improves corporate governance more effectively and enhances performance better?

Our data show that city governments adopt a variety of methods in privatizing the SOEs, including direct sales, either to insiders (through management buyouts, or MBOs hereafter) or to outsider private owners, public offerings, joint ventures, leasing, and employee shareholdings. We find that, while privatization in China has made substantial progress in reallocating control rights from the government to private owners, there are significant variations in the degree of government influence in corporate decisions across different privatization methods. More importantly, city governments' decisions on how to privatize are critically determined by the political and fiscal constraints that they face, and their choice of privatization approaches has a profound impact on the governance and performance of privatized firms. Specifically, when cities face less political opposition to labor shedding and have stronger fiscal capacity, they tend to choose a privatization method that transfers control rights to private owners more completely. This method is direct sales to insiders or MBOs, which account for close to half of all privatization programs. Consistent with private owners' enhanced ability to improve performance, MBOs are most effective in implementing restructuring measures, including change of core management teams, establishing boards of directors, and introducing international accounting and independent auditing. Consequently, the performance of these firms is significantly improved after privatization. Firms privatized by other approaches, however, remain influenced by government in their key corporate decisions, are less effective in restructuring, and do not achieve statistically detectable improvement in performance.

A main challenge in evaluating performance of privatized firms is selection bias issue. That is, better/worse firms might be purposely chosen for a particular privatization method which affects their later performance. An important advantage of our analysis is

that our data allows us to deal with the selection concern seriously, by explicitly examining the mechanisms of privatization, which is perhaps the strongest guard against endogeneity. Specifically, we design our survey in order to collect comprehensive information on re-allocation of control rights and the impact of change of control rights on post-privatization restructuring and performance. With the mechanisms of privatization being revealed, the concern about selection bias is largely mitigated. To rule out the selection bias even further, we employ a difference-in-difference approach and use city characteristics as instruments for privatization methods. These city characteristics are related to privatization approaches, but are arguably unrelated to pre- and post-privatization performances of individual firms.

Our paper is related to a large literature on privatization. Theoretically, it has been emphasized that the government's control rights over state-owned firms have a negative impact on their performance, because the government's objective is often inconsistent with efficiency (Laffont and Tirole, 1993; Shleifer, 1998). Particularly, managers of SOEs typically do not receive high-powered incentives (Vickers and Yarrow, 1988), and the government frequently interferes with the decisions of the SOEs for political purposes (Shleifer and Vishny, 1994). Moreover, due to political concerns, e.g. employment matters and fiscal issues, the government is unable to commit not to bailout loss-making SOEs, which destroys efficiency (Kornai, 1988, 2000). Privatization is the way to solve this soft-budget constraint problem (Boycko, Vishny and Shleifer, 1996; and Berglof and Roland, 1998). Our paper provides direct and systematic empirical evidence that supports the above arguments.

Given our data on detailed corporate governance variables before and after privatization, this paper substantially enriches the empirical literature of privatization.[3]

[3] According to Estrin et al. (2009), most papers in the literature suffer from the quality of the data. Mostly, the datasets are not representative, too small lack and/or have too short time series except very few, e.g. Brown et al. (2006). Moreover, due to the data problem often identification problems are not taken cared of seriously.

Not only do our findings support those from Mexico (La Porta and López-de-Silanes, 1999), the CEE-CIS nations (Brown et al., 2006; survey by Estrin et al., 2009), and other nations (survey by Megginson and Netter, 2001), but more importantly they shed new lights on the concrete mechanisms of performance improvement, from impacts of political factors to re-allocation of control rights.

Our analysis complements earlier empirical work on China's privatization and deepens our understanding of the Chinese economy. Previous work has documented the ineffectiveness of share issue privatization (SIP) (Sun and Tong, 2003; Deng, Gan, and He, 2010)[4] and a lack of significant effect of privatization on performance (Jefferson and Su, 2006) and importance of reducing state ownership in privatized firms to improve performance (Bai et al., 2009).[5] Our data allow us to contribute to the literature by covering a wide spectrum of SOEs and revealing the mechanisms of performance improvement. Our findings underscore the political constraints faced by the government and the resulting incomplete transfer of control rights to the private sector as the key to understanding the lack of performance gain in some of the privatization

[4] Our findings on the central role of transferring control rights in privatization are consistent with these results since the SIP does not involve transferring control rights by the Chinese rule (see next section) as it is not designed for the purpose of privatization. Moreover, SIP is not a major de facto privatization approach that it accounts only for 1% of the population among all privatized firms, according to our survey. Moreover, all the listed firms are very large firms, i.e. the sample in SIP is biased. Considering the impact of the remaining state shares to performances in SIP, there are debates in the literature. Sun and Tong (2003) find no relationship; Li et al. (2009) find a negative relationship; Tian and Estrin (2010) find a non-monotone relationship. Calomiris et al, (2010) and Li et al. (2011) study the impacts of selling government-owned shares in SIP.

[5] The latter two papers infer privatization from census data by looking at changes in the registration of the firms. But the censuses do not collect data on corporate governance and its change, which makes it difficult to address questions about changing of control rights in privatization as we are addressing. Moreover, inferring privatization from changes in the registration may suffer from substantial type II errors, as our survey reveals (see Appendix). There is also a sizeable literature on China's privatization based on small and/or none representative samples, e.g. Li and Rozelle (2000), Wang, Xu and Zhu (2004), Guo and Yao, (2005), Yusuf et al. (2005), Dong, Putterman and Unel (2006). Estrin et al. (2009) summarize that "in China the results to date are less clear cut and relatively more estimates suggest that privatization to domestic owners improves the level of performance."

programs. The dynamics between the state and the economy in China's past ten years or so actually closely resemble those during the privatization, only that this time the state has much less urgency to grow the private sector. In fact there have not been many significant economic reforms or liberalization since China's entering of WTO and during a time of rapid GDP growth. Our analysis points to substantial inefficiencies in sectors and areas with state intervention. How to realize the growth potential in these sectors is vital for China's future economic growth, especially in face of the current slowdown.

The rest of this paper is organized as follows. Section I describes the institutional background of China's privatization. Section II describes our survey and the sample. Section III explores how firms privatized through various methods re-allocate control rights and restructure differently. Section IV investigates what factors affect local governments' choices of privatization methods. Section V examines the impacts of different privatization methods on corporate performance. Finally, Section VI concludes.

I. Institutional background of China's privatization

Similar to other transition economies, at the onset of the economic reform the Chinese economy was dominated by the state sector or SOEs. Yet, in contrast to other transition economies, the governance regime of the Chinese economy is Regionally Decentralized Authoritarianism (RDA). In this RDA regime, political and personnel decisions are highly centralized and local government officials are appointed and assessed by the central government, whereas administrative and most of the economic matters, including those of the SOEs, are decentralized to local governments. Except for the very large ones, the control rights of SOEs were assigned to the local governments, mostly at the municipal level (Xu, 2011). These control rights also give local governments the residual claims to enterprise earnings (Granick, 1990 and Li, 1997).

The local SOEs were very important for the city governments, both as a source of fiscal revenue and as part of local economic performance which are to be assessed by the upper level governments for promotion of government officials (Maskin, Qian and Xu, 2000; Xu, 2011). Not surprisingly, city governments frequently exercise control rights to intervene their SOEs.[6] Under the RDA regime, instead of facing elections, city officials face assessments of the upper government; and China's privatization is driven by political economy mechanisms that are different from those in democratic regimes (e.g. see Biais and Perotti, 2002; and Dinc and Gupta, 2011).

Endowed with the "local" ownership of SOEs, China's state sector reforms have been mostly driven by regional competition and local experiments, sometimes before the central government's official mandates (Xu, 2011). Privatization epitomizes this dynamic. Due to ideological reasons, privatization was a controversial subject in China and the central government did not officially allow it until late 1990s. However, the deteriorating performance of SOEs put increasing pressure on the fiscal conditions of local governments, since they are the residual claimants of the SOE earnings and some of them were on the verge of insolvency due to the losses of their SOEs. Against this background, a few cities initiated *de facto* privatization quietly.

One of the first local privatization attempts was in Zhucheng, a city in Shandong province. In that city, more than two thirds of the SOEs were losing money in 1992, with losses amounting to the city government's total fiscal revenue over 18 months. Facing this pressure, the city government sold many SOEs within its jurisdiction to the employees of these SOEs. Another representative example is the municipal government of Shunde in Guangdong. The Shunde city government also encountered a serious debt problem before it privatized most of its state and collective firms in 1992 (Garnaut et al., 2008). The central government tolerated these experiments by turning a blind eye towards them (Garnaut et al., 2005).

[6] Our survey provides evidence in Figure 2 and Table 3A.

As the state sector's financial performance continued to deteriorate, it imposed a severe strain on the country's banking system.[7] The central government, learned from successful local privatization experiments, gradually accepted privatization as a remedy for the country's ailing SOEs. Nevertheless, due to political and ideological constraints, the term "privatization" was never used officially but was disguised as "transforming the system" or "*gaizhi*." In 1993, the 3rd Plenum of the 14th CCP Congress endorsed a principle of diversifying ownership structure of state-owned firms, which gave local governments excuses to privatize partially. In 1995, the central government announced the policy of "retaining the large, releasing the small" (*zhuada fangxiao*), i.e. the state was to keep a few hundred largest SOEs in strategic industries and would give local governments full control rights to local SOEs. Finally, a green light to privatization was turned on at the CCP's 15th Congress (1997), which granted *de jure* ownership of local SOEs to local governments. This implies that the central government has authorized the "owners," mostly city governments, of SOEs to design/implement privatization on their own. Thus, there is no centrally designed nationwide privatization program in China, which makes its privatization distinctively different from that in the rest of the world.

In practice, each city government was responsible for whether, when and how to privatize. They adopted a variety of methods determined by weighing costs to be incurred and benefits to be obtained. Our data show that, the most popular method is *direct sales (*or *open sales*), to either insiders or to outside private owners. These two methods are used, respectively, in 47% and 22% of the SOEs (Table 2, Panel A2). Other methods include *public offering* (1%), *joint ventures* (2%), *leasing* (8%), *employee shareholding* (10%), and miscellaneous(10%). This basic pattern discovered by us is consistent with the study by Garnaut et al. (2005).[8]

[7] In 1998 nationwide the state sector made a total loss of 307 bn RMB; and the overwhelming bad-loan problem associated with these losses were regarded as the biggest threat to the economy (Xu, 2011).

