

# A Nationwide Survey of Privatized Firms in China

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This descriptive study is based on a nationwide survey of privatization in China. Between 1995 and 2005, close to 100,000 firms with 11.4 trillion RMB in assets were privatized in China. This privatization process encompassed two-thirds of state-owned enterprises and state assets. Privatization in China has created concentrated private ownership and greatly changed corporate governance. After privatization, the state has withdrawn from firms' daily decision making. Soft budget constraints have been substantially hardened. Firms have become more efficient and more profitable.

*Keywords:* Fisher Equation, Monetary Policy Rules, Predictability

*JEL Classification:* E37, E43

## I. Introduction

Privatizing state-owned enterprises (SOEs) is a major step in transforming centralized economies into market economies. By far the largest privatization in history has been the privatization of SOEs in China. This process started on a large scale in the 1990s. Between 1995 and 2005, close to 100,000 firms with 11.4 trillion RMB worth of assets were privatized, encompassing two-thirds of China's SOEs and state assets. As a result, the share of the state sector in the Chinese economy is now similar to that of some Western European economies.

There are some key differences between China's privatization and those of other transitional economies, such as Russia or Central and Eastern Europe (CEE). Unlike Russia or CEE countries where

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privatization was pushed through via shock therapy, China took a gradual approach to its economic reforms and privatization was initiated only after several earlier attempts at enterprise reform failed. This “delayed” privatization brought about both advantages and disadvantages. On the one hand, at the time of privatization, most SOEs were losing money and were deep in debt. On the other hand, the market and legal institutional conditions for private ownership were much more developed than those during mass privatization in other transitional economies. It is still unclear which of these two initial conditions is more important. Another key feature of China’s privatization is that, in contrast to single-mode mass privatization, China adopted multiple approaches to privatizing its SOEs. These approaches include share issue privatization (SIP), joint ventures with foreign firms, and management buy out (MBO), and sales to outsiders.

So far, despite a large literature documenting improved operating efficiency from private ownership in general, little is known about the effectiveness of China’s privatization, the largest one in history. This is an unfortunate omission. China’s privatization is of great importance simply due to its sheer size. More importantly, its distinct differences from other privatization programs around the world can provide valuable insights into privatization designs in general.

The main hurdle to studying China’s privatization has been a lack of systematic data. This is because except for share issue privatization, most privatized firms remain private and there is no publicly available data on these private firms.<sup>1</sup> To this end, we have conducted a nationwide survey of 3065 firms, based on stratified random sampling of the population of firms with sales above 5 million RMB in terms of industry, region, and size. The survey includes privatized firms and non-privatized SOEs (including collective-owned enterprises (COEs), which enables us to address selection issues in performance evaluation. We obtained detailed information on changes in corporate governance, corporate finance, the relationship between government and firms, and law

<sup>1</sup> Sun and Tong (2003) and Deng, Gan, and He (2008) document that Chinese share issue privatization have failed to improve operating efficiency. Deng, Gan, and He (2008) point out that expropriation by large shareholders created during SIP is the root cause of the failure of share issue privatization in China.

enforcement, *etc.* The data from this survey allow us to answer the following questions:

1. Has China's privatization brought about improved operating efficiency?
2. If firms perform better after privatization, what are the specific mechanisms underlying the improved performance? Specifically,
3. Has privatization brought about restructuring measures such as personnel changes and new business strategies?  
Has privatization strengthened incentives and decentralized decision making within the firms?  
Did privatization change the role of the government?  
Did privatization change corporate governance and allocation of control rights?
4. Which mode of privatization, joint venture, SIP, or MBO, is more successful?
5. What kind of institutional conditions are necessary for successful privatization?

This paper reports the descriptive statistics of the survey. We show that privatization in China has created concentrated private ownership and changed corporate governance to a great extent. The state has retreated from being involved in the daily operations of firms and soft budget constraints have been substantially hardened after privatization. Finally, firms are more efficient and more profitable after privatization. We note that our results are preliminary in nature. Rigorous econometric analysis is offered in a contemporaneous paper by Gan, Guo, and Xu (2008).

