China's Decentralized Privatization and Change of Control Rights[1]

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Abstract

A distinct feature of China's privatization is that its design and implementation are decentralized and administered by the local governments. Based on a survey of 3,000 firms in over 100 cities, this paper studies how city governments choose among various privatization methods, how these methods transfer control rights, and how they influence privatization outcomes. We find that less political opposition to labor shedding and greater fiscal capacity prompt cities to choose direct sales to insiders (MBOs) as their privatization method. This method transfers control rights to private owners most completely, restructure most effectively, and achieve the greatest performance improvement.

Introduction

China's privatization during the late 1990s and the mid-2000s was arguably the largest in the world, and still has a profound influence on the governance of the Chinese economy. [3] Our understanding of this vast transformation, however, remains limited, because there is little data, other than that available from the small fraction of firms that underwent share issue privatization (SIP) and became publicly listed.

A distinct feature of China's privatization is that both its design and its implementation are highly decentralized and are administered by the local governments. This feature is in contrast to privatization in most other nations, which followed a nationwide policy and was implemented in a top-down manner.[4] No *de jure* national privatization policy took place in China. Instead, a few city governments first initiated China's *de facto* privatization at a time when, because of an ideological aversion to capitalism, the central government was cautious about privatization. Later, after the central government endorsed the practice of selling state-owned enterprise (SOE) assets to private owners, for most SOEs, city governments decided whether to privatize, and, if the decision was yes, what privatization approach to adopt. As a result, privatization methods across Chinese cities varied widely. This decentralized feature of China's privatization is not only critically important for understanding the Chinese economy, but also provides a rich laboratory to study privatization and institutions in general.

Based on a large-scale nationwide survey of 3,000 firms in more than 100 cities, this paper conducts a systematic study of China's decentralized privatization, in an attempt to draw implications for privatization design and, more generally, the design of economic institutions. We seek to understand how local governments choose different privatization

[3] Based on the data 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) had been privatized and the total asset value involved in the process was about 11.4 trillion RMB (or $1.63 trillion).

[4] For example, see privatization in CEE-CIS nations, Mexico, India, and Brazil as in the surveys by Megginson and Netter (2001) and Estrin et al. (2009).

methods and how these various methods transfer control rights of the firms differently, leading to diverse 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 reallocate control rights among the stakeholders of the firm? Which methods result in post-privatization restructuring that improves corporate governance more effectively and better enhances performance?

Our data allow us to explore two important aspects of privatization that the existing literature has not examined. First, in contrast to the large literature on privatization performance, we focus on the reallocation of control rights in order to understand privatization outcomes. We identify reallocation of control rights, specifically, the extent to which the government retains control in the privatized firms and to whom the firm is privatized, as the mechanism through which privatization affects restructuring and performance of firms. Second, we investigate the role of political factors in shaping the design of privatization programs in China's regionally decentralized authoritarian system (Xu, 2011). This analysis improves our understanding of not only China's privatization, but also of the governance of the Chinese economy in general.

Our data show that although privatization in China has made substantial progress in reallocating control rights from the government to private owners, the degree of remaining government influence on corporate decisions varies significantly across different privatization methods adopted by the city governments. These methods include direct sales, either to insiders (through management buyouts, or MBOs hereafter) or to outsider private owners, public offerings, joint ventures, leasing, and employee shareholdings. Moreover, we find city governments' decisions on how to privatize are critically determined by the political and fiscal constraints 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 management buyouts (MBOs), which account for close to half of all privatization programs in our sample. Our finding is consistent with private owners' enhanced incentives to make changes: MBOs are most effective in implementing restructuring measures, including a change of core management teams, establishing boards of directors, and introducing international accounting and independent auditing. Consequently, the performance of these firms improves significantly after privatization. However, government continues to influence the key corporate decisions of firms privatized by other methods. These firms are also less effective in restructuring and do not achieve statistically detectable improvement in performance.

To examine how different privatization methods transfer control rights differently, we collect comprehensive information on the distribution of control rights before and after privatization and examine the impact of the reallocation of control rights on restructuring and performance. This approach helps us understand the mechanisms of privatization and its impact on performance. This understanding is not only important in its own right, but is also useful in mitigating the selection concern in evaluating post-privatization performance. The selection concern arises because better/worse firms might be purposely chosen for a certain privatization method, which affects their post-privatization performance. A distinctive advantage of our analysis is that our data allow us to deal with the selection concern by explicitly examining the mechanisms of performance improvements, which is perhaps the strongest guard against endogeneity. To rule out the selection bias even further, in a later analysis, we employ an IV estimation with city characteristics as the instruments for privatization methods. These city characteristics are related to the choice of privatization approaches but are not directly related to pre- and post-privatization performances of individual firms.

Our paper is related to a large literature on control rights in privatization. The essence of ownership is the allocation of control rights, which affects incentives and performance (Hart, 1995). Consistent with this view, the government's control rights over SOEs have a

negative impact on their performance, because the government's objective is often inconsistent with efficiency (Laffont and Tirole, 1993; Shleifer, 1998), and the government frequently interferes with the decisions of the SOEs for political purposes (Shleifer and Vishny, 1994). Moreover, due to political concerns, for example, employment and fiscal balance, the government is unable to commit to not bail out loss-making SOEs, which leads to government interference that hinders managerial incentives and efficiency (Kornai, 1988, 2000). Reallocating control rights of the firms via privatization solves the problems associated with the SOEs (Boycko, Vishny, and Shleifer, 1996; Berglof and Roland, 1998). Our paper provides direct and systematic evidence that supports the above arguments. Our paper is also related to the literature on the influence of political factors on privatization, although the political system in our paper is an authoritarian regime, whereas most of the political systems discussed in the literature are democratic or semi-democratic (e.g., Biais and Perotti, 2002). Moreover, with the exception of Dinc and Gupta (2011), who examine the influence of the Indian democratic system on privatization, the existing studies rely on cross-country analyses.

Enabled by detailed data on corporate governance before and after privatization, this paper substantially enriches the empirical literature of privatization by shedding new light on the concrete privatization mechanisms through reallocation of control rights. As Jones and Mygind (1999) and Gupta (2005) point out, a common feature of privatization around the world is it is partial and transferring of control rights is incomplete. Thus, our findings regarding the impact of control rights' transfer on performance are quite general and complement the findings 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). Although some of our paper's findings may not be directly applicable to other nations that do not share the same institutions with China, we believe focusing on the reallocation of control rights and its impact on post-privatization restructuring and performance provides a fruitful approach to understanding privatization around the world.

Our analysis extends 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),[5] a lack of a significant effect of privatization on performance (Jefferson and Su, 2006), and the importance of reducing state ownership in privatized firms to improve performance (Bai et al., 2009).[6] Our data permit us to cover a wide spectrum of SOEs and to go beyond performance comparison by revealing the mechanisms of performance improvement (or a lack of it). Our findings underscore the political constraints governments face 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 programs. The dynamics between the state and the economy in the past decade in China closely resemble those during the privatization; only this time the state has much less urgency to develop the private sector. In fact, few significant economic reforms or liberalization have occurred since China's entry into the WTO. Our analysis points to substantial inefficiencies in firms with state intervention. Realizing the growth potential in these firms is critical for China's future economic growth, especially in face of the current slowdown.

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[5] Our findings on the central role of transferring control rights in privatization are consistent with these results, because the SIP does not involve transferring control rights by the Chinese rule (see next section) because it is not designed for the purpose of privatization. Moreover, SIP is not a major de facto privatization approach, in that it accounts for only 1% of the population among all privatized firms, according to our survey. Moreover, all the listed firms are very large; that is, the sample in SIP is biased. The literature disagrees on the impact of the remaining state shares on performances of SIP firms. 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 impact of selling government-owned shares in SIPs.