[8] Another often mentioned *gaizhi* measure is internal restructuring, including incorporation, spinning off, introducing new investors, and debt–equity swaps, as well as bankruptcy/reorganization, often involves

Under *direct sales*, the firm is openly sold to insiders (through management buyouts, or MBOs) *or* outside private owners through auctions or negotiations between local government and the potential buyers. Despite that we later find that MBOs are the most effective in improving efficiency, it is the most controversial privatization method, because of a lack of transparency in the process of MBOs, which raises the public concern that state assets may have been sold too cheaply. But the public and media do not aware of different mechanism of transferring control rights associated with privatization methods.

Public offering is share issue privatization. Under the policy of "retaining the large, releasing the small," the large ones are privatized through share issue privatization in which non-controlling shares are sold in the public capital market. That is, SIP. By design, it is not meant to transfer control rights. SIP accounts for only a tiny proportion (1% of privatized firms according to our survey) of all privatization programs in China. It is, however, the type of privatization in China that has been most studied in the literature simply because of availability of data. *Joint venture* or *merger* involves privatization in the cases where a SOE forms a joint venture with or merges with a private domestic or foreign firm. Under *Leasing*, the company can be leased to the management, employees, outside private firms, or other SOEs. In reality, most leasing involved inside managers as the lessees and the firms often were privatized through MBO later.

Employee shareholding converts the company into a limited liability companies or cooperatives. It is one of the most important *gaizhi* measures deployed at the early stage of local experiments both because the central government's requires that each privatization plan be approved by employees before implementation and also because shares were often offered as part of the compensation for removing employees' "tenured" state-employment status. At later stages of *gaizhi*, the managers often purchase the

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partial privatization but may also involves no privatization in the case that a structuring is among state-owned firms. The latter case is concentrated in super large scale SOEs owned by the central government and they enjoy monopolistic powers in markets, such as oil, electricity, telecommunication, etc.

majority shares from employees. This is verified by our data: in most of these firms, managers own majority of the shares which qualify them as an MBO.

In sum, the local governments play the most prominent role in China's privatization programs, from program design to implementation. Given the vast regional disparity and local governments' autonomy in making decisions vis-à-vis SOEs within their jurisdictions, the local governments adopt a variety of privatization methods to suit the local needs. What incentives and constraints do they face in determining the choices of privatization methods? What are the implications of the different privatization methods for ownership and control? How do the different privatization methods affect the success of privatization? We aim to address these important questions in the rest of the paper, which is made possible only by our large-scale nationwide survey discussed in the next Section.

II. The Nationwide Survey and the Sample

II.A. The Nationwide Survey

To facilitate an in-depth study of China's privatization, we designed and implemented a large-scale nationwide survey of firms in early 2006. Our sampling procedure involved two steps. We started with the 2004 National Bureau of Statistics (NBS) census, which contained all industrial firms with sales above 5 million RMB, as the population, and drew a random sample of 11,000 firms stratified by region, industry, size, and ownership type. Given that only 20% of firms in the 2004 population were SOEs and our intention was to study privatization, we then supplemented the main survey sample with an additional random sample of 5500 from the 1998 NBS database, again stratified based on region, industry, and size. We chose to use the 1998 NBS data because 1998 is the first year that the NBS database was available and large scale privatization started in the late 1990s. Thus using 1998 population maximized our chance of including SOEs not yet privatized. In total, we had 16,500 firms for the survey.

The questionnaires were designed through an "interactive" process. We started with a pilot survey of 720 firms in four provinces and nine cities, including Beijing, Laizhou (Shandong province), Taizhou and Changxing, (Zhejiang province), Changchun and Jilin (Jilin Province), Shijiazhuang, Pingshan and Tangshan (Hebei province). It was conducted through both on-site interviews and telephone interviews. This pilot survey turned out to be extremely useful in improving our survey design and later in guiding our empirical analysis. For example, due to the controversy of MBOs, many of the MBO firms disguised themselves by reporting other less controversial methods, e.g., employee shareholding. This demonstrated the importance of verifying firms' reported privatization methods with their responses to questions on changes in ownership. In soliciting some (sensitive) financial variables, instead of asking for the information directly, we experimented with using multiple choices (of percentage intervals) and found that the response rate increased substantially.

The main survey was conducted through telephone interviews. We hired a professional survey company that had a close relationship with the National Bureau of Statistics and had previously helped NBS to conduct its own surveys. We spent a week to train the staff of the survey company to understand each question. Throughout the survey, we worked closely with the staff and supervised the progress carefully. The questions were answered by the chief executives of the firms (or their representatives), the chief accountants, or the heads of human resources.

To facilitate a difference-in-difference analysis, we prepared two sets of questionnaires: one for privatized firms (the "treatment" group) and one for all other firms (including the "control" group). In the survey, every firm was first asked whether it was privatized and, depending on the answer, the appropriate questionnaire was used. The two sets of questionnaires were identical except that, for privatized firms, (1) we asked questions related to privatization, e.g., the year in which the firm was privatized and the privatization method; (2) for questions on ownership and control, the firms were

asked to provide information on both the pre- and post-privatization periods. Survey questions that are relevant to this study are in Appendix 1.

We obtained 3054 responses, yielding a response rate of 19%. Our survey sample contains 899 privatized firms, 475 non-privatized SOEs and COEs (non-privatized SOEs hereafter), and 1685 *de novo* private firms. In our survey, we do not notice any systematic selection of firms that responded to our survey. Indeed, as reported in Table 1, our survey sample matches the distribution of the population reasonably well, in terms of both region and industry. The size distribution of our sample is skewed towards larger firms because we purposely over-sampled SOE firms which tend to be larger for this study, otherwise the sample size might be too small statistically. Figure 1 further shows that the regional distribution of the privatization sample is roughly in line with the presence of SOEs in the country.

II.B. The Data

Our approach allows us to obtain the financial information of surveyed firms from the NSB database which is available from 1998 to 2005. To ensure that all privatized firms have at least one-year of performance information prior to privatization, we drop 168 firms that were privatized prior to 1999. We then exclude firms without valid financial information. Our final sample is a panel of 717 privatized firms, 460 SOEs that have not been privatized and 1758 de novo private firms for the period of 1998-2006.

In our analysis of the role of government incentives in privatization decisions, we use the *China City Statistical Yearbook* to obtain city-level (at and above the prefecture level) fiscal and regional economic variables from 1997 to 2006.

II.C. Preliminary Observations from Our Sample

Table 2 reports the summary statistics of the main variables used in our empirical analysis. In Panel A of Table 2, we report some basic facts of China's privatization. Starting from the year 2000 and up to the year 2005, the year prior to the survey, privatization steadily picked up.[9] Direct sales to insiders (MBOs) are by far the most widely used method, accounting for close to half (47%) of all privatized firms. The next is direct sales to outsiders, which is used in 22% of the firms. Thus, direct sales in total account for close to 70% of privatization programs in China. Other privatization methods include public offerings (1%), joint ventures (2%), leasing (8%), employee shareholding (10%), and miscellaneous (10%).

The ownership structure of Chinese privatized firms is highly concentrated. The largest shareholders on average hold 60% of the shares and the second and third largest shareholders hold 26% of shares. Among different privatization methods, MBOs have the lowest ownership concentration, with the largest shareholders holding 37% of the shares, whereas the largest shareholder of the firms sold to outsiders has 64% ownership on average. For firms privatized by other methods, the largest shareholders on average hold 91% of the shares.[10]

Panel B is a summary of the financial variables of Chinese firms in our sample. We use two measures of operating performance: one is operating profits (earnings before interest, tax, and depreciation, EBITDA) over assets; the other is operating profits

[9] The drop in the number of privatization in 2006 is due to the fact that our survey was conducted in early 2006 and thus did not include all privatization in year 2006.

[10] *A priori*, the impact of concentrated ownership on performance is ambiguous. On the one hand, concentrated ownership has the benefit of mitigating the free-rider problem in monitoring managers and, in the case of insider ownership, aligning managerial interests with those of shareholders. On the other hand, a large shareholder can expropriate the resources from outside minority shareholders. This expropriation problem is potentially strongest in countries with weak property rights protection, where much privatization occurs. As pointed out by Deng, Gan, and He (2008), expropriation by large shareholders is the root cause of the failure of share issue privatization in China. Thus it remains to be seen as to how the incentives of large shareholders play out in among non-SIP.

over the number of employees. The top part of Panel B (Panel B1) compares privatized, non-privatized and *de novo* non-state (private) firms. SOEs tend to be larger, more leveraged, and less profitable than *de novo* private firms. Compared with non-privatized SOEs, privatized firms tend to be larger; but they do not have any consistent pattern in terms of operating efficiency.

The bottom part of Panel B (Panel B2) of Table 2 compares the financial variables before and after privatization for sub-samples of privatized firms. While firm scale, both in terms of the total assets and the total sales, increased by 50% and 72% on average after privatization, according to the median, the assets of privatized firms shrank slightly probably reflecting selling-off of unproductive units in most firms. Privatized firms tend to become less leveraged after privatization, consistent with a hardened budget constraint. For both measures of performance, there is a significant improvement in terms of the mean and the median (all at the 1% level). As a comparison, we also report the statistics for MBO firms, the most popular method of privatization. Indicative of our later empirical results, their performance gain appears to be larger.

III. Mechanisms of Efficiency Gain: Reallocation of Control Rights and Restructuring

The essence of different ownership structure is its allocation of control rights among stakeholders of the firm (Grossman and Hart, 1986; Hart and Moore, 1990). In theory, privatization affects a firm's performance through transferring the control rights from the hands of the government to the hands of private owners (Boycko, Shleifer and Vishny, 1996). However, to our knowledge, direct empirical evidence on these important arguments is not well developed. In fact, a common feature of privatization around the world is the incompleteness in transferring control rights, i.e., the government retains significant ownership in privatized firms (Jones and Mygind, 1999; Gupta, 2005). Since the government has political goals that are often different from

profit-maximization, government control is likely to alter the effectiveness of privatization. Thus the first set of questions that we ask in understanding China's privatization is: Has the government retreated from key corporate decision making? How do different methods of privatization reallocate control rights of the firms? What are the consequences of state control on post privatization restructuring and performance?

III.A Re-allocation of Control Rights

In our survey, we explicitly designed questions on the allocation of control rights among the local government, the party committee at the firm, board of directors, general manager, workers representative committee, board of supervisors, and shareholder committee in making key corporate decisions. These corporate decisions include the appointment of senior managers, investment, hiring and laying-off of employees, salary and bonus, distribution of profits, production and marketing, financing, and use of funds. We asked the firms to rank, for each of the above corporate decisions, the importance of different decision makers, ranging from 0 to 5, where 0 means negligibly unimportant and 5 indispensably important. For privatized firms, we obtain this information before and after the privatization.