There is a growing empirical literature that studies various facets of China's privatization (Liu and Liu, 2005; IFC report, 2003). However, none of the existing studies are based on nationwide data to enable the possibility of getting the full picture of privatization in China. Li and Rozelle (2000) study 88 privatized township enterprises in Jiangsu and Zhejiang provinces. Song and Yao (2004) and Garnault, Song and Yao (2005) use firm-level data covering 683 firms in 11 cities from 1995-2001. The study by Liu and Lu (2005) is based on survey data collected from 451 firms in five cities and four sectors during the 1994-1999. Yusuf *et al.* (2005) reported on a survey of 736 firms from five cities and seven sectors from 1996 to 2001. All of these papers find that privatization has improved

profitability, but the impact of privatization on other performance measures is ambiguous. The only work based on nationwide data is that by Su and Jefferson (2006). However, they did not have direct information about privatization. They inferred that privatization had occurred by changes in the legal registration of the firms.

The rest of this paper is organized as follows. Section 1 documents China's earlier SOEs reforms. Section 2 describes the survey. Section 3 reports descriptive statistics of the survey data and the major results of our survey on privatization. Section 4 concludes the paper.

## **II. Privatization in China**

More than twenty years of reforms in China are marked by the government's piecemeal and gradual approach. The reform of the state-owned enterprises is no exception. Instead of outright privatization, China concentrated first on productivity improvement by initiating enterprise governance structures that stressed autonomy and better incentives and then later by adopting long-term managerial contracts with pre-specified financial targets (such as profits and taxes). Instead of introducing markets and liberalizing prices overnight, China first created markets at the margin, parallel to the planned economy, by introducing the "dual-track system" in the state industrial sector and by lowering bureaucratic barriers to entry to the once state-monopolized industries. Admittedly, the reforms brought about fundamental improvements in output and productivity. The marginal productivity of labor increased by 54 percent and the growth in total factor productivity (TFP) was 4.68-6 percent per year during 1980-89 (Li, 1997; Groves, Hong, McMillan, and Naughton, 1994).

This gradual reform approach, however, had its limits. When the reforms started in 1979, most SOEs were profitable at least on paper. Since the reforms began, despite significant output expansion and productivity gains, the profitability of the SOEs declined substantially and most of them were losing money in the early 1990s. As a result, many SOEs were deeply in debt and, by 1994, close to half of the SOEs had zero or negative equity. The decline in profitability was due to two reasons. First, without clear allocation of property rights, the SOEs' obligations were on the profit side but not on the loss side, which reduced the SOEs' incentives to improve

their operating efficiencies. Second, SOEs operated under unfavorable conditions due to both their many social responsibilities (e.g., social security, housing, and education) and external price controls imposed by the dual-track system. These policy burdens put the SOEs in a disadvantaged position in their competition with the rapidly growing private sector. Policy burdens also made it difficult for the state to impose hard budget constraints via bankruptcy of money-losing enterprises. Meanwhile, the dual-track system created enormous opportunities for corruption. In the end, the state acted as the residual claimant, absorbing the losses and the consequences of the diversion of state assets. This imposed a severe strain on the country's banking system. With SOEs relying on 70-80 percent of all bank credit, the banks were saddled with as much as US\$200 billion in uncollectable debt, which accounted for, by conservative estimates, a quarter of all outstanding bank loans (USA Today, Sept. 8, 1997).

These problems ushered in a new stage of more fundamental reforms. In 1993, the Third Plenum of the Fourteenth Chinese Communist Party Congress endorsed the creation of a modern enterprise system. In particular, it approved the development of diversified forms of ownership through privatization, which would allow SOEs to compete on equal terms in the marketplace. In 1995, the central government decided on the policy of "retain the large, release the small" (*juada fangxiao*). That is, the state was to keep the largest 300 SOEs in strategic industries and allow smaller firms to be leased or sold. The Chinese Communist Party's 15th Congress (1997) gave a green light to privatizing the majority of SOEs nationwide. Regional governments were granted *de jure* ownership of SOEs within their jurisdictions and were allowed to sell their assets.

Large scale privatization began in the late 1990s. At this time, market and legal institutional conditions for privatization were partially in place: both product and labor markets were developed; the newly established social security system (*esp.* unemployment benefits) was partially functioning; and new legal institutions and new laws were partially in place. These conditions are in sharp contrast to privatization programs in other transitional economies. Indeed, a common lesson from many former communist countries is that they pushed privatization too hard too soon and the lack of proper institutional conditions hindered potential efficiency gains from privatization.

