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Political economy of labor retrenchment : evidence based on China's state-owned enterprises

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Abstract

This study examines the determinants of the restructuring of China's SOEs in the late 1990s. Our study yields four major findings. First, we find that the degree of labor retrenchment is negatively related to enterprise performance, suggesting that poor performance is a major force driving labor restructuring. Second, we find that market competition is related to both traditional and corporatized SOEs, suggesting that market competition gradually becomes an effective disciplinary force for managers of China's SOEs. Furthermore, we offer evidence that decisions about labor retrenchment in traditional SOEs are related to the local government's fiscal position and to local reemployment conditions for laid-off workers. In contrast, labor decisions in corporatized SOEs are not related to these two variables. This suggests that corporatized SOEs with partial private ownership seem to enjoy higher autonomy in labor decisions.

1. INTRODUCTION

In the transformation economies of the post-Soviet era, enterprises often found themselves with a significant stock of surplus labor created by central labor allocation and full employment guarantees under the socialist system. Employment restructuring thus became one of the major objectives of enterprise reform in all these economies. To improve their performance, enterprises not only had to adjust their product assortment in response to consumer preferences and rapidly changing market conditions but also had to optimize factor inputs. Labor reforms usually started with the promulgation of flexible labor regulations and laws. Highly variable progress within employment restructuring suggests that the formal provision of market-oriented labor laws and regulations serves as a necessary, but not sufficient, condition for successful labor restructuring. Labor retrenchment commonly encounters complex and multifaceted constraints, with political-economic constraints among the crucial determinants of their success (Fleisher and Yang, 2003).

Among China's state-owned enterprises (SOEs), inertia in the labor retrenchment effort has been pronounced. There are two types of SOEs in China: those that maintain 100% state ownership (traditional SOEs), and those that have undergone ownership diversification but still have dominant state shares (corporatized SOEs). SOEs were granted some formal autonomy in labor decisions in the mid-1980s but did not undertake any significant labor restructuring until the mid-1990s. Although SOE profits fell by 50% between 1994 and 1996, they failed to restructure in any significant sense. In fact, the size of the total SOE work force increased slightly (see Table 1).

Many observers have identified continuing government interference in labor decisions as a major cause of China's slow SOE labor restructuring. Bai et al. (2002) argue that SOEs in China were used as policy tools to provide exaggerated levels of employment because alternative institutions for social welfare provision (unemployment benefits) are still underdeveloped or even nonexistent. Groves et al. (1995) offer evidence that increasing de facto managerial independence from political control in labor decisions was positively related to labor productivity and enterprise performance in China's SOEs from 1980 to 1989. This result confirms the existence of political control in SOEs' labor decisions. Dong and Putterman (2002) further establish that hardening budget constraints, without relieving SOEs of their social burden, was a major proximate cause of rising redundant labor in the early 1990s.

Because of low productivity levels and growing enterprise debts, in 1997 China's central government pledged to reverse SOEs' money-losing trends within a three-year period, with labor retrenchment as one of the major reform measures. The government's commitment to improving SOE performance through large-scale labor restructuring is illustrated by its increasing provision of financial assistance and labor reemployment services for displaced workers (Dong 2003). Within four years (1997–2000), the state sector's work force decreased by more than 30 million workers (about 27%), and labor productivity increased by 100% (see Table 1). In spite of significant progress in labor

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retrenchment as signaled by aggregate data, however, little systematic research has been conducted to examine the underlying causal patterns and determinants of the recent restructuring wave. Which enterprises successfully took on the challenge of restructuring? Can we still observe evidence of government control in SOEs' labor decisions? Is there any difference between traditional and corporatized SOEs in terms of labor retrenchment? These are all questions that need to be answered.

Based on data obtained from a World Bank survey, this paper investigates the major driving forces of labor restructuring among China's SOEs from 1998 to 2000. Specifically, we examine how the degree of labor retrenchment is related to a set of business-related and political-economic determinants. To the best of our knowledge, our study is among the first to investigate the causal pattern of labor restructuring during the most recent SOE reforms. Empirical evidence on this issue will shed some light on the nature of labor policies in SOEs and on the nexus between government and SOEs in China's increasingly market-oriented economy. An understanding of the government-SOE nexus in China is particularly critical, as the government is determined to maintain large and medium-sized SOEs as an important part of the economic system.

The paper is structured as follows: The next section provides a brief account of China's labor market reforms since 1978 and the specific institutional background of SOEs' employment restructuring in the late 1990s. Section 3 discusses the potential determinants of an SOE's labor policies and sets out our hypotheses. Section 4 presents our estimation model and results. Section 5 concludes.

2. Labor Market Reforms: The Institutional Background and Status Quo

Before reform, labor in China was directly allocated to SOEs. In return, SOEs had to fulfill production quotas specified by production plans and had to provide workers with comprehensive benefits packages including subsidized housing, education, health care, and retirement pensions. Following the introduction of industrial reforms in the early 1980s, a "dual-track transition" of the labor market was instituted. Free labor markets were developed in the newly emerging non-state sector, while SOEs continued to perform the dual tasks of producing goods and providing social welfare and only gradually acquired the formal right to make independent employment decisions according to their production needs (Bai et al. 2002).