The results are summarized in Table 3 and Figure 2. As shown in Panel A of Table 3, for non-privatized SOEs and for pre-privatization SOEs, government exercises a fairly strong control power over major decisions of these firms, with average scores of 2.3 and 1.9 respectively (columns (1) and (3) in Panel A of Table 3)[11]. The government's control right is particularly strong on the appointment of top management, scoring 3 and 2.5. In contrast, the government has no control power over decisions within *de novo* private firms (columns (2) in Panel A of Table 3).

[11] One should keep in mind that the pre-privatization reform of SOEs has been focused on delegating decision power to SOEs

Figure 2 illustrates that the most striking change in control rights after privatization is the reduction of government influence, with the average score dropping from 1.8 to 0.4. Among different privatization methods, the reduction of the government's control right is the most for MBOs, with the average score dropping from 1.8 to 0.07. Direct sale to outsiders comes second, with average government control reduced from 1.8 to 0.15. For other methods, the average score is reduced from 1.9 to 0.9.

A unique feature of corporate governance in China is that almost all the not-too-small firms in China[12], including domestic *de novo* private firms and foreign firms, have a committee (or a branch) of the Chinese Communist Party. As shown in Panels A and B of Table 3, party committees are also involved in decision-making of the firm and their influence is similar to that of the government for Non-privatized SOEs and pre-privatization SOEs (columns (1) and (3)). After privatization, the reduction in control by party-committees is generally less than that by the government.

Conceivably, the government may influence corporate decisions both through its direct control rights and through its indirect intervention via firm-level party committees. Thus it is useful to provide an overall picture of the state control in privatized firms. To this end, we use the max of these two as the score for overall state influence in corporate decisions. Despite a drop of the score of overall state influence from 2.8 to 1.4 after privatization, state influence is still quite important in a significant proportion of firms, with 39% firms having a score above 2 (*Somewhat Important*) and 15% above 3 (*Moderately Important*). In addition to state influence in corporate decision making, our survey also indicates that governments retained significant ownership of the firms. The retained government ownership is 20% on average.

[12] All the firms in our sample are "not-too-small" that each of their sales revenue is no less than 5 million RMB.

In Table 4, we report the proportion of firms with an overall state influence score above 2 or government ownership above 20%, which is the sample mean and is an ownership level that is likely to allow government to exert influence on the firms. Across different privatization methods, MBO firms have the lowest level of state control in both measures. Only 1% of MBO firms have government ownership above 20%, significantly lower than the sample average of 50%. MBOs are also much less likely to have state intervention in its major decision making (16% vs. 59% sample mean). Compared with MBOs, the other direct sales method, sales to outsiders, has substantially more state control. However, compared to other methods of privatization, firms sold to outsiders have less state influence, though the difference is only significantly for state control in corporate decision making but not in state ownership.

Among other changes in control rights, Figure 2 indicates that the board of directors and shareholder meetings gain the most importance in corporate decision making, which suggest a general trend of professionalization of management in privatized firms. Moreover, this change is most prominent among MBOs and in the case of shareholder meetings, privatization methods other than direct sales.

III.B The Influence of State Control on Post-Privatization Performance

Given that the state retains substantial control in about half of the privatized firms, we now investigate the impact of state control on post-privatization performance. We estimate the following model:

$$Performance_{it} = \alpha_i + \beta_t + \gamma\, Post_{it} + \lambda\, State\ Control_i \times Post_{it} + \delta X_{it} + \varepsilon_{it}, \qquad (1)$$

where $Performance_{it}$ is measured by both ROA and earnings per employee. $Post_{it}$ is a dummy variable indicating years after privatization (it is set to zero for those SOE that has never been privatized). *State Control* is a dummy variable indicating strong state

control, which is measured either as state ownership above the sample mean or reported government control above 2 as discussed above. X_{it} are firm control variables that might be related to profitability, including size (measured as log of assets), leverage (debt over assets), and lag of profitability to account for potential mean reversion in profits. α_i is a firm fixed effect, which controls for any time-invariant firm characteristics that may affect privatization decisions. β_t is a year fixed effect. Coefficient γ is the differences-in-differences estimate of the effect of state control on post-privatization firm performance.

Table 5 demonstrates that state control significantly hinders performance of privatized firms, consistent with theoretical predictions of Boycko et al. (1996). In columns (1) and (2) of Table 5, higher state ownership is associated with significantly worse post-privatization performance, for both operating efficiency measures (at the 5% and the 10% levels). In columns (3) and (4) of Table 5, state influence in firms' decision making is associated with significantly lower operating efficiency (at the 1% and 10% levels). These results highlight that the success of privatization depends critically on whether the government could commit to withdrawing its control over the firms and refraining from using the firms to achieve its political objectives.

III.C Post-Privatization Restructuring Measures

Related to reallocation of control rights, privatized firms may undertake different restructuring measures that could enhance incentives and important efficiency. In our survey, we asked about four restructuring measures. The first is whether the firm changed its core management team — introduction of new human capital into management is shown to be important in improving efficiency in other privatization settings (Barberis, Boycko, Shleifer, and Tsukanova, 1996). The second is whether the firm incentivizes its executives through increased performance-based pay. In restructuring corporate governance, we asked whether the firm established a board of

directors after privatization and whether it adopted international accounting standard after privatization.

Panel A of Table 6 reports the proportion of firms adopting the above restructuring measures for different privatization methods. Compared to the overall privatization sample, MBO firms are most likely to change members of core management team (64% vs. 62%), to establish a board of directors (84% vs. 76%), and to adopt international accounting standards and professional independent auditing (11% vs. 8%). The latter two differences are significant at the 5% or 10% levels. Direct sales to outsiders are less likely to establish a board (67% vs 76%) and but are more likely to adopt performance based compensation (15% vs. 7%), both differences are significant at the 1% level.

The logit model in Panel B of Table 6 further confirms the findings in the univariate analysis. MBO firms are significantly more likely to change core members of the management team, to establish a board of directors, and to adopt international accounting standard and professional independent auditing (at the 1% or the 5% levels). All these are consistent with the findings that MBOs represent the most transfer of control rights from the state to the firm. MBO firms are not likely to have performance-based pay to executives, which is not surprising — owners of MBOs firms are also managers and thus ownership and control are already aligned. [13]

In contrast, firms sold to outsiders are not more likely to change core management team or to introduce governance measures. Probably reflecting separated ownership and control, however, these firms are more likely to use performance-based pay to align incentives.

Anecdotal evidences as well as our own conversations with managers suggest that board of directors is often established because the firm, at the time of MBO, needs

[13] Among 471 MBOs in our sample, except for 2 firms, managers are the largest shareholder. In the remaining two firms, one has the government and the other has workers as the largest shareholder.

to raise financing from other investors who eventually sit on the board and because the board can help with professionalization of the firm. Adopting international accounting standards is also a way to professionalize the firm. Thus it appears that MBO firms have more incentive to professionalize the firm, which is also consistent with an incentive to prepare the firm for public listing.[14] Indeed eventually listing the firms in the public capital market provides an exit strategy for the owner-managers of the firms. This can be part of the reasons why, in contrast to the failure of insider privatization in Eastern Europe and Russia (Barberis et al., 1996) MBOs in China are successful, although further research would be necessary to confirm this hypothesis in detail.

As a summary, we find that firms privatized through MBO have resulted in substantial reduction of government controls over the firm; whereas other privatization methods are much less effective in transferring the control rights to the firm. Further, freedom from state control is associated with significantly better operating performance. Finally, MBO firms are more likely to adopt restructuring measures including change of core management team, adoption of international accounting standards, and establishment of a board of directors.

IV. Political Constraints, Governments' Incentives, and MBO Choices

We have shown in the previous section, MBOs are most effective in transferring the control rights to the private owners and in promoting post-privatization restructuring. This inevitably leads us to ask why many city governments chose not to privatize via the MBO approach. In this Section, we address this issue by examining the incentives of the local governments and the political and economic constraints they faced at the time of privatization.

[14] One of the coauthors of this paper served on the board of an MBO company that intended to be listed in NASDAQ, along with lawyers and accountants. That board indeed provided valuable professional advice to the company.

As discussed earlier, by the late 1990s, most SOEs were losing money and deep in debt. In addition to poor management, there are two main reasons for SOEs' weak performance. One is surplus workers -- according to various estimates, surplus workers ranged from 23.5% to 44% of the SOE labor force during 1993−96 (Li and Xu, 2001, and Dong and Putterman, 2003).[15] Given that layoffs are politically incorrect, these surplus workers are kept in the SOEs even if the SOEs could not pay them in full or give them enough work (this "no work" status without being formally laid off is called *xia gang*). The other main reason for SOE's poor performance is various policy burdens, such as pension, social welfare, and uncompensated uses of corporate resources by the local governments. Thus without government intervention, private owners aiming at efficiency would lay off redundant workers and be reluctant to shoulder many of the policy burdens, both are politically and financially painful to the local government. As we have shown, MBOs represent a commitment from the government to relinquish its control. Several factors could affect the incentive for the local government to make such a commitment.

The first is local political opposition to layoffs. Empirically, we measure it as the share of SOE employment in total urban employment. A greater share of SOE employment indicates slower development of *de novo* private sector, which makes it harder for the laid-off workers to find new jobs and political opposition to layoffs stronger. Moreover, the implicit unemployment problem discussed above is most severe in cities dominated by SOEs, again resulting in stronger political pressure against layoffs. Thus we expect that cities with a greater share of SOE employment are less likely to implement MBOs in privatization.[16]

[15] According to a World Bank survey in 1994, one-third of firms reported a labor redundancy rate exceeding 20% (Bai et al., 2006).

[16] There is a more subtle reason why the share of SOEs may be negatively related to MBOs. Cross region differences in the development *de novo* private sector is related to the local governments' attitudes towards private ownership. In earlier days of reform, some local governments provided *ad hoc* local protections (promises) and other supports to private firms when the constitution did not protect private ownership;

The second factor is the ability of local governments to bear the costs of layoff and social responsibilities. One measure of such ability is the government's fiscal resources. The more the fiscal resources, the greater ability the government has to pay for the layoffs and/or redeployment of laid-off workers. Moreover, the impact of greater government fiscal capacity is likely to be non-linear: it is more important in regions where unemployment is a bigger concern because greater fiscal capacity allows the government to provide better support for redeployment of laid-off workers in MBOs. Fiscal resources also reduce the reliance of local governments on SOEs to achieve their social and political goals, as well as for uncompensated use of resources.

In our survey, we also asked about various government policy subsidies that might affect the government's choice of MBO. The policy subsidies include the city government's loan guarantees and direct allocation of land (for free or at below market price). To the extent that these policy subsidies reflect pre-existing "ties" between the firm and the government, it may be harder for the government to commit to a more complete withdrawal of influence.