[6] 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 the changing of control rights in privatization. Moreover, inferring privatization from changes in the registration may suffer from substantial type II errors, as our survey reveals (see Appendix). A sizeable literature on China's privatization is based on small and/or non-representative samples, e.g., Li and Rozelle (2000), Wang, Xu, and Zhu (2004), Guo and Yao, (2005), Yusuf et al. (2005), and 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."

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 reallocate 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 state sector or SOEs dominated the Chinese economy. 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 the central government appoints and assesses local government officials, whereas administrative and economic matters, including those of the SOEs, are mostly decentralized to local governments. In the case of SOEs, except for the very large ones, the control rights are assigned to the municipal governments (Xu, 2011). These control rights also give local governments the residual claims to enterprise earnings (Granick, 1990; Li, 1997). Thus, the local SOEs were very important for city government officials, both as a source of fiscal revenue and as a contributor to local GDP growth which is a critical criteria used by upper-governments in promotion decisions (Maskin, Qian, and Xu, 2000; Xu, 2011). In short, under China's RDA regime, political economy mechanisms that are different from those in democratic regimes drive China's privatization decisions (e.g., see Biais and Perotti, 2002; 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. For ideological reasons, privatization was a controversial subject in China, and the central

government did not officially allow it until the late 1990s. However, the deteriorating performance of SOEs put increasing pressure on the fiscal conditions of local governments because they are the residual claimants of the SOE earnings and some of them were on the verge of insolvency following the losses of their SOEs. Against this background, a few cities quietly initiated *de facto* privatization.

One of the first local privatization attempts was in Zhucheng, a city in Shandong province, where more than two-thirds of the SOEs in 1992 experienced losses amounting to over 18 months of the city government's fiscal revenue. Facing this pressure, the city government sold many SOEs within its jurisdiction to the employees of these SOEs. Another 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. The central government turned a blind eye toward these experiments (Garnaut et al., 2005).

The continued deterioration of the state sector's financial performance imposed a severe strain on the country's banking system.[7] The central government learned from successful local privatization experiments, and 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*); that is, the state was to keep a few hundred of the largest SOEs in strategic industries and would give local governments full control rights to local SOEs. Finally, the CCP's 15th Congress (1997) gave the green light to privatization, granting *de jure* ownership of local SOEs to local governments. This form of ownership implies the central government has authorized the "owners," mostly city governments, of

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

SOEs to design/implement privatization on their own. Thus, China has no centrally designed nationwide privatization program, 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 potential costs and benefits. Our data show the most popular method was *direct sales (*or *open sales*), either to insiders or to outside private owners. Direct sales to insiders and outsiders accounted for, respectively, 47% and 22% of all the privatization programs (Table 2, Panel A2). Other methods included *public offering* (1%)*, joint ventures* (2%), *leasing* (8%), and *employee shareholding* (10%). These patterns are consistent with Garnaut et al. (2005).[8]

Under *direct sales*, the firm is openly sold to insiders (through MBOs) *or* outside private owners through auctions or negotiations between the local government and the potential buyers. Although we later find that MBOs are the most effective method in improving efficiency, it is also the most controversial privatization method because of its lack of transparency, which raises the public concern that state assets may have been sold too cheaply.

Public offering is SIP. Under the policy of "retaining the large, releasing the small," the large SOEs are privatized through SIP, in which non-controlling shares are sold in the public capital market. By design, SIP is not meant to transfer control rights. It accounts for only a tiny proportion (1% of privatized firms according to our survey) of all privatization programs in China. However, it is the most-studied type of privatization in China simply because of the availability of data. *Joint venture* or *merger* involves privatization when an SOE forms a joint venture 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

[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. Internal restructuring often involves partial privatization but may also involve no privatization when the restructuring occurs among state-owned firms. The latter case is concentrated in large-scale SOEs owned by the central government, and they enjoy monopolistic powers in such markets as oil, electricity, telecommunication, and so on.

leasing involved inside managers as the lessees, and the firms were often privatized later through MBO.

Employee shareholding converts the company into a limited liability company or cooperative. It is one of the most important *gaizhi* measures employed at the early stage of local experiments, both because the central government requires that each privatization plan be approved by employees before implementation and because shares were often offered as part of the compensation for removing employees' "tenured" state-employment status. As our data verify, at later stages of *gaizhi*, the managers often purchase the majority shares from employees. In most of these firms, managers own the majority of the shares, which qualifies the firms as MBOs.

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? Our large-scale nationwide survey, discussed in the next section, allows us to address these important questions.

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 supplemented the main survey sample with an additional random sample of 5,500 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 the database was available, and large-scale privatization started in the late 1990s. Thus, using the 1998 population maximized our chance of including SOEs not yet privatized. In total, we had 16,500 firms for the survey.

We designed the questionnaires 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 helped improve our survey design considerably and later guide our empirical analysis. For example, because of the controversy surrounding MBOs, many of the MBO firms disguised themselves by reporting other less controversial methods, for example, employee shareholding, which later led us to verify 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-choice questions (of percentage intervals), and 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 NBS and had previously helped NBS conduct its own surveys. We spent a week training the survey company's staff to understand each question. Throughout the survey, we worked closely with the staff and carefully supervised the progress. The chief executives of the firms (or their representatives), the chief accountants, or the heads of human resources answered the questions.

To facilitate a difference-in-differences analysis, we prepared two sets of questionnaires: one for privatized firms (the "treatment" group) and one for all other firms (including the "control" group). The survey asked every firm whether it was privatized, and accordingly used the appropriate questionnaire. The two sets of questionnaires were identical

except that for privatized firms, (1) we asked questions related to privatization, for example, the year in which the firm was privatized and the privatization method; (2) for questions on ownership and control, we asked the firms to provide information on both the pre- and post-privatization periods. Appendix 1 contains the survey questions that are relevant to this study.

We obtained 3,132 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 1,758 *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 toward 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 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 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 for regression analyses is a panel of 717 privatized firms, 460 SOEs that have not been privatized, and 1,685 *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 about China's privatization. Between 2000 and 2005, the year prior to the survey, privatization increased steadily.[9] Direct sales to insiders (MBOs) are by far the most widely used method, accounting for 47% of all privatized firms. The next is direct sales to outsiders, accounting for 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%), and employee shareholding (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][11]

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

[9] The drop in the number of privatized firms 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] For the other method, the total ownership shares of the largest shareholders and the second- and third-largest shareholders are above 100%, because the ownership of the latter is based on the subsample that reports this information.

[11] *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 Deng, Gan, and He (2008) point out, expropriation by large shareholders is the root cause of the failure of SIP in China. Thus, how the incentives of large shareholders play out among non-SIP remains to be seen.

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 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 subsamples of privatized firms. Although firm scale, both in terms of total assets and total sales, increased by 50% and 72% on average, respectively, after privatization, according to the median, the assets of privatized firms shrank slightly, probably reflecting the sell-off of unproductive units in most firms. Privatized firms tend to become less leveraged after privatization, consistent with a hardened budget constraint. Both measures of performance saw 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 the firms' stakeholders (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 has not been well developed. In fact, a common feature of privatization around the world is the incompleteness in transferring control rights; that is, the government retains significant control rights, sometimes (but not necessarily) via remained ownership in privatized firms (Jones and Mygind, 1999; Gupta, 2005). Because the government's political goals often differ from profit maximization, government control is likely to alter the effectiveness of

privatization. Thus, the first questions we ask in understanding China's privatization are as follows: 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 Reallocation of Control Rights

Reflecting the concept of property rights as a bundle of rights, we use a set of corporate decision rights in examining control rights. 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. In the survey, we design questions on the allocation of control rights before privatization and the reallocation of control rights after privatization, 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 the above-mentioned key corporate decisions. We asked the firms to rank, for each of the above corporate decisions, the importance of different decision makers on a 5-point scale (0 = *negligibly unimportant*, 5 = *indispensably important*).