In addition to the institutional environment, regional governments played an important role in privatization. They often were the initiators of privatization. They also acted as a (imperfect) substitute for institutions (Pistor and Xu, 2005). Since there was no constitutional protection for private property rights until April 2004, ad hoc government protection (promises) was crucial to firm development. Close relationships with regional governments were important for firms to acquire resources like land, credit and energy, etc. during privatization.

There are no official statistics on the number of firms or the value of the assets that have been sold off. In our surveyed sample, 62.8% of the SOEs and COEs were privatized by the end of 2004. Since our sample is carefully constructed to match the population, we infer that 92,493 firms had been privatized with total assets of 11.4 trillion RMB.

### **III. The Survey**

#### *A. Pilot Surveys*

Before we finalized our questionnaire, we conducted pilot surveys 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). The pilot surveys were conducted through on-site face-to-face interviews and telephone interviews. These pilot surveys turned out to be extremely useful in helping us to design both our survey questions and procedures. For example, for some key (and sensitive) financial variables, instead of asking for the information directly, we experimented with using multiple choices (in percentage intervals) and found that the response rates increased dramatically.

#### *B. The Sampling Procedure*

The survey was conducted in early 2006. We used the population of all industrial firms with sales of 5 million RMB or more in 2004 provided by the National Bureau of Statistics (NBS). We started with a random sample of 11000 firms stratified by region, industry, size, and ownership type. Since we desired to study privatization in great

detail, we added 5500 SOEs listed in the 1998 Statistical Bureau database, which is a stratified sample based on region, industry, and size, to the main survey sample.

Our overall response rate was about 18.6%.<sup>2</sup> In our respondent sample, we had 900 privatized firms (Sample A), 477 non-privatized SOEs and COEs (non-privatized SOEs hereafter), and 1188 firms that were never owned by the state (private firms hereafter). This combined sample matched the industry and regional distribution of the population, but it included a higher percentage of SOEs and thus large firms than in the general population. We therefore randomly sampled an additional 3200 small- and medium-sized non-SOEs from the 2004 population to obtain 500 non-SOE respondents (a response rate of about 16%). We used these 500 small- and medium-sized non-SOEs to randomly replace 500 large SOEs to obtain a sample (Sample C) that clearly matches the distribution of the general population. The newly surveyed 500 small- and medium-sized non-SOEs combined with the 1665 non-privatized SOEs and private firms in Sample A formed Sample B.

The survey was mainly conducted through telephone interviews. We hired a professional survey company that had a close relationship with the National Bureau of Statistics and had previously helped NBS to conduct its own surveys. We spent a week to train the staff of the survey company to understand each question. Throughout the survey, we worked closely with the staff and supervised the progress carefully.

By excluding firms without valid financial information in the NBS financial database, Sample A included 808 privatized firms, Sample B included 1908 firms (non-privatized SOEs and private firms) and Sample C included 535 privatized and 1772 non-privatized SOEs and private firms. Table 1 compares the distribution of our survey sample (A & B and C) with that of the full population.

#### **IV. Descriptive Statistics of the Survey Data**

In this section, we describe what can be learned from the survey data based on summary statistics. We focus on corporate governance, incentives, corporate finance, and relationships with the government.

<sup>2</sup>The response rates between the two samples were very similar. s

TABLE 1

## SAMPLE DISTRIBUTION OF OWNERSHIP, SIZE, LOCATION, AND INDUSTRY

This table compares the distribution of our survey samples with that of the population by ownership, size, location, and industry. North China includes Beijing, Tianjin, Hebei; North-East: Heilongjiang, Jilin, Liaoning; North-West: Xinjiang, Qinghai, Ningxia, Gansu, Shaanxi, Innermongolia; North-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.