We estimate the following logit model to quantify the influence of government incentives on the choice of MBOs.

$$\begin{aligned} &Prob(MBO = 1) = \Lambda(Y), \text{ where} \\ &Y = a + b\ Government\ Incentives + cX + Industry\ Dummies \\ &+ Privatization\text{-}Year\ Dummies, \end{aligned} \qquad (2)$$

and $\Lambda(.)$ is the logistic cumulative distribution function. *Government Incentives* include government fiscal resources as measured by government revenue as a percent of GDP, the share of SOE employment in total urban employment, government allocation of land, and government guarantee of loans. To capture the greater impact of fiscal resources in

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whereas many others discouraged the development of private sector. To the extent that MBOs represent a more "thorough" privatization, city governments that are more "pro" private ownership are more likely to choose MBOs.

cities where unemployment is a greater concern, we also include an interaction term between fiscal resources and a dummy variable indicating high share of SOE employment (defined as % of SOE employment greater than the sample median). All *Government Incentives* variables are measured in the year prior to privatization. *X* is a set of control variables. We include two sets of controls. One is the city level, including GDP per capita and population growth. The other set of controls is at the firm-level, including profitability (EBIT over sales), size (log of assets), and leverage – again all measured at the year prior to privatization.

Table 7A presents the summary statistics of the variables used. Indicatively our later findings, MBOs are significantly more popular among cities with better fiscal balance, or with lower share of SOE output. Moreover, MBO firms are less likely to have obtained land from government.

Table 7B presents our regression results. In column (1) of Table 7B, the impact of a higher share of SOE employment is negative and significant as expected (at the 5% level). The interaction term between *Fiscal revenue/GDP* and *High share of SOE employment* enters with a positive sign (at the 1% level), suggesting that in cities where political opposition to layoff is stronger, greater fiscal resources allows the government to provide better support for redeployment of laid-off workers in MBOs. Government allocation of land is significantly negative (at the 5% level), suggesting that pre-existing government-firm ties make it harder for the government to commit to MBOs.

In column (2) of Table 7B, we further add firm-level variables in the year prior to privatization, including size, profitability and leverage. Firm size is significantly related to MBO choices with a negative sign (at the 10% level). This is not surprising because the cost of layoff and policy burdens tends to be greater for larger firms, and such a large cost would be difficult for the government to absorb. Notably, profitability is not statistically significant in determining the restructuring choices.

As a summary, the choice of privatization methods is mainly driven by political and social considerations, particularly the impact of unemployment and government's fiscal ability to absorb the cost of privatization. Economic factors, such as firm profitability, do not play a significant role in privatization choices. These findings demonstrate the importance of political economy factors in shaping the design of economic institutions. They are also useful in interpreting our results on post-privatization performance in the next section.

V. Choice of Privatization Methods and Firm Performance

Results in the previous sections show that, as compared with other privatization methods, MBOs are much more effective in reallocating control rights from the state to private owners and in implementing restructuring measures. Thus, MBOs are likely to bring about the most efficiency gain. In this section, we empirically evaluate the performance of different privatization methods. Specifically, we focus on the difference-in-difference estimates of performance gain of MBOs vs. other methods of privatization.

In our sample, firms are privatized in different years since the late 1990s, whereas the National Statistical Bureau financial information is only available during 1998-2006. Thus, to fully utilize the data, we use the following panel regression of privatized firms as our main empirical model:

$$Performance_{it} = \alpha_i + \beta_t + \gamma\, Post_{it} + \lambda\, MBO_i \times Post_{it} + \delta X_{it} + \varepsilon_{it}, \qquad (3)$$

where $Performance_{it}$ is measured as earnings over assets (or ROA) and earnings per employee. $Post_{it}$ is a dummy variable indicating years after privatization. X_{it} contains firm control variables, including size (measured as log of assets), leverage (debt over assets), and lag of profitability to account for potential mean reversion in profits. α_i is the firm fixed effect, which controls for any time-invariant firm characteristics. β_t is the

year fixed effect to capture changes in macro-economic conditions that might affect performance. Coefficient γ is the difference-in-difference estimate and captures the differences in performance improvement after privatization. Similarly, the coefficient λ captures the differences between MBOs and other methods of privatization.

V.A. A First Look at the Performance of Chinese Firms

Before we report the effect of different privatization methods on performance, we first present an overall picture of the operating performance of Chinese firms, including privatized firms, non-privatized SOEs, and *de novo* private firms. Columns (1) and (2) in Panel A of Table 8 show that, consistent with popular reports that SOEs are in much weaker competitive position as compared to *de novo* private firms, privatized and non-privatized SOEs have significantly worse performance than *de novo* private firms for both performance measures (at the 1% levels). In columns (3) and (4) of Panel A, we add the *Post* dummy. It is not significantly different from zero.

In Panel B of Table 8, we estimate the performance regression on SOE firms (including privatized and non-privatized SOEs) and thus compare the relative performance of privatized vs. non-privatized SOEs, which should be a better benchmark. In the first two columns, we report results without firm fixed effects. For both performance measures, the *Post* dummy is positive, marginally significant at the 15% level for ROA and significant at 1% for profit per employee. However, when we add firm fixed effects in columns (3) and (4) of Table 11, the coefficient on the *Post* dummy becomes statistically insignificant, suggesting that the results in columns (1) and (2) are driven by unobserved firm heterogeneity. To summarize, when we pool all privatized firms together regardless how they were privatized, we find no statistical evidence that privatization has any impact on performance.

V.B. The Impact of Privatization Methods on Firm Performance

We now report the effect of privatization methods, particularly MBOs, on firm performance. Estimation results of Equation (3) are presented in Table 9. In the first two columns of Table 9, we report results without firm fixed effects. The interaction between *MBO and* the *Post* dummy is significantly positive for both measures of performance (at the 5% and the 10% levels). The coefficient on the *Post* dummy itself is not significant, suggesting that privatization methods other than MBOs do not improve performance. In columns (3) and (4) of the table, we add firm fixed effects. The coefficient on *MBO*Post* remain positive and significant (at the 1% levels). Interestingly, the *Post* dummy itself is not significantly different from zero for ROA but is significantly negative for profits over employment (at the 5% level), which suggests that non-MBOs do not improve efficiency and even lead to decline in operating efficiency based on earnings per employee.

In columns (5) and (6) of Table 9, we further examine the effectiveness of the other type of direct sales method, that is, *Direct Sales to Outsiders*. The interaction between *Direct Sales to Outsiders* and *Post* is not significantly different from zero, suggesting that direct sales to outsiders do not improve performance. This result is fully consistent with our earlier findings about the state control and a lack of restructuring measures in this kind of privatization programs in China.

V.C. Discussions: The Selection Concern

A common concern about performance evaluation of privatized firms is the selection bias. For example, one may worry that MBO firms have significantly better post-privatization performance because better firms are systematically chosen for MBOs; or managers may have private information about the future prospects of the firms and choose to buy out those with good prospects; or managers may have manipulated the

earnings downward prior to MBOs so that they could buy out the firms more cheaply, causing a mechanical increase in earnings post-privatization.

We should stress that, compared with the previous literature, our data allow us to deal with the selection bias more seriously. The analysis in the previous sections has in fact already addressed the selection issue in several ways. First, we do not simply make performance comparison, but rather, we have identified the mechanism of performance improvement. Specifically, our earlier evidence indicates that MBOs transfer control rights from the government to private owners more completely (Tables 3 and 4) and they restructure more effectively (Table 6); and privatized firms with less control rights left in the hands of the government perform significantly better (Table 5). Second, we explicitly examine the factors that affect the chances of firms being selected for MBOs. The fact that we find political and fiscal incentives, rather than the above-mentioned economic considerations, determine the choice of privatization method (Table 7) is reassuring. It suggests that the better performance of MBOs is not likely to be driven by good quality firms being selected for MBOs.

To rule out the selection bias even further, we perform two additional analyses. First, we examine whether there is any pre-existing trend in the difference in performance between MBOs and non-MBOs. If MBO firms were better firms or firms with greater growth potential, one should observe better performance prior to privatization. As shown in Figure 3, there is not any preexisting trend in performance.

Second, we use city government's political incentives as instruments to estimate the effect of restructuring on performance. The instruments include %SOE Employment, Fiscal Revenue/GDP, government allocation of land and loan guarantees. Column (1) of Table 7B shows results of the first stage regressions. Consistent with the discussions in Section IV, our instruments are significantly associated with the choice of privatization methods. We employ the limited information maximum likelihood (LIML) estimation of the two-stage least square (TSLS) regressions, which is more robust to weak IV

problems. The results are reported in Table 10. The IV difference-in-difference estimates are quantitatively similar to our OLS estimates, further confirming that improved post-privatization performance of MBOs is not driven by selection.

VII Conclusion

China's privatization is unique in that, instead of being designed by the national government, it is initiated, designed and implemented by city governments. Consequently, there is a large variation in privatization policies and outcomes across Chinese cities. This distinctive experience provides a rich laboratory in which one can observe how city governments, influenced by political constraints and financial interests, choose different privatization methods, how these methods lead to different mechanisms for efficiency gain in privatized firms, and what the outcomes of these different mechanisms are. Yet, unfortunately, this valuable laboratory was not explored in the literature, partly due to a lack of detailed data.

This paper fills this gap. Based on a large-scale nationwide survey of over three thousands of firms from nearly one third of Chinese cities, we make the following contributions. First, we shed light on the role of political factors in shaping the design of privatization programs in this regionally decentralized authoritarian system (Xu, 2011).[17] Second, we identify concrete mechanisms, i.e. re-allocation of control rights, through which privatization affects restructuring and performance of firms. Third, this paper improves our understanding of China's privatization, and the governance of the Chinese economy.

In our survey, which is based on a random sampling stratified by size and industry, we explicitly ask questions that would allow us to identify the mechanism of privatization, including the change of ownership and shareholding structure, re-

[17] There is a literature on political factors' influences on privatization, mostly are voting related (e.g. Biais and Perotti, 2002). The large majority of the empirical literature is cross country studies with an exception of Dinc and Gupta (2011), which examines the influence Indian democracy on privatization.

allocation of control rights among different parties in key corporate decisions, and post-privatization restructuring. Through this survey we have collected, arguably, the most comprehensive data available to researchers in studying the mechanism of privatization.