The results are summarized in Table 3 and Figure 2. As Panel A of Table 3 shows, for non-privatized SOEs and pre-privatization SOEs, government exercises fairly strong control over these firms' major decisions, with average scores of 2.3 and 1.8, respectively (columns (1) and (3) in Panel A of Table 3).[12] The government's control rights are particularly strong in the appointment of top management, scoring 3 and 2.4. By contrast, the government has no control power over decisions within *de novo* private firms (column (2) in Panel A of Table 3).

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 (Table 3 and Figure 2). Among the different privatization methods, the government's control rights decrease the most

[12] Note the pre-privatization reform of SOEs has been focused on delegating decision power to SOEs.

for MBOs, with the average score dropping from 1.8 to 0.1. Direct sales to outsiders are second, with average government control reducing from 0.9 to 0.4. For other methods, the average score reduces from 1.8 to 0.8.

A unique feature of corporate governance in China is that, except for the very small ones, almost all firms in China,[13] 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 involved in the firm's decision-making, 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 party committees' control generally decreases less than the government's.

The government might influence corporate decisions both through its direct control rights and through its indirect intervention via firm-level party committees. Thus, an overall picture of the state control in privatized firms is useful. To this end, we use the max of these two as the score for overall state influence in corporate decisions. Despite a drop in 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% of 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 the government retains significant ownership of the firms. The retained government ownership is 20% on average.

Table 4 reports the proportion of firms with government ownership above 20% (an ownership level that is significant enough for influence) and overall state-influence scores above 2. 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%. The state is also much less likely to intervene in MBOs' major decision-making (16% vs. 59% sample mean). Compared with MBOs, the other direct sales method, sales to outsiders, has substantially more state

[13] Because NSB data cover firms with sales above 5 million yuan, firms in our sample do not include the "very small" ones.

intervention. However, compared to other methods of privatization, firms sold to outsiders have less state intervention, though the difference is only significant for state control in corporate decision-making and not in state ownership.

Among other changes in control rights, Figure 2 indicates the importance of the board of directors and shareholder meetings increases the most, which suggests 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 SOEs that have 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 may 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 that controls for any time-invariant firm characteristics that may affect privatization decisions. β_t is a year fixed effect. Coefficient γ is the difference-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 10% levels). In columns (3) and (4) of Table 5, state influence in firms' decision-making is associated with significantly lower operating efficiency. 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 efficiency. In our survey, we asked about four restructuring measures. The first is whether the firm changed its core management team—the 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 standards 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 the most likely to restructure their core management teams (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%) 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 restructure their management teams, to establish a board of directors, and to adopt international accounting standards and professional

independent auditing (at the 1% or 5% levels). These findings are consistent with the findings that MBOs entail the most transfer of control rights from the state to the firm. MBO firms are not likely to have performance-based pay for their executives, which is not surprising—owners of MBOs firms are also managers, and thus ownership and control are already aligned.[14]

By contrast, firms sold to outsiders are not more likely to change their core management teams 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 evidence, as well as our own conversations with managers, suggests a board of directors is often established because the firm, at the time of MBO, needs 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, MBO firms appear to have more incentive to professionalize the firm, which is also consistent with an incentive to prepare the firm for public listing.[15] Conceivably, the possibility of exit through the public capital market would provide incentives for the owner-managers of the firms to engage in value-maximizing activities and may be part of the reason why, in contrast to the negative consequences of insider privatization in Eastern Europe and Russia (Barberis et al., 1996), MBOs in China are associated with positive outcomes. Of course, further research would be necessary to confirm this hypothesis in detail.

In sum, we find firms privatized through MBO have resulted in a substantial reduction of government control 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

[14] Managers are the largest shareholders in all but two of the 471 MBOs in our sample. In the remaining two firms, the government is the largest shareholder in one, and workers are in the other.

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

associated with significantly better operating performance. Finally, MBO firms are more likely to adopt restructuring measures, including the restructure of management teams, adoption of international accounting standards, and establishment of a board of directors.

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

As 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 finding 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 local governments' incentives and the political and economic constraints the governments faced at the time of privatization.

As discussed earlier, by the late 1990s, most SOEs were losing money and were deep in debt. In addition to poor management, two main reasons explain 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 (Dong and Putterman, 2003).[16] Given that layoffs are politically incorrect, these surplus workers are kept in the SOEs even if the SOEs cannot 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 SOEs' 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 would be reluctant to shoulder many of the policy burdens, a result that is 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 local government's incentive to make such a commitment.

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

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 the *de novo* private sector, which makes finding new jobs harder for the laid-off workers and increases political opposition to layoffs. Moreover, the implicit unemployment problem discussed above is most severe in cities dominated by SOEs, again resulting in stronger political opposition to layoffs. Thus, we expect that cities with a greater share of SOE employment are less likely to implement MBOs in privatization. [17]

The second factor is the ability of local governments to bear the costs of layoffs and social responsibilities. One measure of such ability is the government's fiscal resources. The more fiscal resources available, the greater the government's ability is 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 local governments' reliance on SOEs to achieve their social and political goals, as well as for uncompensated use of resources.

The political pressure against layoffs was exerted through the Employee Representative Congress. At the early stage of privatization, most SOEs had an Employee Representative Congress, which had a big say in the redeployment of employees and the choice of privatization methods.[18,19] As a result, employment was an important negotiation

[17] The share of SOEs may be negatively related to MBOs for a more subtle reason. Cross-region differences in the development of the *de novo* private sector are related to the local governments' attitudes toward private ownership. In the 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, whereas many others discouraged the development of the 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.

[18] See http://china.findlaw.cn/lawyers/article/d28876.html and http://finance.sina.com.cn/chanjing/b/20120117/185911224916.shtml for rules (in Chinese) governing the power of Employee Representative Congress in Shanghai and Shijiazhuang. In both cities, the Employee Representative Congress must approve layoffs.

point between the government and the potential buyers. In our pilot survey, a manager of a privatized SOE in Shanghai revealed the local government provided a monetary subsidy for each additional worker he would keep.

In our survey, we also ask 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, the government may have more difficulty committing 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 cities where unemployment is a greater concern, we also include an interaction term between fiscal resources and a dummy variable indicating a 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 (EBITDA over sales), size (log of assets), and leverage—again all measured in the year prior to privatization.

[19] In our interviews, we found that employment concern is also part of the reason why, at the initial period of privatization, a significant portion of SOEs were privatized through employee shareholding to avoid dispute between the firm and the employees. Later, because employee shareholding could not achieve efficiency, many of these firms introduced a second round of privatization through MBOs.

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

Table 7B presents our regression results. In column (1) of Table 7B, the impact of a higher share of SOE employment is negative 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 layoffs is stronger, greater fiscal resources allow the government to provide better support for redeployment of laid-off workers in MBOs. Government allocation of land is significantly negative (at the 1% level), suggesting pre-existing government-firm ties make committing to MBOs harder for the government.

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 finding is not surprising, because the cost of layoffs and policy burdens tends to be greater for larger firms, and the government would have difficulty absorbing such a large cost. Notably, profitability is not statistically significant in determining the restructuring choices.

In sum, political and social considerations, particularly the impact of unemployment and the government's fiscal ability to absorb the cost of privatization, mainly drives the choice of privatization methods. 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, 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-differences estimates of the performance gain of MBOs versus other methods of privatization.

In our sample, firms are privatized in different years since the late 1990s, whereas the NSB's 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, which captures changes in macro-economic conditions that might affect performance. Coefficient γ is the difference-in-differences 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 a much weaker competitive position as compared to *de novo* private firms, the SOE dummy is significantly negative for both performance measures (at the 1% levels). In columns (3) and (4) of Panel A, we add a dummy indicating privatized firms that is not significantly different from zero. Meanwhile, the *Post* dummy is significantly negative (at the 1% level) across all columns, suggesting privatization actually weakens performance.