	Sample A & B		Sample C		Population	
	Number (1)	% (2)	Number (3)	% (4)	Number (5)	% (6)
<i>Panel A: Ownership Distribution</i>						
SOEs & COEs	706	26%	556	24%	54,789	20%
Private	956	35%	851	37%	119,538	43%
Joint Venture and Foreign	453	17%	396	17%	57,284	21%
Others	601	22%	504	22%	47,481	17%
Total	2,716	100%	2,307	100%	279,092	100%
<i>Panel B. Size Distribution</i>						
Large	159	6%	42	2%	5,580	2%
Medium	792	29%	328	14%	60,182	22%
Small	1,765	65%	1,937	84%	213,330	76%
Total	2,716	100%	2,307	100%	279,092	100%
<i>Panel C. Regional Distribution</i>						
North	271	10%	219	10%	22,717	8%
North-East	209	8%	148	6%	18,254	7%
North-West	121	5%	98	4%	10,013	4%
North-Central	435	16%	371	16%	40,724	15%
South-West	162	6%	125	5%	15,242	6%
East	952	35%	821	36%	98,034	35%
South	360	13%	344	15%	51,076	18%
South-Central	206	8%	181	8%	23,032	8%
Total	2,716	100%	2,307	100%	279,092	100%
<i>Panel D. Industry Distribution</i>						
Mining	239	9%	206	9%	31,064	11%
Food, Beverage & Tobacco	225	8%	205	9%	23,862	9%
Textiles	330	12%	309	13%	42,852	15%
Timber and Paper Products	245	9%	217	9%	24,268	9%
Petroleum & Chemical	450	17%	385	17%	42,799	15%



	Sample A & B		Sample C		Population	
	Number	%	Number	%	Number	%
	(1)	(2)	(3)	(4)	(5)	(6)
Metals	598	22%	505	22%	58,530	21%
Machine and Electronics	463	17%	383	17%	46,900	17%
Electricity, Gas and Water	166	6%	97	4%	8,817	3%
Total	2,716	100%	2,307	100%	279,092	100%

### A. Privatization Process

By the end of 2005, 62.8% of SOEs had been privatized. Consistent with results from the World Bank Survey (Liu and Lu, 2005), we found that privatization mainly occurred between 2000 and 2001. Among the 900 privatized firms in our sample, 80% were SOEs and 19% were COEs before privatization. Across the different layers of governments, regional governments played the most important role, initiating 58% of SOE privatization. Another 45% of the privatization was initiated by managers of the firm or jointly with regional governments. The roles of the central government and employees were negligible.

MBO was the most important means of privatization, accounting for about half of SOE privatization.<sup>3</sup> Employee shareholding was second, accounting for 25% of SOE privatization.<sup>4</sup> The average that each MBO manager paid was 7.2 million RMB. Three-quarters of the MBO managers paid 100% of their payments by cash and one-quarter of the MBO managers paid one-third of the cost in down-payments and expected to pay the rest from future profits of the firm. Among employee shareholders, each employee on average

<sup>3</sup>We asked about the means of privatization and about managerial ownership after privatization. Obviously, due to a controversy about MBOs, firms under-report that they are MBOs. Only 73 firms or 8.6% of the sample categorized themselves as MBOs, inconsistent with the average reported managerial ownership of 78% (about half of the firms reported this information). Thus, we also use managerial ownership to identify MBOs. If we define an MBO as having managerial ownership greater than 50%, 46% of the firms in our sample are MBOs. If we define an MBO as managerial ownership greater than 20%, 4% of the firms in our sample are MBOs.

<sup>4</sup>Garnaut et al. (2005) point out that privatization after 1997 resulted in the concentration of shares in the hands of the management. Liu and Lu (2005) use the survey data conducted by CASS during 1994-1999 and find that MBO is associated with more efficiency gain than is employee share holding.

**TABLE 2**  
ORGANIZATIONAL FORMS OF PRIVATIZED VS. NON-PRIVATIZED FIRMS

	Privatized firms		Not-privatized firms		Population 2004	
	Number (1)	% (2)	Number (3)	% (4)	Number (5)	% (6)
Limited joint stock companies	324	36.1%	218	10.1%	12,593	5.0%
Limited liability companies	433	48.2%	805	37.2%	169,023	60.0%
partnership	32	3.6%	75	3.5%	14,284	5.1%
Individual-owned (geren duzi)	87	9.7%	631	29.1%	26,580	9.5%
Joint ventures	20	2.2%	355	16.4%	27,270	9.8%
Foreign owned	2	0.2%	79	3.7%	29,342	10.5%
Total	898	100.0%	2163	100.0%	279,092	100.0%

paid 33,417 RMB. The vast majority of employees (96%) bought shares with cash.

Table 2 lists the organizational forms of privatized firms. Privatized firms are substantially more likely to be organized as limited liability companies and limited joint stock companies (48% and 36%, respectively) than are non-privatized firms (37% and 10%, respectively). Privatized firms are much less likely to be organized as sole-proprietary (geren duzi) enterprises than are non-privatized firms (10% vs. 29%).