Our data indicates that privatization in China has made substantial progress in reallocating control rights from the government to private owners. There are, however, significant variations in the degree of remaining government influence in corporate decisions across different privatization methods. Our evidence suggests that the incentives of the city governments and the political constraints they face are the key determinants of their choices of privatization methods. In cities where political opposition to layoffs are weaker and where the city government has more fiscal resources to bear the cost of layoffs and to fill the gap in social welfare, the government is more likely to choose the MBO method, which represents the strongest commitment to withdraw its influence in corporate decisions. Our findings indicate that MBOs, which account for about half of all privatization programs, restructured more effectively and improved their performance significantly. In contrast, in direct sales to outsiders and other methods, the state, retains substantial control, resulting in less restructuring and worse post-privatization performance.

In general, our findings support those in the previous literature that looking only at aggregate results of the success of privatization without knowing the concrete mechanisms could be misleading, since different ways of re-allocating control rights deeply affect restructuring and performance (Frydman et al., 1999, Estrin et al., 2009). Some of our findings, however, do appear to contrast with the literature. Specifically, it has been documented that in the CEE-CIS economies firms privatized to outsiders, particularly foreigners, enjoyed significant efficiency gains; whereas firms privatized to insiders did not work well (Djankov and Murrell, 2002; Estrin et al., 2009). Yet, in China, we find that the MBO approach leads to more effective restructuring and more efficiency improvement than other approaches. We do not view the two sets of findings

as inconsistent. Our results highlight the importance of taking away control rights from the government and proper corporate governance in privatized firms - they are the key drivers of performance enhancement. In China, the MBO approach transfers control rights to private owners most completely. In CEE-CIS countries, however, it is not clear how control rights are transferred in insider privatization and what the governance structure there is in these firms.

We conjecture that another factor that contributes to the differences in performance of insider privatization between China and CEE-CIS is the institutional environment at the time of privatization. When mass privatization started in CEE-CIS economies, product markets and labor markets were not developed, financial markets were not established and private ownership was an unfamiliar phenomenon. In this situation, managers or private owners may not have had sustained interest in running their firms, nor did they have a clear exit strategy. Indeed, there were anecdotes that insiders stole from privatized firms. In contrast, privatization in China has been delayed but when it actually occurs, the private sector is already a big part of the economy and market-institutions have been developed, including a functioning capital market. All these provide the new owners with an exit strategy to fully capitalize on the efficiency gains and thus incentives to improve performance. We leave future research to examine this hypothesis in detail.

The dynamics between the state and the economy during privatization provide an important perspective for understanding the Chinese economy. Political constraints and state invention are the main reasons why some privatization programs fail to enhance performance. The same dynamics characterize the Chinese economy quite well in the past ten years, after China enters WTO. During a period of rapid economic growth, the state has no urgency to push for further economic reforms and political comprises result in great state influence and thus economic inefficiencies in many sectors of the economy. In the face of the current economic slowdown, however, resolving these inefficiencies is

one of the important areas for future economic reforms.

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Figure 1. Regional distribution of Privatized Firms in the Survey

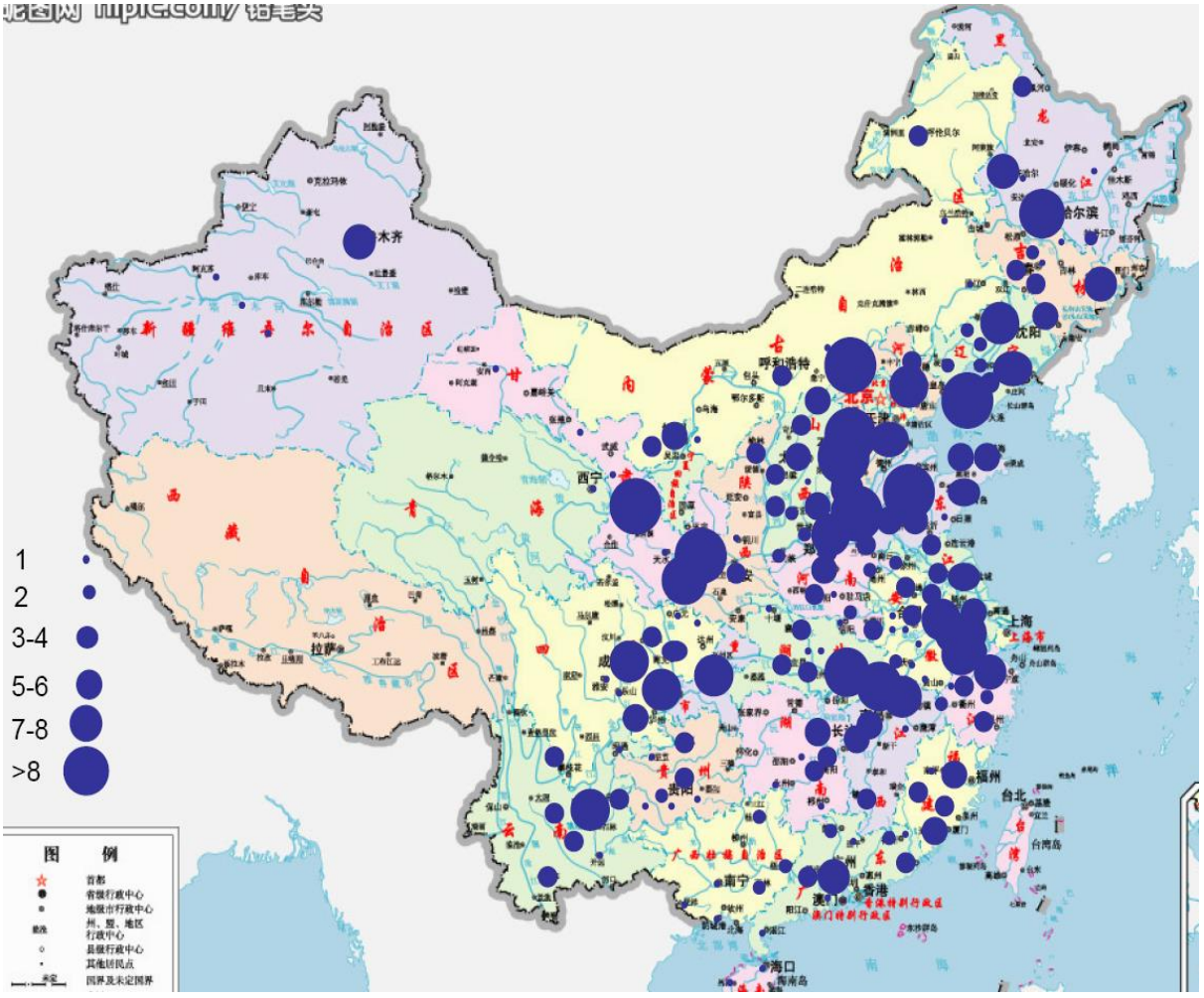


Figure 2. Reallocation of Control Rights Before & After Privatization

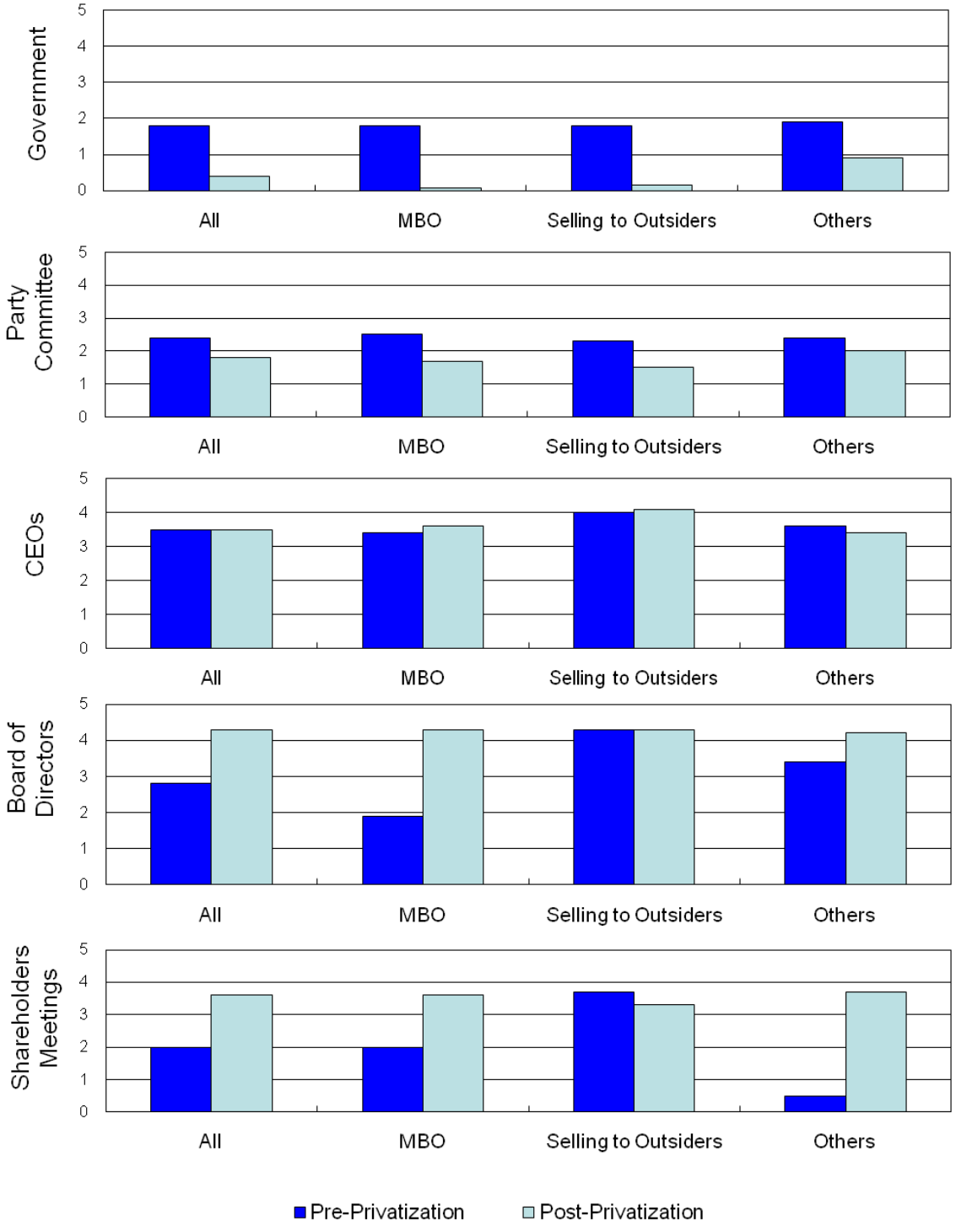
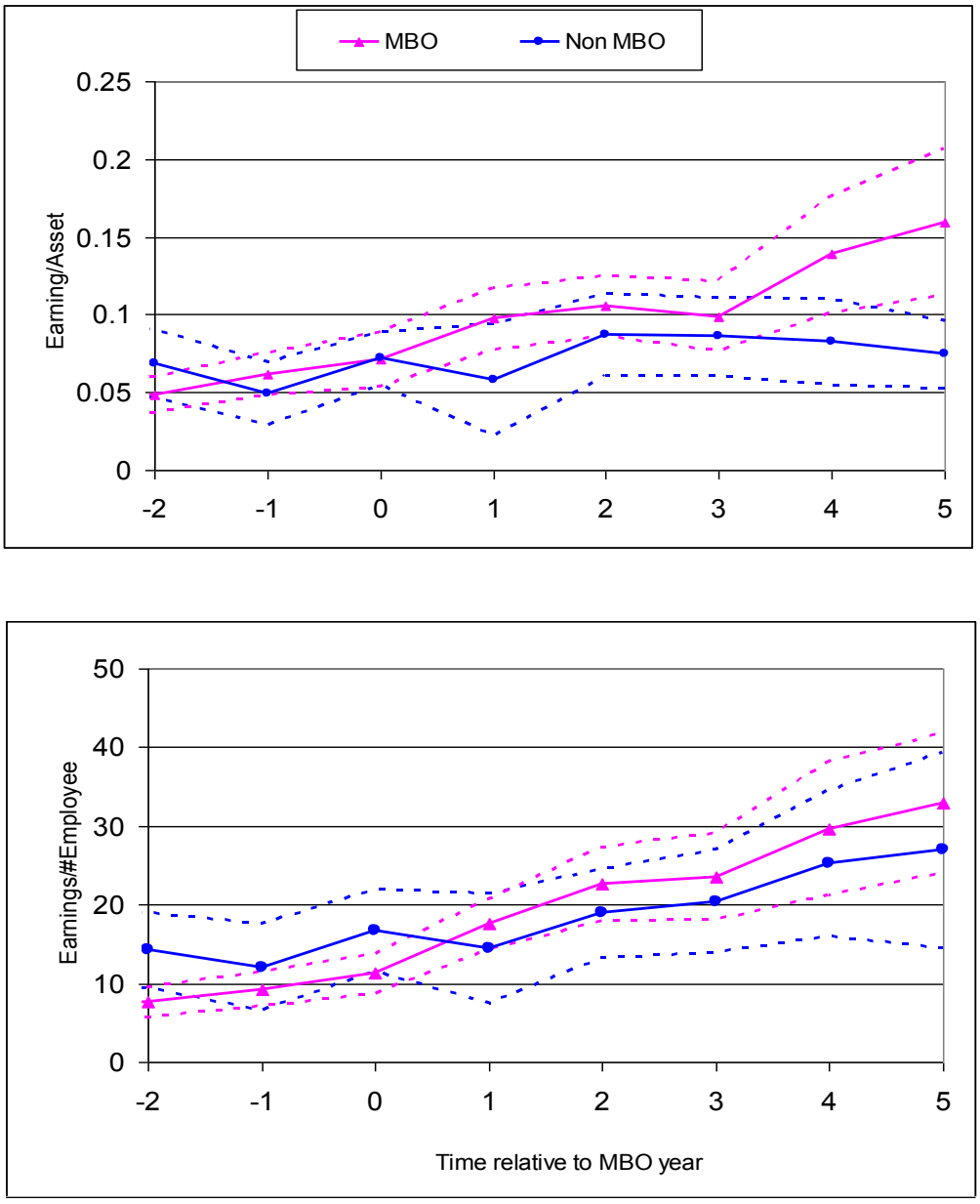