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 the two groups. In the first two columns, we report results without firm fixed effects. The *Post* dummy is insignificant for ROA and significantly negative for profits per employee (at the 1% level). However, when we add firm fixed effects in columns (3) and (4) of Table 8, the coefficient on the *Post* dummy switches signs and becomes significantly positive for ROA, and positive but insignificant for profits per employee, suggesting unobserved firm heterogeneity drives the results in columns (1) and (2). To summarize, when we pool all privatized firms together, regardless of how they were privatized, we find no consistent 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. The first two columns of Table 9 report results without firm fixed effects. The interaction between *MBO* and the *Post* dummy is significantly positive for both measures of performance (at the 1% level). The coefficient on the *Post* dummy itself is not significant, suggesting 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* remains positive and significant (at the 1% level). Interestingly, the *Post* dummy itself is not significantly different from zero for ROA but is significantly negative for profits over employment (at the 10% level), which

suggests non-MBOs do not improve efficiency and even lead to a 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 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 program 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 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 comparisons, but rather, we have identified the mechanism of performance improvement. Specifically, our earlier evidence indicates MBOs transfer control rights from the government to private owners more completely (Tables 3 and 4) and restructure more effectively (Table 6); and privatized firms with fewer 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 better-quality firms being selected for MBOs is not likely to drive the better performance of MBOs.

Note that, as we discuss in section IV, employment is a dominating factor in the choice of privatization methods, both for the government and for the Employee Representative Congress. Even if managers of MBOs have inside information, they are unlikely to be able to influence both the local government and the Employee Representative Congress.

To rule out the selection bias even further, we perform two additional analyses. First, we examine whether any pre-existing trend is present 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 Figure 3 shows, no preexisting trend is present in performance.

Second, we use city government's political incentives as instruments to estimate restructuring's effect on performance. The instruments include %SOE Employment, Fiscal Revenue/GDP, government allocation of land, and loan guarantees. The first-stage regression is the same as that in column (1) of Table 7B. 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. Table 10 reports the results. The IV difference-in-differences estimates are quantitatively similar to our OLS estimates, further confirming selection does not drive improved post-privatization performance of MBOs.

VI. 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, privatization policies and outcomes vary widely 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, the literature has not explored this valuable laboratory, partly because of a lack of detailed data.

This paper fills this gap. Based on a large-scale nationwide survey of over 3,000 firms from nearly one-third of China's 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). Second, we identify concrete mechanisms, namely, the reallocation 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, reallocation 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 results indicate privatization in China has made substantial progress in reallocating control rights from the government to private owners. However, the degree of remaining government influence in corporate decisions across different privatization methods varies widely. Our evidence suggests the city governments' incentives and political constraints are the key determinants of their choices of privatization methods. In cities where political opposition to layoffs is 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 withdrawing its influence in corporate decisions. Our findings indicate MBOs, which account

for about half of all privatization programs, restructured more effectively and improved their performance significantly. By 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 show that looking only at aggregate results of the success of privatization without knowing the concrete mechanisms could be misleading, because different ways of reallocating control rights deeply affect restructuring and performance (Frydman et al., 1999; Estrin et al., 2009). Some of our findings, however, do appear to be in contrast to the literature. Specifically, studies have documented that in the CEE-CIS economies, firms privatized to outsiders, particularly foreigners, enjoyed significant efficiency gains, whereas firms privatized to insiders did not (Djankov and Murrell, 2002; Estrin et al., 2009). Yet, in China, we find 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 control rights away from the government and of proper corporate governance in privatized firms. In China, the MBO approach transfers control rights to private owners most completely. In CEE-CIS countries, however, how control rights are transferred in insider privatization and what the governance structure is in these firms is unclear. The comparison between China and other transition economies is an important subject for future research.

We conjecture that another factor that contributes to the differences in the 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, anecdotes say insiders stole from privatized firms. By contrast, privatization in China has been delayed, but when it occurs, the private sector is

already a big part of the economy and market institutions have been developed, including a functioning capital market. Thus, the new owners are much more likely to care about the long-run performance of the firms and later to fully capitalize on the efficiency gains. We leave an examination of this hypothesis in detail for future research.

The dynamics between the state and the economy during privatization provide an important perspective for understanding the Chinese economy. Political constraints and state intervention are the main reasons some privatization programs fail to enhance performance. The same dynamics characterize China's economy over the past decade, after China entered WTO. During a period of rapid economic growth, the state has no urgency to push for further economic reforms, and political compromises result in greater 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 an important area for future economic reforms.

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Figure 1. Regional Distribution of Privatized Firms in the Survey