A first important breakthrough in the liberalization of the labor system was achieved in 1986, when the labor contract system *(laodong hetongzhi)* was introduced on a pilot basis to replace socialist-style lifelong employment in SOEs. In addition, SOEs' directors/managers acquired the right to conduct entrance exams to screen promising job applicants, to refuse ill-qualified applicants, and to institute a probation period for new hires. To stave off opposition of the new system, it was first applied only to new hires; it became universal only in 1996. As a consequence, the move toward contract-based labor proceeded slowly. By the end of 1995 only 40% of SOE employees were working under the new system, while complete implementation of the system was not realized until 2000 (China's Labor Statistics Yearbook, various years).

In 1992 the "regulations for the transformation of enterprise mechanisms of state-owned enterprises" were promulgated. Art. 17 gave management, for the first time, the formal right to autonomously make decisions about "conditions and type of employment as well as the number of employees." Central plans for labor allocation were abolished in 1993.

The implementation of China's Labor Law in 1995 was probably the most important legal reform, as this law formally grants all enterprises, including SOEs, legal rights to restructure and to eliminate excessive labor. The liberalization effect of the law rests on three crucial provisions, which facilitate adjustment and restructuring decisions: (1) the general application of labor contracts with time limits (Art. 19); (2) agreements on probation periods (Art. 21); and, most important, (3) the right to cut down on manpower when an enterprise runs into economic difficulties (Art. 27). In particular, the latter provision introduces new flexibility for timely labor adjustments in response to an enterprise's order situation and profitability. As labor relations between employers and employees are legally specified, and labor contracts can be terminated by both sides, the law formally finalized the break with China's "iron rice bowl." Authority over labor decisions was formally transferred from the state to enterprise managers in all enterprises, including SOEs.

Despite a wide range of policy measures introduced to reform SOEs, up to the mid-1990s the dismissal of state employees remained a rarity, and most SOEs still provided non-wage welfare benefits (Dong 2003). Zhang (1994) reports that only 2% of SOEs made use of their formal rights to terminate labor contracts. Based on a panel data set of 681

SOEs in four provinces (Jiangsu, Sichuan, Shanxi, and Jilin), Dong and Putterman (2002) confirm that SOE managers' ability to perform downward adjustment of the labor force remained seriously limited until 1994. Bodmer (2002) documents the degree and the effects of labor reforms in Chinese SOEs up to 1994 and concludes that reforms relevant to employment decisions in SOEs remained very limited in scope. In addition, ample evidence shows that a large proportion of SOEs have failed to restructure and remain burdened by excess manpower and low productivity.

The lack of effective labor restructuring up to the mid-1990s has been largely attributed to the use of SOEs for employment and social security provision (Meng and Kid 1997, Bai et al. 2002). In the late 1990s the heavily indebted and ailing state sector forced the government to address the labor redundancy problem. Since then, millions of workers have been let go. Nevertheless, labor restructuring in China's SOEs is still an unfinished endeavor. Brooks and Tao (2003) estimate that about 10 to 18 million workers were still redundant in 2001.

3. WHEN DO STATE-OWNED ENTERPRISES RESTRUCTURE? SOME POLITICAL ECONOMY CONSIDERATIONS AND HYPOTHESES

In a neo-classical world, an enterprise's labor input would be calculated based on a production function, input prices, and expected sales, while flexible labor markets would guarantee smooth adjustment processes. SOEs, however, seldom operate as independent business entities responding only to market forces. This is because politicians tend to use them to enhance their political support (Buchanan et al. 1980, Shapiro and Willig 1990,

Shleifer and Vishny 1994).[1] This tendency is particularly strong in socialist systems and is especially pronounced in China because China's danwei-socialism guaranteed urban SOE workers not only lifetime employment but also a wide range of benefits such as inexpensive housing, free medical care, and diverse types of subsidies and in-kind payments (Naughton 1997). SOE workers were thus naturally reluctant to accept market-based labor reforms. Dong and Ye (2003) offer evidence that employees of loss-making enterprises in China tended to cling to their jobs, preferring to take wage cuts than to change jobs. Workers frequently expressed their discontent through protests and strikes (Lee 1998) as well as through "collective inaction" in the form of noncompliance, absenteeism, and evasion (Whyte 1987, Zhou 1993, Lee 1998). Protests and strikes often compelled the government to pressure enterprise managers to hire extra workers or to refrain from imposing additional layoffs, whereas collective inaction generated direct pressure on managers because managers' performance is dependent on workers' cooperation (Whyte 1987, Lee 1998).[2]

The Chinese Communist government, on the other hand, is eager to continue danwei-socialism to secure social support (Opper, Wong, and Hu 2002). Although the theory of political business cycles has been developed largely with reference to democratic political systems, the general idea that politicians' survival rests on public support also holds for autocratic regimes. Even China's one-party regime needs to respond to major interest

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[1] Politicians are particularly apt to intervene in labor decisions, since employment opportunities and wage levels provide convenient tools by which to redistribute wealth from the common pool to the favored parties (Nordhaus 1975, Frey and Schneider 1978).