Figure 3. No Pre-existing Trend of Performance Differences between MBOs and Other Privatization Methods



Note: Solid lines are the mean; dashed lines are 90% confidence intervals.

Table 1. Sample Distribution of Ownership, Size, Location, and Industry

This table compares the distribution of our survey sample with that of the population by size, location, and industry. North China includes Beijing, Tianjin, Hebei; North-East: Heilongjiang, Jilin, Liaoning; North-West: Xinjiang, Qinghai, Ningxia, Gansu, Shaanxi, Innermongolia; Noth-Central: Shanxi, Henan, Shandong; South-West: Xizang, Yunan, Guizhou, Sichuan, Chongqing; East: Shanghai Jiangsu, Zhejiang; South: Guangxi, Guangdong, Fujian, Hainan; South-Central: Hubei, Hunan, Jiangxi, Anhui.

	Survey Sample		Population	
	Number	%	Number	%
	(1)	(2)	(3)	(4)
Panel A: Size Distribution				
Large	87	3%	3,242	1%
Medium	491	17%	35,660	11%
Small	2,419	80%	285,284	88%
Panel B: Regional Distribution				
North	300	10%	25,936	8%
North-East	209	7%	22,693	7%
North-West	150	5%	12,967	4%
North-Central	480	16%	48,628	15%
South-West	180	6%	16,209	5%
East	1,019	34%	113,465	35%
South	419	14%	58,353	18%
South-Central	240	8%	25,935	8%
Panel C: Industry Distribution				
non-manufacturing industries	1	0%	13	0%
Mining	273	9%	37,662	12%
Food, Beverage & Tobacco	264	9%	29,431	9%
Textiles	366	12%	49,402	15%
Timber and Paper Products	275	9%	28,441	9%
Petroleum & Chemical	495	17%	49,159	15%
Metals	633	21%	66,682	21%
Machine and Electronics	515	17%	53,351	16%
Electricity, Gas and Water	175	6%	10,045	3%

Table 2. Basic Facts and Summary Statistics

This table presents basic facts of China's privatization and summary statistics of financial variables used in the empirical analysis. Profits are defined as earnings before interest, tax, and depreciation. In Panel A.1, we report year of privatization till 2005, since our survey was conducted in early 2006. There were 11 firms privatized in 2006 in our sample. Significance levels are all based on two-tailed tests of differences. In Panel A.3 differences between the MBO firms and other methods and between Selling to Outsiders and other methods are tested. Differences between SOEs and non-SOEs are tested in column (5) of Panel B.1, differences between MBO and non-MBO are tested in column (4) of Panel B.2 . Significance at the 1%, 5%, and 10% levels is indicated by ***, **, and *, respectively.

Panel A: Basic Facts of China's Privatization

A.1 Year of Privatization

Year	# of firms	Percentage
1999	60	8%
2000	103	15%
2001	102	14%
2002	109	15%
2003	129	18%
2004	95	13%
2005	108	15%

A2. Methods of Privatization

	# of firms	Percentage
Direct Sales		
To Insiders (MBO)	338	47%
To Outsiders	157	22%
Other Methods		
Public Offerring	8	1%
Joint Ventures	11	2%
Leasing	56	8%
Employee Holding	70	10%
Others	77	10%
Total	717	100%

A3. Ownership of Privitized Firms

		MBO	Selling to Outsiders	Other	All
Ownership by the Largest Shareholder	Mean	37%***	64%	91%***	60%
	Median	30%***	70%	100%***	51%
Ownership by the Second and Third Largest Shareholder	Mean	27%**	20%***	30%*	26%
	Median	22%**	15%***	30%**	20%

Table 2. Basic Facts and Summary Statistics (Cont'd)

Panel B: Financial Information of Chinese Firms

B1. Overview of Financial Information of Chinese Firms

			State-Owned Enterprises (SOEs)				
		Whole Sample	Privatized	Non-Privatized	Difference	Non-SOEs	Difference
		(1)	(2)	(3)	(2)-(3)	(4)	(2)-(4)
Assets (in thousands)	Mean	170,704	316,182	218,203	97,979***	46,373	269,809***
	Median	25,626	54,166	42,914	11,252***	14,543	39,623***
Sales (in thousands)	Mean	116,336	197,552	131,049	66,504***	52,451	145,101***
	Median	20,371	26,178	19,668	6,510***	18,360	7,818***
Leverage	Mean	0.095	0.138	0.138	0.000	0.045	0.093***
	Median	0.004	0.061	0.051	0.010*	0.000	0.061***
Profit / Assets	Mean	0.105	0.071	0.059	0.013***	0.150	-0.079***
	Median	0.065	0.045	0.038	0.007***	0.098	-0.053***
Profit / #Employee	Mean	21.285	13.865	16.174	-2.310**	28.796	-14.931***
	Median	8.819	6.467	4.667	1.800***	13.483	-7.016***
Number of Firms		15,109	4,959	3,149		6,927	

B2. Financial Variables Before and After Privatization

		Privatized SOEs			MBO		
		Before	After	Difference	Before	After	Difference
		(1)	(2)	(3)	(4)	(5)	(6)
Assets (in thousands)	Mean	278,753	389,630	110,877**	119,987***	176,863	56,976***
	Median	54,221	53,989	-232	43,968***	38,823	-5,145
Sales (in thousands)	Mean	161,631	268,043	106,412***	78,563***	149,584	71021***
	Median	24,686	31,691	7,005***	22,634***	24,785	2151***
Leverage	Mean	0.144	0.126	-0.018***	0.132***	0.112	-0.020**
	Median	0.073	0.04	-0.033***	0.070**	0.029	-0.041***
Profit / Assets	Mean	0.055	0.102	0.047***	0.050*	0.128	0.078***
	Median	0.04	0.057	0.017***	0.038	0.064	0.026***
Profit / #Employee	Mean	10.838	19.682	8.843***	8.185***	21.291	13.105***
	Median	5.133	10.693	5.560***	4.541***	10.896	6.355***

Table 3. Privatization and Change of Control Rights

This table reports allocation of control rights in Chinese firms. The importance of various decision makers is given a score from 0 to 5, where 0 means negligibly unimportant and 5 indispensably important. Average scores across firms are reported; standard deviations are in parenthesis. Significance levels in columns (4), (6), (8), and (10) are based on two-tailed tests of differences in scores from their previous columns, between before- and after- privatization. Significance at the 1%, 5%, and 10% levels is indicated by ***, **, and *, respectively.