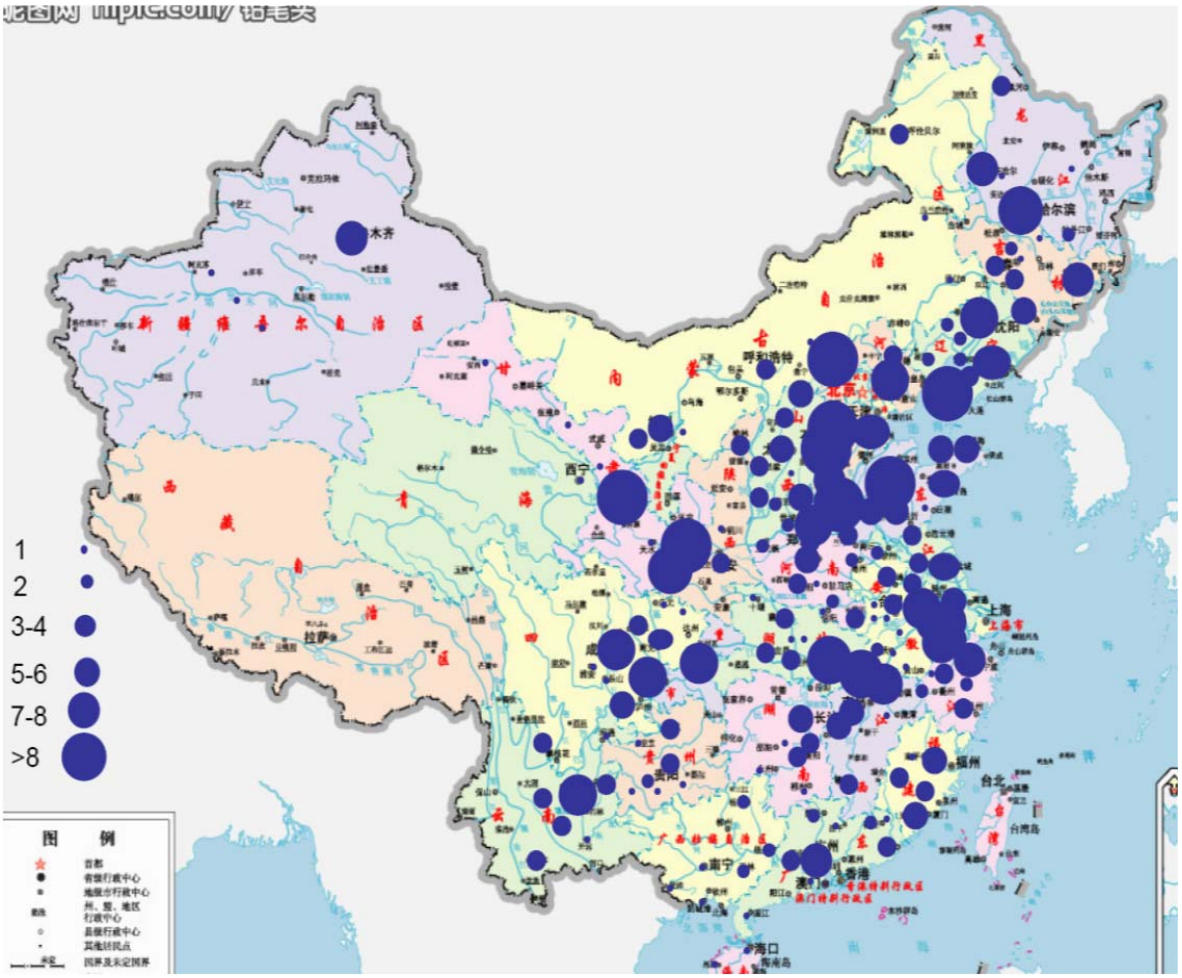


Figure 2. Reallocation of Control Rights before & after Privatization

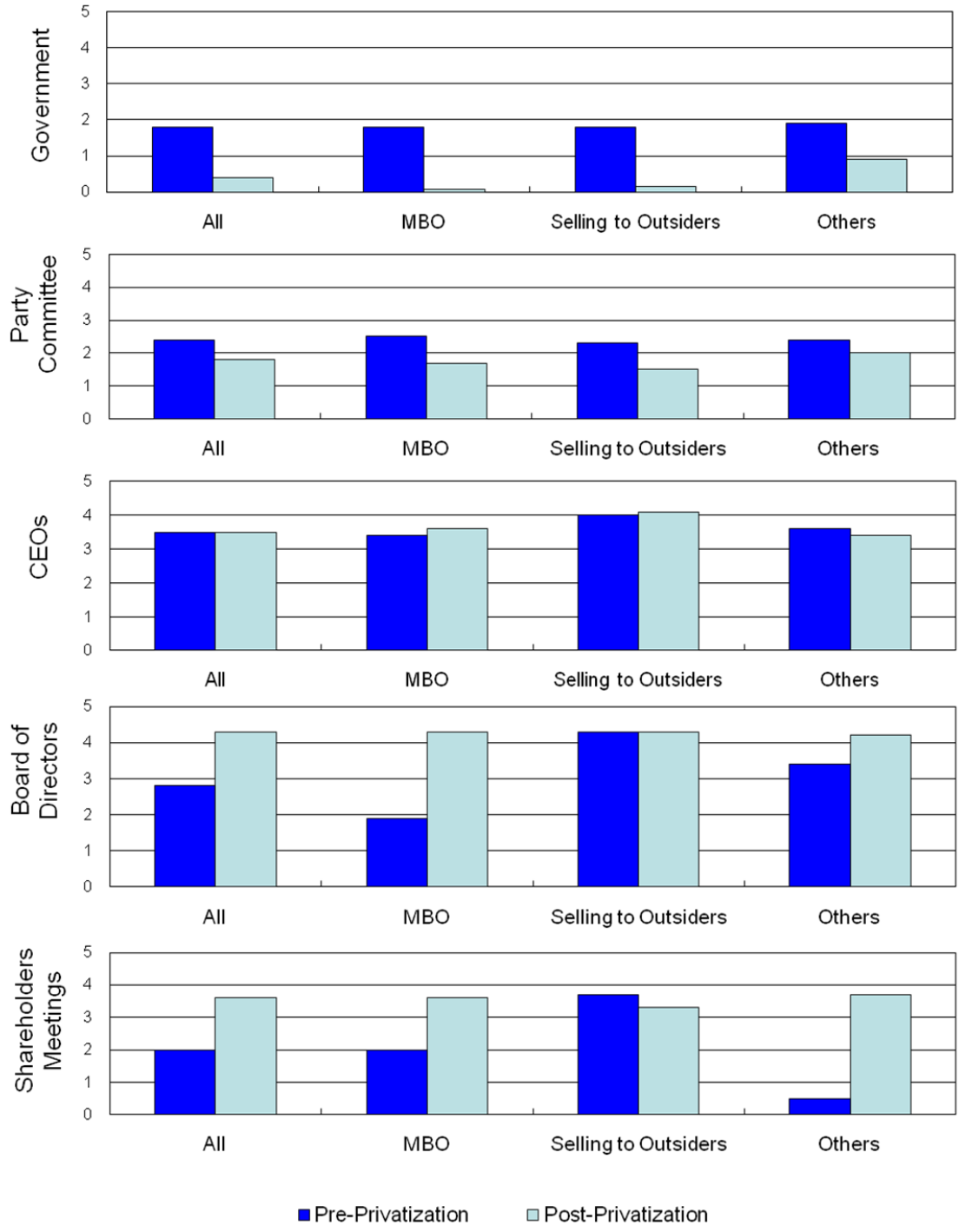
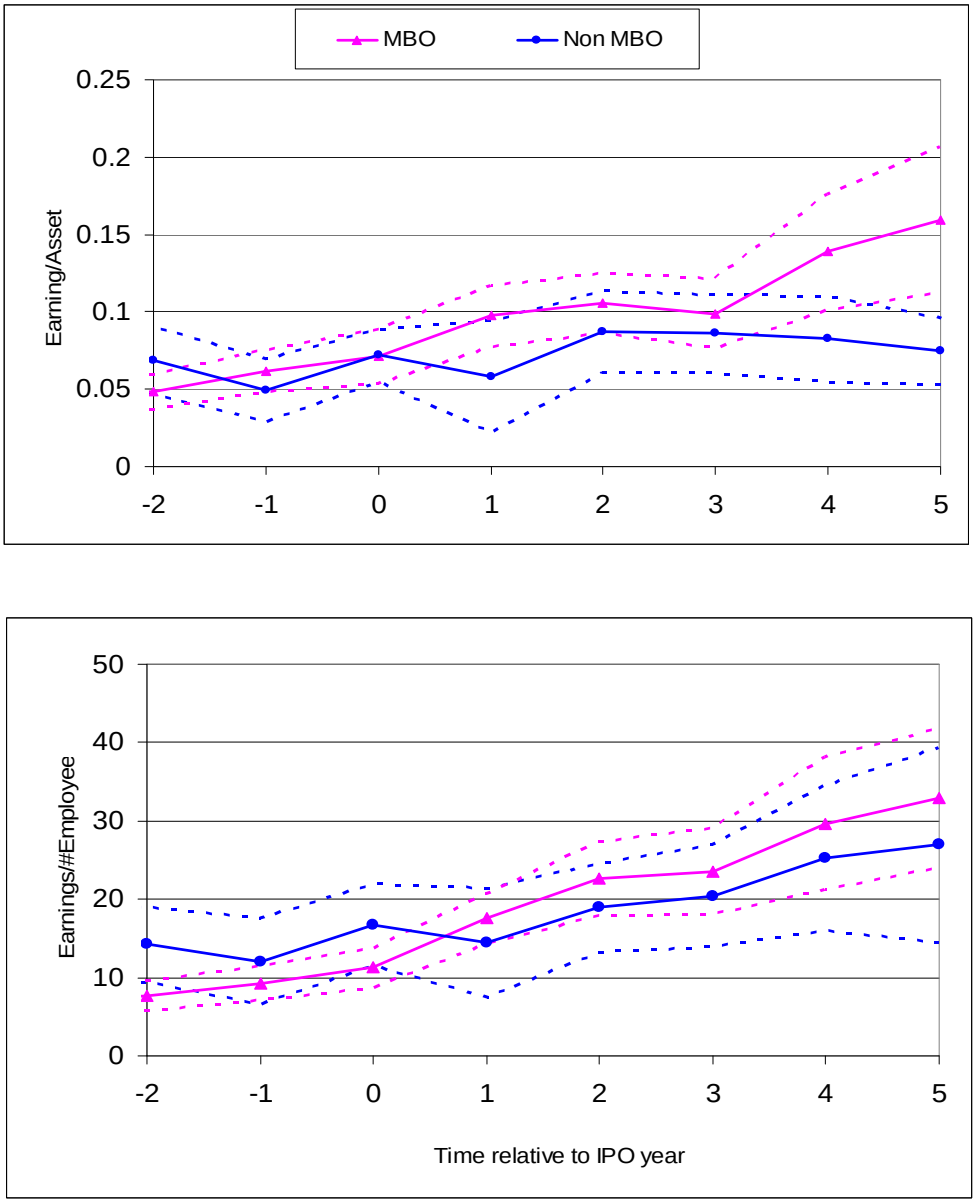