#### *B. Corporate Governance in Privatized Firms*

As in many other countries, privatization in China created concentrated ownership. On average, the largest shareholder in our sample owned 60% and the second/third largest shareholders owned 26% of company shares of privatized firms. The largest shareholder of non-privatized firms (SOEs and COEs) was the government, which owned 94% of the shares, whereas the second/third largest shareholders owned 3% of shares. In terms of ownership, the privatized firms became similar to private firms.

Privatization is associated with significant personnel changes in firms. Over 62% of the firms changed the core members of the management team after privatization, whereas only 15% of private

firms made similar changes during the survey period. However, 66% of non-privatized SOEs also changed their management team. Without more analysis, we cannot say if the personnel changes were due to privatization or just a phenomenon among SOEs.

After privatization, three quarters of the firms in the survey established boards of directors. Among the non-privatized SOEs, only 18% of the firms had boards of directors and among private firms, 44% had boards of directors. In privatized firms, 48% of the chairmen of the boards of directors became the largest shareholder of their firms. Among private firms, nearly 100% of the board chairmen are the largest shareholders and among non-privatized SOEs, about 30% of board chairmen are the largest shareholders of their firms.

Panels B-F of Table 3 report the allocation of control rights among government/party committees, CEOs, corporate boards, and shareholder meetings in making key corporate decisions. The corporate decisions we asked about included the appointment of top managers, employment/layoffs and wages/compensation, corporate financial issues, production, and operations. These control rights were rated with scores ranging from 0 to 5 in the order of greatest importance.

Most strikingly, the government almost completely retreated from being involved in the daily operations of companies after privatization. On average, government control rights dropped from 1.9 to 0.4, making privatized firms similar to private firms. The control rights of party committees were also substantially weakened, dropping from 2 to 1.2, which is in contrast to the score of 2.5 for non-privatized firms.

Probably because earlier enterprise reforms had already given managers substantial authority over their companies, the control rights of CEOs remained largely the same after privatization.

The importance of both boards of directors and shareholder meetings increased substantially after privatization. Their average importance increased from 0.1 and 0.06 to 3.2 and 1.74, respectively. Interestingly, these figures are similar to those for both non-privatized SOEs and privatized firms. These observations, as well as our interviews, suggest that there was a trend or pressure to give control rights to corporate boards across all firms.

We also asked how firms solved disputes between managers and shareholders. Corporate boards were the most important factor in

**TABLE 3**  
OWNERSHIP AND CONTROL OF PRIVITIZED FIRMS

	Privatized firms	Not-privatized SOEs	Private firms	
	(1)	(2)	(3)	
<i>Panel A. Ownership of Large Shareholders</i>				
Largest shareholder	60%	94%	79%	
Second/third largest shareholder	26%	32%	29%	
	Before privatization	After privatization	Not-privatized SOEs	Private firms
	(1)	(2)	(3)	(4)
<i>Panel B. Control Rights of Government</i>				
Appointment of top management	2.5	0.6	3	0
Employment/layoff	2	0.4	2.2	0
Wages/compensations	1.6	0.4	1.9	0
Investment	2	0.4	2.6	0
Fund raising	1.9	0.4	2.4	0
Distribution of profits	1.7	0.4	2	0
Production and marketing	1.5	0.3	1.8	0
Average	1.9	0.4	2.3	0
<i>Panel C. Changes of Control Rights of Party Committee</i>				
Appointment of top management	2.6	2.1	2.7	2
Employment/layoff	2.8	2.1	2.8	2.2
Wages/compensations	2.6	2	2.4	2.2
Investment	2.2	1.6	2.5	2
Fund raising	2.1	1.6	2.5	1.7
Distribution of profits	2.5	1.8	2.4	1.8
Production and marketing	2.3	1.7	2.2	1.8
Average	2.4	1.8	2.5	2
<i>Panel D. Control Rights of CEOs</i>				
Appointment of top management	3.7	3.6	4.1	4.3
Employment/layoff	3.7	3.7	4	4.2
Wages/compensations	3.3	3.4	3.8	4.3
Investment	3.2	3.4	3.8	4
Fund raising	3.7	3.7	3.9	4.2
Distribution of profits	3.8	3.7	4	4.1
Production and marketing	3.6	3.6	3.9	4.2
Average				
<i>Panel E. Control Rights of Boards of Directors</i>				
Appointment of top management	2.9	4.4	4.5	4.5