					Privatization Methods															
	Non-privatized SOEs		*de novo* Private Firms		All				MBO				Selling to Outsiders				Others			
					Before		After		Before		After		Before		After		Before		After	
	(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)		(9)		(10)	
	M	Md	M	Md	M	Md	M	Md	M	Md	M	Md	M	Md	M	Md	M	Md	M	Md
Panel A. Control Rights of Government																				
Appointment of top management	3.0	4.0	0.0	0.0	2.4	2.0	0.6 ***	0.0 ***	2.4	3.0	0.1 ***	0.0 ***	2.6	2.0	0.4 ***	0.0 ***	2.4	2.0	1.1 ***	0.0 ***
Employment/layoff	2.2	2.0	0.0	0.0	2.0	2.0	0.4 ***	0.0 ***	2.0	2.0	0.1 ***	0.0 ***	2.2	2.0	0.5 ***	0.0 ***	1.9	2.0	0.7 ***	0.0 ***
Wages/compensations	1.9	2.0	0.0	0.0	1.6	0.0	0.4 ***	0.0 ***	1.6	0.0	0.1 ***	0.0 ***	1.8	1.0	0.4 ***	0.0 ***	1.6	0.0	0.7 ***	0.0 ***
Investment	2.6	3.0	0.0	0.0	2.0	2.0	0.4 ***	0.0 ***	2.0	2.0	0.1 ***	0.0 ***	1.9	2.0	0.4 ***	0.0 ***	1.9	2.0	0.8 ***	0.0 ***
Fund raising	2.4	2.0	0.0	0.0	1.9	0.0	0.4 ***	0.0 ***	1.9	0.0	0.1 ***	0.0 ***	1.8	1.0	0.4 ***	0.0 ***	1.9	0.0	0.8 ***	0.0 ***
Fund using	2.1	2.0	0.0	0.0	1.7	0.0	0.4 ***	0.0 ***	1.6	0.0	0.1 ***	0.0 ***	1.8	1.0	0.3 ***	0.0 ***	1.7	0.0	0.8 ***	0.0 ***
Distribution of profits	2.0	2.0	0.0	0.0	1.7	0.0	0.4 ***	0.0 ***	1.7	0.0	0.1 ***	0.0 ***	1.8	0.0	0.4 ***	0.0 ***	1.6	0.0	0.7 ***	0.0 ***
Production and marketing	1.8	1.0	0.0	0.0	1.6	0.0	0.3 ***	0.0 ***	1.5	0.0	0.0 ***	0.0 ***	1.7	0.0	0.3 ***	0.0 ***	1.6	0.0	0.7 ***	0.0 ***
Average	2.3	2.3	0.0	0.0	1.8	0.8	0.4	0.0	1.8	0.9	0.1	0.0	1.9	1.1	0.4	0.0	1.8	0.8	0.8	0.0
Number of Firms	454		1550		717		714		338		337		89		88		290		290	
Panel B. Control Rights of Party Committee																				
Appointment of top management	2.7	3.0	2.0	2.0	2.8	3.0	1.7 ***	2.0 ***	2.9	3.0	1.5 ***	2.0 ***	2.5	3.0	1.3 ***	1.0 ***	2.8	3.0	2.1 ***	2.0 ***
Employment/layoff	2.7	3.0	2.2	2.0	2.8	3.0	1.7 ***	2.0 ***	3.0	3.0	1.6 ***	2.0 ***	2.4	3.0	1.3 ***	1.0 ***	2.8	3.0	2.1 ***	2.0 ***
Wages/compensations	2.4	3.0	2.2	2.0	2.7	3.0	1.7 ***	2.0 ***	2.8	3.0	1.6 ***	2.0 ***	2.3	2.0	1.3 ***	1.0 **	2.6	3.0	2.0 ***	2.0 ***
Investment	2.5	3.0	2.0	2.0	2.2	2.0	1.3 ***	1.0 ***	2.2	2.0	1.2 ***	0.0 ***	2.1	2.0	1.1 ***	1.0 **	2.1	2.0	1.6 ***	2.0 **
Fund raising	2.4	3.0	1.7	2.0	2.1	2.0	1.3 ***	1.0 ***	2.1	2.0	1.2 ***	1.0 ***	2.2	2.0	1.1 ***	1.0 ***	2.1	2.0	1.5 ***	1.0 **
Fund using	2.3	2.0	1.6	2.0	1.9	2.0	1.2 ***	1.0 ***	1.9	2.0	1.1 ***	0.0 ***	2.1	2.0	1.0 ***	1.0 ***	1.9	2.0	1.5 ***	1.0 *
Distribution of profits	2.4	3.0	1.8	2.0	2.5	2.0	1.6 ***	2.0 ***	2.6	3.0	1.4 ***	1.0 ***	2.3	2.0	1.2 ***	1.0 **	2.5	2.0	1.9 ***	2.0 ***
Production and marketing	2.2	2.0	1.8	2.0	2.4	2.0	1.5 ***	1.0 ***	2.5	2.0	1.3 ***	1.0 ***	2.2	2.0	1.1 ***	1.0 ***	2.4	2.0	1.7 ***	2.0 ***
Average	2.5	2.8	1.9	2.0	2.4	2.4	1.5	1.5	2.5	2.5	1.3	1.1	2.2	2.3	1.2	1.0	2.4	2.4	1.8	1.8
Number of Firms	320		181		611		611		285		285		67		67		259		259	

Table 3. Privatization and Change of Control Rights (Cont'd)

	Non-privatized SOEs		*de novo* Private Firms		Privatization Methods															
					All				MBO				Selling to Outsiders				Others			
					Before		After		Before		After		Before		After		Before		After	
	(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)		(9)		(10)	
	M	Md	M	Md	M	Md	M	Md	M	Md	M	Md	M	Md	M	Md	M	Md	M	Md
Panel C. Control Rights of CEOs																				
Appointment of top management	3.9	4.0	4.3	5.0	3.6	4.0	3.6	4.0	3.4	3.0	3.5	4.0	4.1	4.0	4.3 **	5.0 *	3.6	4.0	3.4 **	4.0 *
Employment/layoff	4.1	4.0	4.3	5.0	3.7	4.0	3.6 **	4.0	3.6	4.0	3.5	4.0	4.1	4.0	4.3	5.0	3.7	4.0	3.4 ***	4.0 **
Wages/compensations	4.0	4.0	4.2	5.0	3.7	4.0	3.6	4.0	3.6	4.0	3.6	4.0	4.2	4.0	4.3	5.0 *	3.7	4.0	3.5	4.0
Investment	3.8	4.0	4.3	5.0	3.2	4.0	3.3 *	4.0	2.9	3.0	3.3 ***	4.0 **	4.1	4.0	4.3	5.0 *	3.2	4.0	3.1	4.0
Fund raising	3.8	4.0	4.0	5.0	3.1	4.0	3.3 **	4.0	2.9	3.0	3.2 ***	4.0 **	3.9	4.0	4.2	5.0 *	3.1	4.0	3.0	4.0
Fund using	3.8	4.0	4.2	5.0	3.1	4.0	3.2	4.0	2.9	3.0	3.2 **	4.0 **	4.0	4.0	4.2	5.0	3.1	4.0	3.0	4.0
Distribution of profits	3.9	4.0	4.2	4.0	3.6	4.0	3.6	4.0	3.4	3.0	3.5	4.0	4.2	4.0	4.4	5.0	3.6	4.0	3.5 *	4.0
Production and marketing	4.0	4.0	4.1	5.0	3.8	4.0	3.7	4.0	3.6	4.0	3.6	4.0	4.3	5.0	4.5	5.0	3.8	4.0	3.6 *	4.0 *
Average	3.9	4.0	4.2	4.9	3.5	4.0	3.5	4.0	3.3	3.4	3.4	4.0	4.1	4.1	4.3	5.0	3.5	4.0	3.3	4.0
Number of Firms	466		1667		717		716		338		338		89		88		290		290	
Panel D. Control Rights of Boards of Directors																				
Appointment of top management	4.5	5.0	4.5	5.0	3.3	4.0	4.4 **	5.0 **	2.6	4.0	4.3 **	5.0 ***	4.7	5.0	4.6	5.0	3.7	4.0	4.3	4.0
Employment/layoff	3.9	5.0	3.9	4.0	3.5	4.0	4.3 *	5.0	2.8	4.0	4.3 *	5.0 *	4.7	5.0	4.3	5.0	3.9	4.0	4.4	5.0
Wages/compensations	3.9	5.0	3.6	4.0	3.2	4.0	4.0	4.0	2.7	4.0	3.9	4.0	3.7	5.0	4.0	4.0	3.6	4.0	4.1	4.0
Investment	4.3	5.0	4.5	5.0	3.6	5.0	4.6 **	5.0 ***	2.6	4.0	4.7 **	5.0 ***	5.0	5.0	4.7 ***	5.0	4.1	5.0	4.4	5.0
Fund raising	4.3	5.0	4.4	5.0	3.2	4.0	4.5 ***	5.0 ***	2.7	3.0	4.6 **	5.0 ***	4.3	4.5	4.7	5.0	3.3	4.0	4.3	5.0
Fund using	4.3	5.0	4.4	5.0	3.5	5.0	4.3 *	4.0	3.3	4.0	4.3	4.0	5.0	5.0	4.6 ***	5.0	3.3	4.0	4.2	5.0
Distribution of profits	4.4	5.0	4.5	5.0	3.2	4.0	4.4 **	5.0 ***	2.0	3.0	4.3 ***	4.0 ***	4.8	5.0	4.7	5.0	3.7	4.0	4.4	5.0
Production and marketing	3.9	4.5	3.6	4.0	2.8	4.0	4.0 **	4.0 **	1.9	1.5	4.0 ***	4.0 ***	3.3	5.0	4.2	4.0	3.7	4.0	4.0	4.0
Average	4.2	4.9	4.2	4.6	3.3	4.3	4.3	4.6	2.6	3.4	4.3	4.5	4.4	4.9	4.5	4.8	3.7	4.1	4.3	4.6
Number of Firms	103		756		21		545		10		285		3		42		8		219	
Panel E. Control Rights of Shareholders Meetings																				
Appointment of top management	3.4	4.0	3.7	4.0			3.5	4.0			3.5	4.0			3.0	3.0			3.6	4.0
Employment/layoff	2.6	4.0	3.1	4.0			3.4	4.0			3.4	4.0			3.1	3.5			3.6	4.0
Wages/compensations	2.7	3.0	2.9	3.0			3.3	4.0			3.3	4.0			2.8	3.0			3.3	4.0
Investment	3.8	4.0	4.0	4.0			4.2	5.0			4.3	5.0			3.3	3.5			4.1	4.5
Fund raising	3.4	4.0	3.9	4.0			4.3	5.0			4.4	5.0			3.7	4.0			4.3	5.0
Fund using	3.5	4.0	3.9	4.0			3.7	4.0			3.7	4.0			3.1	3.0			3.8	4.0
Distribution of profits	3.4	4.0	3.8	4.0			3.6	4.0			3.6	4.0			3.4	3.5			3.5	4.0
Production and marketing	2.7	3.0	2.8	3.0			3.2	4.0			3.2	3.0			3.2	3.0			3.3	4.0
Average	3.2	3.8	3.5	3.8			3.7	4.3			3.7	4.1			3.2	3.3			3.7	4.2
Number of Firms	49		380		0		358		0		252		0		10		0		96	

Table 4. State Control in Privatized Firms

This table reports the percentage of firms in each privatization methods that are still have strong state influence. Significance levels are based on two-tailed tests of differences between the MBO firms and other methods and between Selling to Outsiders and other methods. Significance at the 1%, 5%, and 10% levels is indicated by ***, **, and *, respectively.