Figure 3. No Pre-existing Trend of Performance Differences between MBOs and Other Privatization Methods



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
	(1)	(2)
Panel A: Size Distribution		
Large	3%	1%
Medium	17%	11%
Small	80%	88%
Panel B: Regional Distribution		
North	10%	8%
North-East	7%	7%
North-West	5%	4%
North-Central	16%	15%
South-West	6%	5%
East	34%	35%
South	14%	18%
South-Central	8%	8%
Panel C: Industry Distribution		
Mining	9%	12%
Food, Beverage & Tobacco	9%	9%
Textiles	12%	15%
Timber and Paper Products	9%	9%
Petroleum & Chemical	17%	15%
Metals	21%	21%
Machine and Electronics	17%	16%
Electricity, Gas and Water	6%	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. 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	14%
2001	102	14%
2002	109	15%
2003	129	18%
2004	95	13%
2005	119	17%

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	11%
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 Firm-Years		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)	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
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)	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
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 method that is still under 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.

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

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. Significance at the 10% levels by one-sided tests is indicated by [c].

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

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)
Fiscal resources * High share of SOE employment	2.660***	2.372***
	(0.002)	(0.008)
Government allocation of land	-0.142***	-0.142***
	(0.000)	(0.001)
Government guarantee of loans	0.053	0.078
	(0.464)	(0.314)
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				
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				
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**		
	(0.010)	(1.521)		
Post Dummy	-0.004	-7.107***	0.014*	1.802
	(0.004)	(1.744)	(0.009)	(1.656)
Year Dummies	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes		
Firm Fixed Effects	No	No	Yes	Yes
Observations	7973	7839	7973	7839
R-squared	0.070	0.160	0.540	0.530

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)
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)
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

Note: the numbers do not add up with later numbers - probably due to a different cut in sample (privatization year most likely)

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%

Appendix 2.
Survey Questions That Are Relevant to the Analysis in The Paper[1]

Part I Basic Information.

1. Did your enterprise experience *Gaizhi*? 1. Yes; 2. No.
   If Yes, proceed with this questionnaire,
   If No, proceed with Questionnaire B.

2. Method of privatization (Select ONE answer among the categories, yet select ALL answers that apply under the category)

Method	Year	
	First Time	Last Time
1. IPO	____	____
2. Retaining the state ownership of the existing assets:		
2.1 Retained the existing state ownership, set up the Company Charter and the Board of Directors	____	____
2.2 Spin-off: Divided the enterprise into smaller firms	____	____
2.3 Issued new shares to introduce other type of ownership	____	____
2.4 Converted debts into shares	____	____
2.5 Other (please specify: _____)	____	____
3 Filed bankruptcy or reorganized	____	____
4. Transformed into an employee-owned share-holding company		
5. Privatization through selling assets		
5.1 Management acquisition	____	____
5.2 Sold to other individual(s) of the firm	____	____
5.3 Sold to other SOEs	____	____
5.4 Sold to outside individuals or domestic private firms	____	____
5.5 Sold to foreign firms/individuals (please specify: __)	____	____
6. Leasing or trusteeship	____	____
7. Joint venture with a foreign enterprise	____	____

3. Ownership after privatization (in %) (Please indicate affiliation for state-owned shares)

[1] The whole survey contains 48 pages and is available from the authors upon request.

	%
1. Central government	
2. Local government	
3. Executives	
4. Employees	
5. Other SOE(s) or enterprise(s)	
6. Other collective enterprise(s)	
7. Domestic private enterprise(s)/individual(s)	
8. Joint venture(s)	
9. Solely foreign owned enterprise(s)	
10. Other	
Total	100%
11. Major shareholder	
12. Sum of 2nd and 3rd largest shareholders	

Part II Corporate Governance

1. Was there any change in the core management team of the enterprise after privatization?
   1 Yes 2 No
2. Is there a Board of Directors in your firm?
   1 Yes 2 No （skip to 5.4）
   2.1 The Board Chairman is:
      1. A former manager/former CCP Secretary
      2. Newly appointed by government
      3. The major shareholder
      4. New CEO
      5. Other (please specify: _____)
   2.2 The Board Chairman was:
      1. Appointed by the major shareholder
      2. Appointed by the superior authority
      3. Elected by the board
      4. Elected in the general shareholders' meeting
      5. Appointed by former CEO
   2.3 The Board composition (fill in numbers):
      __ representatives from the central government;
      __ representatives from the local government;
      __ executives;
      __ employees;
      __ representatives from other SOEs or institutions
      __ representatives from other collective enterprises;
      __ representatives from foreign-funded company;
      __ representatives from joint ventures;
      __ other owners of domestic private enterprises or individual shareholders;

_ independent directors;
_ others.

2.4 Are the board directors elected by the general shareholders' meeting? 1. YES 2. NO

2.5 The decision-making mechanism of the board is based on:

1. Simple majority principle, one vote by each director
2. Simple majority principle, one vote by each share
3. Combination of 1 & 2
4. The major shareholder has the final word
5. Several major shareholders have the final word
6. Other (please specify: _____)

2.6 Does the Board respect and accept the opinion of the CEO?

0. Never 1. Seldom (far less than 50%)
2. Sometimes (less than 50%) 3. 50% probability
4. Often (more than 50%) 5. Always (far more than 50%)

3. President

3.1 Does CEO of your firm also acts as the legal person?

Before privatization: 1.Yes; 2. No.
After privatization: 1.Yes; 2. No.

3.5 Does CEO of your firm also acts as Board Chairman?

Before privatization: 1.Yes; 2. No.
After privatization: 1.Yes; 2. No.

3.3 How many years has he/she served as CEO?

Before privatization: _____years;
After privatization: _____years.

3.4 Was CEO an employee of your firm before this appointment?

Before privatization: 1.Yes; 2. No.
After privatization: 1.Yes; 2. No.

3.5 Percentage of shares owned by CEO:

Before privatization: ___%
After privatization: ___%

3.6 Is the stake owned by CEO linked to business performance?

Before privatization: 1.Yes; 2. No.
After privatization: 1.Yes; 2. No.

3.7. Is CEO's cash income linked to business performance?

Before privatization: 1.Yes; 2. No.
After privatization: 1.Yes; 2. No.

If YES, the percentage of his income linked to business performance compared to his/her total salary:

Before privatization: ___%
After privatization: ___%

4. CEO:

Before privatization:

1. Was elected by the general shareholders' meeting
2. Was appointed by the Board
3. Was served by the major shareholder
4. Was appointed by the government
5. Others

After privatization:

1. Was elected by the general shareholders' meeting
2. Was appointed by the Board
3. Was served by the major shareholder
4. Was appointed by the government
5. Others

Part III Government and Business

1. The importance of the government and the major parties of the firm in the following decisions of the firm, before and after privatization (Rate the importance, with a 0-5 scale, in which 0 means Irrelevant and 5 means Indispensably Important):

Decision		The government	Board of Directors	CEO	Party Committee	Shareholder Meetings
New recruitment/lay off	Before					
	After					
Investment	Before					
	After					
Compensation	Before					
	After					
Executive appointment	Before					
	After					
Profit allocation	Before					
	After					
Production and marketing	Before					
	After					
Finance	Before					
	After					
Use of fund	Before					
	After					

Appendix 2. NSB Data

The National Statistical Bureau (NSB) is arguably the most important data source for studying industrial firms in the Chinese economy. However, some questions have arisen about the quality of this data set, as is the case with any Chinese data. In this study, we have examined the data in detail to understand how their weakness may affect our analysis. This appendix summarizes our findings.