	Before privatization	After privatization	Not-privatized SOEs	Private firms
	(1)	(2)	(3)	(4)
Employment/layoff	2.8	4.3	3.9	3.9
Wages/compensations	2.6	3.9	3.9	3.6
Investment	3.2	4.6	4.3	4.5
Fund raising	2.8	4.4	4.3	4.4
Distribution of profits	2.7	4.4	4.4	4.5
Production and marketing	2.3	4	3.9	3.6
Average	2.8	4.3	4.2	4.1

*Panel F. Control Rights of Shareholders Meetings*

Appointment of top management	1.9	3.5	3.4	3.7
Employment/layoff	2	3.4	2.5	3.1
Wages/compensations	1.6	3.2	2.8	2.9
Investment	2.3	4.1	3.7	4
Fund raising	2.5	4.3	3.4	3.9
Distribution of profits	1.5	3.6	3.4	3.8
Production and marketing	1.5	3.2	2.7	2.8
Average	1.9	3.6	3.1	3.5

*Panel G. How Disputes between Management and Shareholders Are Solved*

Board of directors	0.15	3.39	3.7	4.3
Negotiation	2.8	2.5	2.8	2.8
Shareholders meeting	0.1	1.8	3.1	3.2
Third-party mediation	1.9	1.5	1.6	1.5
Court	1.23	0.83	1	1
Other	1.1	0.35	2.8	2.8

resolving disputes between managers and shareholders, with an increase from 0.15 to 3.39. The importance of the courts decreased from 1.23 to 0.83. Apparently, boards of directors, negotiation, and shareholders meetings were much more important in solving disputes than were the courts in China during the survey period.

Privatization strengthened incentives among employees (Table 4). The percentage of performance-based bonuses rose from 19% before privatization to 29% after privatization, in line with the use of bonuses in both non-privatized SOEs and private firms. This suggests a trend towards performance-based pay throughout the corporate sector in China.

Privatized firms use both firm-level, group, and personal performances in determining bonuses. However, compared with non-privatized SOEs and private firms, they appear to rely more on firm-level profits, rather than group and personal performance in

**TABLE 4**  
EXCHANGE RATE REGIMES IN TRANSITION ECONOMIES

	Before privatization	After privatization	Not-privatiz ed SOEs	Private firms
	(1)	(2)	(3)	(4)
<i>Panel A. Compensation Structure</i>				
% of fix salary	84%	71%	75%	66%
% of performance based bonus	19%	29%	25%	28%
<i>Panel B. Determinants of Bonuses</i>				
Firm's profits	4.1	4	3.4	3.2
Related department performance	1.3	1.6	1.9	2.3
Personal performance	2.3	2.8	3.6	3.8
Employee's position	1.7	1.3	1.4	1.5
Others	0.02	0.01	1.7	1.5

determining bonuses.

### C. Corporate Finance

Table 5 (Panel A) shows that after privatization, firms reinvested a greater proportion of their own profits (from 80% to 87%) than they did before privatization. The post-privatization reinvestment rate is similar to that of non-privatized SOEs and private firms. Interestingly, after constitutional property rights protection was introduced in 2004 in China, the reinvestment ratio increased in 2005.

After privatization, firms relied less on bank loans and their loan-to-asset ratios were reduced from 31% to 26%. Most privatized firms and private firms reported that the reduction in borrowing was due to the lack of demand for bank loans.

We asked about loan collateral. After privatization, firms relied much less on government guarantees (decreased from 8.1% to 1.3%). Shareholders or managers were much more likely to provide personal guarantees (increased from 10% to 40%). Thus, in terms of the sources of loan collateral, privatized firms became similar to other private firms, which had virtually no government guarantees and were 27% more likely to use managerial or large shareholders'

**TABLE 5**  
CORPORATE FINANCE OF PRIVATIZED FIRMS

	Before privatization	After privatization	Not-privatized SOEs	Private firms
	(1)	(2)	(3)	(4)
<i>Panel A Reinvestment and Corporate Finance of Privatized Firms</i>				
% reinvest	80%	87%	88%	87%
% banks loans	31%	26%	29%	30%
<i>Panel B Loan Collateral</i>				
Government guarantees	0.081	0.013	0.096	0.002
Shareholders/managers own assets	0.095	0.4	0.1	0.27
<i>Panel C What Financial Support Do Firms Get When They Are in Financial Distress</i>				
%of financial distress	18.0%	3.0%	14.5%	5.3%
Government	27.3%	18.8%	23.2%	5.5%
Banks	55.9%	31.3%	49.2%	63.3%
Investors	18.6%	6.3%	4.3%	45.6%
Other firms	57.1%	18.8%	47.8%	42.2%
Reorganization	17.4%	29.4%	1.1%	4.3%

personal guarantees than to use government guarantees.