	Strong State Control in Corporate Decision Making	State Ownership Above Mean
Direct Sales to Insiders (MBO)	16%***	1%***
Direct Sales to Outsiders	25%*	15%
Other Methods	59%	50%
Whole Sample	31%	19%

Table 5. The Impact of State Influence on Performance

This table presents the effect on state control on performance. Performance measures are calculated as operating profits (earnings before interest, tax, and depreciation) over assets and number of employees, respectively. Robust standard errors are in parentheses. Significance at the 1%, 5%, and 10% levels is indicated by ***, **, and *, respectively.

	Performance Measures		Performance Measures	
	Profits / Assets	Profits / #Employee	Profits / Assets	Profits / #Employee
	(1)	(2)	(3)	(4)
Lag of Perfmance				
Log (sales)	0.062***	13.918***	0.062***	13.944***
	(0.010)	(1.195)	(0.010)	(1.193)
Leverage	-0.017	5.486	-0.02	5.232
	(0.017)	(3.356)	(0.017)	(3.352)
Post Dummy	0.021**	0.791	0.033***	1.808
	(0.010)	(1.226)	(0.012)	(1.274)
State Control in Decision Making * Post	-0.056**	-5.04		
	(0.026)	(3.727)		
State Share Above Mean * Post			-0.064***	-5.557**
			(0.015)	(2.401)
Year Dummies	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes
Observations	4,888	4,810	4,888	4,810
R-squared	0.55	0.59	0.55	0.6

Table 6. Post-Privatization Restructuring and Professionalization

Panel A presents the percentage of firms in each privatization methods that are still have strong state influence. Significance levels are based on two-tailed tests of differences between the MBO firms and other methods and between Direct Sales to Outsiders and other methods. Panel B presents the logit model of restructuring measures after privatization. Robust standard errors are in parentheses. The financial variables are the three-year average after privatization. In both Panels, Significance at the 1%, 5%, and 10% levels is indicated by ***, **, and *, respectively.

Panel A. Post-Privatization Restructuring Measures

	Change of Core Management Team	Performance Based Compensation	International Accounting & Independent Auditing	Establishing Board of Directors
Direct Sales to Insiders (MBO)	64%	8%	11%**	84%***
Direct Sales to Outsiders	61%	15%***	7%	67%***
Other	60%	2%	5%	71%
Whole Sample	62%	7%	8%	76%

Panel B. Logit Regression of Post-Privatization Restructuring Measures

	Change of Core Management Team	Performance Based Compensation	International Accounting & Independent Auditing	Establishing Board of Directors
	(1)	(2)	(3)	(4)
Lag of Perfmance	-0.073**	-0.264***	0.192***	0.244***
	(0.036)	(0.080)	(0.065)	(0.046)
Log (sales)	-0.223	0.45	-3.570***	-0.069
	(0.343)	(0.773)	(0.992)	(0.408)
Leverage	-0.631**	0.422**	-0.522	-0.501***
	(0.302)	(0.187)	(0.575)	(0.182)
Selling to Private Sector	-0.166	1.793***	-0.094	-0.055
	(0.171)	(0.423)	(0.369)	(0.203)
MBO	0.388**	-1.253***	0.991***	0.782***
	(0.151)	(0.272)	(0.318)	(0.189)
Industry Fixed Effects	Yes	Yes	Yes	Yes
Observations	606	606	606	606

Table 7. Government Incentives and Choices of MBO Methods

This table presents the effect of government incentives on MBO choices. Panel A reports the summary statistics of variables. Significance levels are based on two-tailed tests of differences between the MBO firms and other methods. Panel B presents the logit regression of MBO choices. *Fiscal resources* is defined as fiscal revenue over GDP; High share of SOE employment is a dummy variable indicating *Share of SOE Employment* above the median. Robust standard errors are in parentheses. In both Panels, significance at the 1%, 5%, and 10% levels is indicated by ***, **, and *, respectively.

Panel A. Summary Statistics of Government Incentives and City-Level Variables

		All Privatized SOEs	MBO
Government Incentives			
Fiscal resources	Mean	0.67	0.70***
	Median	0.71	0.71***
Share of SOE employment	Mean	0.25	0.24
	Median	0.17	0.16*
Government allocation of land	Mean	0.69	0.62***
Government guarantee of loans	Mean	0.07	0.07
City-Level Controls			
Log (GDP per Capita)	Mean	9.72	9.77*
	Median	9.71	9.78*
Population Growth	Mean	0.03	0.04*
	Median	0.01	0.01***

Table 7. Government Incentives and Choices of MBO Methods (Cont'd)

Panel B. Logit Regression of MBO Choices

	Independent Variable: MBO	
	(1)	(2)
Government Incentives		
Fiscal resources	-0.979	-1.173
	(0.230)	(0.159)
Share of SOE employment	-0.748**	-0.754**
	(0.024)	(0.026)
Government allocation of land	-0.142***	-0.142***
	(0.000)	(0.001)
Government guarantee of loans	0.053	0.078
	(0.464)	(0.314)
Fiscal resources * High share of SOE employment	2.660***	2.372***
	(0.002)	(0.008)
City-Level Controls		
Log (GDP per Capita)	-0.021	-0.022
	(0.568)	(0.554)
Population Growth	0.216	0.233
	(0.242)	(0.241)
Firm-Level Controls		
Log (sales)		-0.021*
		(0.054)
Performance		-0.023
		(0.874)
Leverage		-0.103
		(0.330)
Observations	708	678
R-squared	0.199	0.207

Table 8. A First Look at Performance of Chinese Firms

This table presents the OLS estimates of the effect of privatization on firm performance, based on the sample containing both privatized and non-privatized SOEs. Performance measures are calculated as operating profits (earnings before interest, tax, and depreciation) over assets, sales, and number of employees, respectively. Robust standard errors are in parentheses. Significance at the 1%, 5%, and 10% levels is indicated by ***, **, and *, respectively.

	Performance Measures		Performance Measures	
	Profits / Assets	Profits / #Employee	Profits / Assets	Profits / #Employee
	(1)	(2)	(3)	(4)
Panel A. Performance of Chinese Firms				
Lag of Perfmance				
Log (sales)	0.021***	12.408***	0.020***	12.398***
	-	(1.440)	-	(1.430)
Leverage	-0.044***	5.528	-0.044***	5.547
	(0.010)	(5.990)	(0.010)	(5.990)
Privatized Firms			0.013	1.343
			(0.010)	(2.510)
SOE	-0.080***	-27.515***	-0.085***	-28.043***
	(0.010)	(2.620)	(0.010)	(3.240)
Post Dummy	-0.084***	-20.236***	-0.085***	-20.307***
	(0.010)	(2.320)	(0.010)	(2.380)
Year Dummies	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes
Observations	14,878	14,690	14,878	14,690
R-squared	0.08	0.04	0.08	0.04
Panel B. Effect of Privatization on Performance				
Lag of Perfmance				
Log (sales)	0.019***	8.176***	0.055***	14.670***
	(0.001)	(0.532)	(0.007)	(2.716)
Leverage	-0.049***	10.750*	-0.038	3.72
	(0.009)	(6.032)	(0.028)	(4.648)
Privatized Firms	0.033***	3.895**	0.014*	1.802
	(0.010)	(1.521)	(0.009)	(1.656)
Post Dummy	-0.004	-7.107***		
	(0.004)	(1.744)		
Year Dummies	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes		
Firm Fixed Effects	No	No	Yes	Yes
R-squared	0.070	0.160	0.540	0.530
Observations	7,973	7,839	7,973	7,839

Table 9. The Influence of Privatization Methods on Post-Privatization Performance

This table presents the influence of different privatization methods on firm performance, based on the sample of privatized firms. Performance measures are calculated as operating profits (earnings before interest, tax, and depreciation) over assets, sales, and number of employees, respectively. Robust standard errors are in parentheses. Significance at the 1%, 5%, and 10% levels is indicated by ***, **, and *, respectively.

	Performance Measures		Performance Measures		Performance Measures	
	Profits / Assets	Profits / #Employee	Profits / Assets	Profits / #Employee	Profits / Assets	Profits / #Employee
	(1)	(2)	(3)	(4)	(5)	(6)
Lag of Perfmance						
Log (sales)	0.020***	7.209***	0.062***	13.884***	0.062***	13.888***
	(0.002)	(0.296)	(0.010)	(1.192)	(0.010)	(1.193)
Leverage	-0.057***	3.057	-0.017	5.437	-0.016	5.467
	(0.016)	(2.526)	(0.017)	(3.362)	(0.018)	(3.357)
Post Dummy	0.003	-1.717	-0.011	-3.120*	-0.003	-2.888
	(0.011)	(1.654)	(0.012)	(1.746)	(0.016)	(2.382)
MBO * Post	0.061***	8.021***	0.047***	6.141***	0.039**	5.925**
	(0.013)	(2.071)	(0.015)	(1.906)	(0.018)	(2.529)
Direct Sales to Outsiders* Post					-0.022	-0.64
					(0.017)	(2.848)
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes				
Firm Fixed Effects	No	No	Yes	Yes	Yes	Yes
Observations	4,888	4,810	4,888	4,810	4,888	4,810
R-squared	0.07	0.2	0.55	0.6	0.55	0.6

Table 10. Two-Stage Least Square Estimates of the Effect of MBO on Performance

This table presents the two-stage least square (TSLS) estimates of the effect of MBO on performance. The model is estimated using Limited Information Maximum Likelihood (LIML) estimation. *Government Incentives* are used as instruments. Performance measures are calculated as operating profits (earnings before interest, tax, and depreciation) over assets, sales, and number of employees, respectively. Robust standard errors are in parentheses. Significance at the 1%, 5%, and 10% levels is indicated by ***, **, and *, respectively.

	Performance Measures	
	Profits / Assets	Profits / #Employee
	(1)	(2)
Lag of Perfmance		
Log (sales)	0.021***	7.366***
	(0.002)	(0.348)
Leverage	-0.067***	5.487
	(0.024)	(3.460)
Post Dummy	-0.081***	-5.696*
	(0.024)	(3.427)
MBO * Post	0.239***	15.216**
	(0.043)	(6.259)
Year Dummies	Yes	Yes
Firm Fixed Effects	Yes	Yes
Observations	3571	3531
Cragg-Donald Wald F statistic	25.618	34.638
10% maximal LIML size	3.27	3.27