1. Missing data

Critics have raised the issue of missing observations in the NSB data set. The most relevant concern for our analysis is that data might be missing for performance-related reasons, which biases our results. Table A1 reports the extent of missing data. To start, we focus on firm-year observations with valid sales *and* assets information. Column (1) of Panel A reports the NSB data sample size by year. It increases considerably over years, reflecting more firms meeting the 5-million-sales criterion, driven by the economic growth in China, and better coverage of the NSB census.

Columns (2) and (3) report the number and percentage of firms entering into and disappearing from the database. Column (4) is the number of firms reappearing. Each year, about 10%-26% (with an average of 18%) of the firms disappear from the database, whereas only a small proportion of these firms reappear in the database in later years. This finding suggests that once a firm enters the database, it reports data quite reliably every year until it disappears.

Panel B further confirms this pattern. It reports the number of missing years for firms with different data span, which is defined as the total number of years a firm appears in the database. The vast majority of the firms—an average of 89% of firms across data spans between two and nine years—do not have any missing data. In the next few columns, we show, for those firms with missing observations, the number of years for which data are missing. In most of the cases, the data are missing for only one year. Combined with those in Panel A, the results suggest that although the database shows a substantial attrition of firms, during the firms' data span, missing data are not a big concern. In other words, firms permanently dropping out of the database are the primary drivers of the data attrition.

In what follows, we examine whether any pattern exists in the firms' (permanent) disappearance. Here, we focus on firms reporting data continuously until they disappear, because disappearance is the main source of missing data. Panel C of Table A2 is an entry and exit matrix. It reports the year in which firms entering the database in each year disappear—if they disappear. For example, the first row shows how many of the firms entering the database in 1998 disappear in each of the subsequent years from 1999-2006 (the last year of our data). The last two columns show the proportion of firms that never disappear.

Clearly, most firms that disappear do so during the first two years after they enter the database, accounting for around 60% of firm attrition on average, excluding firms entering in 2004, which has only two years of data. Several possible reasons can explain this pattern. First, after the Party's 15th Congress in 1997, large-scale privatization and restructuring of SOEs occurred, which disrupt company operations and thus responses to NSB survey. Private sector firms might also be involved in some kind of restructuring, to the extent that they are involved

in mergers and acquisitions. Although the NSB database does not record such activities directly, it has a variable called "registration type." Under registration type, companies are classified into seven ownership categories, including SOEs, COEs (collectively owned enterprises), Hong Kong, Macao, Taiwan-owned enterprises, foreign-owned enterprises, shareholding companies, private companies, and other domestic companies. A change in registration type reflects privatization or a significant M&A event. However, not all corporate restructurings would result in a change in registration type if such a restructuring does not involve a change in the ownership category as defined above. Nevertheless, this measure is the best one we have to gauge the extent of restructuring. Panel D1 of Table A2 supports the restructuring hypothesis and shows 65% of the firms that disappear in the first two years have changed their registration type, a much higher probability compared with firms disappearing in later years (7%) and those that never disappear (7%).[1]

Another possibility is that the firms are smaller, and yearly variations in sales make them fall below the 5-million-sales criterion necessary for inclusion in the NSB census. Panel D2 of Table A2 reports financial variables of firms in the first year they enter the database. Columns (1) and (2) indicate that compared with those that never disappear, firms that disappear in the first two years are indeed significantly smaller and are much more likely to have sales below 5 million (20% vs. 4%). Thus, the exogenous criterion of sales the NSB imposes appears to be an important reason firms disappear. One may argue that lower sales may be related to bad performance. This connection is not obvious, because in an SOE-dominated

[1] We also look at the proportion of firms that change registration type during all the years in the database for both firms that disappear in later years and those that never disappear. They are 23% and 47% respectively. Thus change in registration type does not necessarily cause firms to disappear. It just so happens that registration type changes in the first two years are associated with firms disappearing.

economy, refocusing and selling off redundant assets, which would reduce sales in the short run, is actually good news for efficiency and performance. When we compare firms disappearing in the first two years and those disappearing later, the former group is smaller, but the difference in the proportion of firms with sales below 5 million is not economically significant (21% vs. 20%). Thus, although firm size is an important factor related to firms disappearing, it is not a direct reason for firms' disappearance in the first two years as opposed to later years.

Finally, we check whether data attrition results from firms that are not performing well and thus are reluctant to respond to the NSB census. Note that this explanation and the restructuring explanation may not be mutually exclusive. The proportion of negative-profit firms that have undergone a change in registration type is not significantly different from those that have not. In fact, among firms that disappear in the first two years, the proportion of negative profits is actually slightly smaller for those with a change in registration type than those without (25% vs. 27%). Thus, restructuring is not necessarily associated with poor performance.

In column (3) of Panel D2, we compare the two groups of firms disappearing (in the first two years and later) with those that never disappear. We find the former has a greater proportion of firms with negative profits in the first year in which they enter the database, which seems to suggest firms' poor performance may be associated with firms disappearing. To further understand the association between poor profits and data attrition, in Panel D3 of Table 1, we compare firms disappearing later with those that never disappear. We find the proportion of firms with at least one year of negative profits differs little between the two groups in terms of economic significance (37% vs. 32%). This finding is reassuring because it means firms with

poor profits do not necessarily disappear, or the association between poor profits and firms' disappearance is fairly weak in the whole sample. Taken together, the evidence suggests restructuring and the sales criterion exogenously imposed by the NSB, rather than performance, are the main reasons firms disappear.

2. Privatization and NSB-reported Change of Registration Type

Given the NSB database records the registration type, a natural question may be "Can one identify privatization based on the changes of registration types?" This alternative approach may not be reliable, because, after partial privatization, the firm remains an SOE and thus would not report a change in registration type. In fact, our survey data provides a unique opportunity to check whether it is appropriate to use changes in registration type to identify privatization. Denoting privatization year as t, we classify privatization based on the change in registration type from t-1 or t+1. If registration type ever changes from SOE to non-SOE during this three-year window, we classify it as privatization.

Panel A of Table A3 suggests type II error is the main problem with using registration type to identify privatization (the null is no privatization). Among the 789 privatized firms, less than a quarter (23.2%) would have been classified as privatized. That is, the chance of type II error is 76.8%. If we extend the window to [t-2, t+2], things do not improve much and the chance of type II error is still as high as 67.3%. In comparison, type I error is a minor problem and is present in only 6.1% of the cases. Panel B of Table A3 further documents the reasons registration type fails to identify privatization. When we use a window of [t-1,t+1], 51% of the failure in identifying privatization is a results of firms not reporting any change in registration type after

privatization. The second reason is that some SOE firms are never classified as SOEs (38% of the cases). Or sometimes the registration type is missing (7%). Finally, firms' reported registration types are, at times, inconsistent: they may be an SOE in one year, a non-SOE in another year, and then become an SOE again. Or they may turn from a non-SOE to an SOE. These inconsistent cases account for 3% of all failed identification. Taken together, the evidence suggests change of registration type is not a reliable indication of privatization, for two reasons. One is that the firm still considers itself an SOE as long as the remaining state ownership is significant. The other is that registration type does not seem to be a reliable or accurate variable.

3. Privatization and NSB-Reported State Ownership

The NSB database contains information on state ownership. We check the reported state ownership of our sample of privatized firms. Again, we denote privatization year as t. Figure A1 plots NSB state ownership from t-7 to t+8. The finding that state ownership declines for the privatized firms in our survey is reassuring. Consistent with our earlier discussion that restructuring may happen in the years prior to the big push of direct sales, a mild decline in state ownership occurs before the reported privatization. Moreover, most of the decline in state ownership occurs between t-1 and t+1. All these findings suggest that although NSB state-ownership data are broadly consistent with privatization, they cannot identify the exact timing of privatization and thus should not be used for studies involving performance comparison.