It is well-known that before privatization, Chinese SOEs stayed in business even if they had untenable financial conditions. The soft-budget constraint is an important reason for why the firms had little incentive to improve their efficiency. In our sample, about 18% of the firms experienced financial distress before privatization and 3% of the firms experienced financial distress after privatization. Before privatization, in 27% of the distress cases, the firms gained direct help from the government; more than half obtained bank loans (56%) or loans from other, presumably state-owned, firms (57%). As a result, only 17% were reorganized before privatization despite their financial distress. After privatization, the government, banks, and other SOEs provided help in only 19%, 31%, and 19% of the cases, respectively, and 29% of the firms in financial distress were reorganized.

**TABLE 6**  
RELATIONSHIP WITH THE GOVERNMENT

	Before privatizati on (1)	After privatizati on (2)	Not-pri vatized SOEs (3)	Private firms (4)
<i>Panel A. Importance of Relationship with Government, Favorable Policy and Law Enforcement (0-5)</i>				
Overall importance of the relationship	3.7	3.2	3.9	3
Importance of favorable government policy	3.3	3	3.4	3.3
Importance of law enforcement	2.7	2.7	2.9	2.6
<i>Panel B. % Firms Reporting Acquiring Land from Each Channel</i>				
Directly acquired land from government	100%	59%	99%	97%
Acquired land through government connection at lower market prices	41%	95%	93%	95%
Acquired land from government at market prices	34%	98%	96%	95%
<i>Panel C % of Land Acquired from Each Channel</i>				
Directly acquired land from government	39%	26%	52%	1%
Acquired land through government connection at lower market prices	53%	35%	11%	27%
Acquired land from government at market prices	4%	4%	13%	27%
<i>Panel D. Government's Perceived Incentive to Provide Support</i>				
Fiscal revenue	3.8	3.9	4	4
Government officials' performance (political incentives)	3.6	3.6	3.6	3.7
Comply with central government's policy	3.2	3.1	2.9	3.1
Improving regional social welfare	2.5	2.7	2.4	2.8
Gaining leverages to use firms to serve for the government	2.1	1.5	1.8	1.2
Officials' direct personal benefits (corruption)	0.5	0.5	0.4	0.3



*D. Relationships with the Government*

The state-led development in China means that there are close relationships between regional governments and firms. Although the governments withdrew from corporate governance after privatization, their relationships with the firms was not weakened. After they were privatized, 57% of the firms reported no changes in their relationships with governments, 23% reported closer relationships with governments, and 20% reported more distant relationships with governments. All the firms, no matter if they were privatized, reported that their relationships with governments and favorable government policies are important for firms' development.

Land is a major constraint for most firms' development and regional governments play an important role in land allocation. After privatization, the percentage of firms that acquired land from direct allocation by the government decreased from 100% to 59%, whereas 99% of non-privatized firms still enjoyed direct allocation of land. The proportion of land obtained through direct government allocation decreased from 39% to 25% after privatization, whereas about half of the land for non-privatized SOEs is still directly allocated. Ninety-five percent of privatized firms were able to acquire land below the market price through government connections. This percentage that is similar to that for private firms and non-privatized SOEs. However, the proportion of land acquired at below the market price was 35% for privatized and 27% for private firms. It seems that privatized firms rarely purchased land at the market price. Market-priced land accounted for only 4% of their total land stock, but it was 27% of the total land stock for private firms. Overall, after privatization, firms received less help from the government in acquiring land, but they were still treated more favorably than private firms in government allocation of land. Non-privatized SOEs enjoyed the largest government subsidy in acquiring land.

Relationships with the government may come at a cost. That is, firms may need to spend time and money due to corruption or rent seeking behaviors of government officials. Reflecting the weakened relationships with the government after privatization, the number of firms that spent over 1% of their total budgets on extra legal payments to the government was reduced from 58% to 48%. Firms reporting that their managers spent 5% of their working hours dealing with the government, *e.g.*, for registration, taxes, and

**TABLE 7**  
EXCHANGE RATE REGIMES IN TRANSITION ECONOMIES

	Before privatization	After privatization	Not-privatized SOEs	Private firms
	(1)	(2)	(3)	(4)
Product sales (Mil)	155.5	224.6	136.5	48.2
Total assets (Mil)	304.5	342.0	244.1	45.1
Real value added (Mil)	55.9	66.3		13.5
Profits	5.1	12.0	4.6	2.1
ROA	0.0	0.0	0.0	0.1
Capital Productivity	2.9	3.7	4.7	6.2
Labor Productivity (000)	118.0	187.5	92.3	287.5

environmental issues, dropped from 29% to 21%, which was still higher than for non-privatized SOEs and private firms (18% and 14%, respectively).

In terms of government incentives for providing support, there were not any noticeable difference between privatized firms and other firms. Firms believe that fiscal revenue, government officials' own promotion (political incentives), and complying with the central government's policies are the main incentives (all with scores over 3). Improving social welfare and gaining leverage to use the firms to serve the government are of some importance (scoring around 2). Interestingly, the firms do not consider government officials' personal benefit (corruption) as important (with a score of 0.5).

#### *E. Post-Privatization Performance*

Contrary to earlier studies documenting the failure of Chinese share issue privatization in enhancing operating efficiency (*e.g.*, Sun and Tong, 2003 and Deng, Gan, and He, 2008), other means of privatization have brought about substantial improvement in firm performance, both in terms of output expansion and operating efficiency. Average sales increased by 44%, from 156 million RMB to 225 million RMB. Firm assets increased by 12%, from 305 million RMB to 342 million RMB. Average profits increased by 138%, from 5.06 million RMB to 12 million RMB. Financial performance also improved substantially. Return on assets (ROA) increased four-folded from 1% to 4%. Better financial performance appeared to be driven

by productivity gains: capital productivity increased by 27% from 2.9 to 3.7, whereas labor productivity (by output) increased by 59%, from 118,000 RMB/person to 188,000 RMB/person.

While privatized firms performed much better than non-privatized SOEs, they still seem to lag behind private firms, both in terms of financial returns and productivity. Private firms out-performed the other firms by around 50% in all these measures: their ROA was 6.4%, their capital productivity was 6.24, and their labor productivity was 278.

Clearly these results are highly contemporary, since they do not control for firm level heterogeneity and self selection of privatization. We consider these issues in a contemporaneous paper (Gan, Guo, and Xu, 2008). Below is a very brief summary of some of the results in that paper.

We start with the panel dataset from 1998 (the first year of NSB data) to 2005 containing both privatized and non-privatized firms (Sample A and B). We control for size, leverage, and industry and year dummies in all our regressions. We find that the privatization is associated with significant increases in operating performance, as measured as return on assets, return on sales, and profit per employee. Moreover, the performance increase is driven by those firms that were sold to private owners.

Since privatization decision may not be random, to mitigate the concern of selection, we further include firm fixed effects in our regression. Thus any time-invariant firm characteristics (such as local economic environment and relationship with the government) that may be related to the decision to privatize are fully controlled for. The main results are unchanged, suggesting that better firms being selected for privatization cannot explain these results.

## **V. Concluding Remarks**

The Chinese privatization scheme is not based on a rational design. Instead, it is a result of political games given existing institutions. Privatization in China has created concentrated private ownership and has greatly changed corporate governance. The control rights of privatized firms have been redistributed. The state has retreated from being involved in the daily operations of companies; large shareholders essentially control major decision

making in their firms. After privatization, soft budget constraints were substantially hardened. Although the government has withdrawn from daily corporate decision making, its policy support is still considered important by firms. After privatization, firms became more efficient and more profitable based on various measures, including product output, profitability, and productivity. Our data allow us to identify specific mechanisms of improved post-privatization performance, which we consider in a contemporaneous paper (Gan, Guo, and Xu, 2008).

Some implications can be drawn from China's privatization experience. The Chinese experience suggests that postponing privatization to accumulate political support for privatization and to establish institutional conditions increases the effectiveness of privatization. In particular, privatized firms operate better when the product and labor markets are functioning. Better developed financial institutions help privatized firms to trade on their property rights and to obtain external financing. Social safety nets help firms deal with inevitable layoffs during the privatization. Legal institutions protect the property rights of the owners of privatized firms and provide them with incentives to grow their firms (Johnson, McMillan, and Woodruff, 2002).

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