Table A1. The Extent of Missing Data in the NSB Database

Panel A. Number of observations in NSB by year

Numbers in brackets in columns (2) and (3) are, respectively, new firms and disappearing firms as a percent of the number of observations in the previous year. (1) = (1)_last year + (2) – (3) + (4).

Year	# of firms (1)	# of new firms (2)	# of disappearing firms (3)	# of reappearing firms (4)
1998	146,259	n.a.	n.a.	n.a.
1999	155,151	30,640 (21%)	21,748 (15%)	n.a.
2000	156,357	28,038 (18%)	28,429 (18%)	1,597
2001	163,968	46,162 (30%)	41,392 (26%)	2,841
2002	176,834	33,866 (21%)	25,422 (16%)	4,422
2003	193,122	43,376 (25%)	30,924 (17%)	3,836
2004	273,329	124,462 (64%)	50,783 (26%)	6,528
2005	269,751	36,209 (13%)	44,830 (16%)	5,043
2006	299,334	50,246 (19%)	26,963 (10%)	6,300
Total # of firms	1,834,105	392,999	270,491	30,567
Average of %	n.a.	26%	18%	n.a.

Panel B. Years of missing data by data span

Data span is defined as the number of years from the first year a firm enters database to the last year that the firm is in the database.

Data Span	Total	# firms w/o missing data	missing for			
			1 year	2 years	3 years	≥4 years
9 years	42,062 (100%)	35,148 (84%)	3,470 (8%)	1,373 (3%)	921 (2%)	1,150 (3%)
8 years	12,616 (100%)	9,889 (78%)	1,391 （11%)	557 (4%)	396 (3%)	383 (3%)
7 years	16,327 (100%)	13,033 (80%)	1,547 (9%)	808 (5%)	527 (3%)	412 (3%)
6 years	38,942 (100%)	34,106 (88%)	2,982 (8%)	1,230 (3%)	428 (1%)	196 (1%)
5 years	35,439 (100%)	31,701 (89%)	2,578 (7%)	846 (2%)	314 (1%)	n.a.
4 years	48,247 (100%)	45,126 (94%)	2,334 (5%)	787 (2%)	n.a.	n.a.
3 years	127,740 (100%)	122,776 (96%)	4,964 (4%)	n.a.	n.a.	n.a.
2 years	83,260 (100%)	83,260 (100%)	n.a.	n.a.	n.a.	n.a.
1 years	134,625 (100%)	n.a.	n.a.	n.a.	n.a.	n.a.
Total of # firms	539,258	375,039	19,266	5,601	2,586	2,141
Average of %	100%	89%	7%	3%	2%	2%

Panel C. Entry & exit matrix

Year the firm enters	Firms reporting data continuously until they disappear										Never disappear & % of the total
	Year the firm disappears								Subtotal	Disappear in the first two years	
	1999	2000	2001	2002	2003	2004	2005	2006			
1998	18,306 (19%)	18,083 (19%)	21,743 (22%)	9,860 (10%)	9,390 (10%)	13,055 (13%)	3,826 (4%)	3,422 (4%)	97,685 (100%)	36,389 (37%)	35,148 (24%)
1999	n.a.	6,418 (31%)	5,625 (27%)	2,393 (11%)	2,325 (11%)	2,759 (13%)	754 (4%)	679 (3%)	20,953 (100%)	12,043 (57%)	6,467 (21%)
2000	n.a.	n.a.	7,504 (44%)	2,362 (14%)	2,322 (14%)	3,203 (19%)	855 (5%)	774 (5%)	17,020 (100%)	9,866 (58%)	8,528 (30%)
2001	n.a.	n.a.	n.a.	6,040 (26%)	6,109 (26%)	7,407 (32%)	1,866 (8%)	1,716 (7%)	23,138 (100%)	12,149 (53%)	19,523 (42%)
2002	n.a.	n.a.	n.a.	n.a.	5,809 (39%)	6,024 (40%)	1,660 (11%)	1,541 (10%)	15,034 (100%)	11,833 (79%)	16,981 (50%)
2003	n.a.	n.a.	n.a.	n.a.	n.a.	10,314 (67%)	2,643 (17%)	2,550 (16%)	15,507 (100%)	12,957 (84%)	26,331 （61%）
2004	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	26,125 (72%)	10,068 (28%)	36,193 (100%)	36,193 (100%)	84,701 (68%)
2005	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	3,863 (100%)	3,863 (100%)	3,863 (100%)	32,346 (89%)
2006	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	50,246 (100%)
Total	18,306 (8%)	24,501 (11%)	34,872 (15%)	20,655 (9%)	25,955 (11%)	42,762 (19%)	37,729 (16%)	24,613 (11%)	229,393 (100%)	135,293 (59%)	280,271 (52%)

Panel D. Why do firms tend to disappear in the first two years?

Significance levels of 1%, 5%, and 10% are indicated as ***, **, and *, respectively.

Panel D1. Change of registration type

We test the statistical difference between (a) and (b), and between (a) and (c).

	Change in the first two years	Change during the lifetime
(a) Disappear in the first two years	65%	65%
(b) Disappear later	7%***	23%***
(c) Never disappear	7%***	47%***

Panel D2. Financial variables in the first year the firm enters
We test the statistical difference between (a) and (b), and between (a) and (c).

		# firms	Sales ('000)	Sales < 5 mil	Negative profit
			(1)	(2)	(3)
(a) Disappear in the first two years	mean	135,293	26,884	20%	26%
	med		7,518		
(b) Disappear later	mean	94,100	31,178**	21%***	27%***
	med		10,002***		
(c) Never disappear	mean	280,271	44,954***	4%***	19%***
	med		11,893***		

Panel D3. Financial variables of firms disappearing at some point and those that never disappear

		# firms	Avg Sales ('000)	Sales < 5 mil	Neg profit
			(1)	(2)	(3)
Disappear at some point	mean	229,393	35,040	30%	37%
	Med		9,807		
Never disappear	mean	280,271	91,905***	6%***	32%***
	med		19,813***		

Table A2. Change of Registration Types in NSB Data

Panel A. Type I & type II errors in using registration types to identify privatization

This table reports the success rate of using the change of registration type in the NSB database to identify privatization in our sample. For privatized firms in our survey, the privatization year is t. Then we check the registration type during [t-1, t+1] and [t-2, t+2]. If the registration type changes from state-owned and collectively owned firms to other types, we define it as privatization. For non-privatized firms, we use the same algorithm to check the registration change in NSB data over the whole sample period (1998-2006).

Panel A. Identification based on windows [t-1, t+1] and [t-2, t+2]

		Identified by the survey		
		Privatized window [t-1,t+1]	Privatized window [t-2,t+2]	Not privatized
Identified by NSB	Privatized	183 (23.2%)	258 (32.7%)	29 (6.1%)
	Not privatized	606 (76.8%)	531 (67.3%)	446 (93.9%)
	Total	789 (100%)	789 (100%)	475 (100%)

Panel B. Reasons why NSB fail to identify privatization

This table presents the reasons NSB data fail to identify privatization. “Others” means registration type goes from non-SOE to SOE at some point during the window.

	Window [t-1,t+1]	Window [t-2,t+2]
No registration-type change	310 (51%)	318 (60%)
Not SOE	233 (38%)	108 (20%)
Registration type missing	44 (7%)	72 (14%)
"Others"	19 (3%)	33 (6%)
Total	606 (100%)	531 (100%)

Table A3. Change in the Mean of State Ownership in NSB for Privatized Firms