[2] Bai et al. (2000) provide a formal model establishing the superiority of delayed privatization and continuing provision of social security by SOEs if social stability is weak.

groups, such as the urban working class, if political stability and the immediate survival of the political leadership are to be secured. Using SOEs to keep redundant labor seemed particularly important during the early transition period when a sustainable social security system was not yet in place and the newly emerging private sector lacked the capacity to absorb excessive labor.

Bai et al. (2002) argue that managers in China's SOEs were in fact charged with the dual role of maintaining production and providing social security. To induce them to shift efforts from production to social security provision, the government provided them with smaller profit incentives, which led to SOEs' continuous poor performance. In spite of significant progress in reducing the number of redundant workers, in our view, the recent wave of labor retrenchment is unlikely to signal a complete depoliticization of labor policies. Rather, managers will continue to perform the dual role of maintaining production and providing social security. Thus, we assume that labor retrenchment in SOEs is a function of both business-related and political-economic factors. To test our assumption, we develop four hypotheses on these two types of determinants and then empirically examine whether labor retrenchment in SOEs is actually related to these factors.

Business-related factors

Enterprise performance. Studies on adjustment strategies following an enterprise's performance decline indicate that downsizing of the work force is one of the most commonly adopted short-term strategies to improve enterprise performance (Denis and Kruse 2000, Kang and Shivdasani 1997). Enterprises burdened with excessive employment

are particularly likely to benefit from labor adjustments, as cutting redundant labor can reduce labor costs without affecting production capacity and sales. We expect that

H1: The degree of labor retrenchment is negatively related to enterprise performance.

Competition. Studies on SOEs in Eastern European transitional economies support the role of competition, as they find that many SOEs have undertaken restructuring activities "that are broadly consistent with what would be expected of profit-maximizing firms" (Pinto et al. 1994, Aghion et al. 1994, Brada et al. 1994, Estrin et al. 1995, Brada 1996, p. 80). Overall, we expect that

H2: The degree of labor retrenchment is positively related to the degree of competition.

Political-economic factors

Government's fiscal position. The fact that government interference in labor decisions affects government budget position by increasing expenditures (e.g., subsidies to SOEs) and decreasing revenues (e.g., tax income) suggests that a government's fiscal capacity will limit its ability to fund excessive employment (Sheifer and Vishny 1994).[3] A tight fiscal position (i.e., a high budget deficit) might increase the government's willingness to accept politically unpopular labor retrenchment, since labor shedding and the concomitant improvement in financial performance brings financial release via tax increases and

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[3] Empirical studies on privatization suggest that a government's policymaking decisions depend to some extent on the tightness of fiscal budget constraints. State withdrawal, in general, is more likely to occur during an economic crisis when financial conditions are dire and public debt is regarded as excessive (World Bank 1995).

subsidy reduction (Li 1998). At the same time, managers' willingness to comply with requests articulated by the government and workers depends on their budget constraints and on the likelihood that they will be compensated for retaining excessive labor (Shleifer and Vishny 1994). A tight fiscal position signals relatively harder budget constraints for SOEs as well as a decreased likelihood of being adequately compensated by the government for retaining excessive employment. We hypothesize that

H3:   The degree of labor entrenchment is negatively related to the government's budget.

Absorption capacity of laid-off workers. While early models of political business cycles assume that a government's incentives and expected benefits from inducing political cycles do not vary over time, more recent research has revealed that the expected benefits for manipulating the economy should be negatively correlated with the level of the government's political security and the size of the support base (Schultz 1995). As low reemployment possibilities for surplus workers increase workers' resistance to labor retrenchment and weaken a government's political security and support base, a government will benefit more (politically) by funding a certain level of excess labor if reemployment possibilities for surplus worker are low. In contrast, a government will benefit less (politically) by funding a certain level of excess labor if reemployment possibilities are high. Therefore, the local absorption capacity for surplus labor could be a government's major political concern. Overall, we expect that

H4: *The degree of labor retrenchment is positively related to the local absorption capacity for surplus labor.*

We do not expect the determinants of labor retrenchment to possess the same degree of explanatory power irrespective of an enterprise's ownership structure. Equal impact on labor retrenchment for traditional and corporatized SOEs would presuppose an identical cost-benefit calculus for politicians irrespective of an enterprise's ownership structure. Following Shleifer's and Vishny's (1994) model on political interventions into enterprise decisions, even partial privatization may increase the costs of political intervention at the enterprise level, since non-state owners will ask for compensation for negative performance effects. Partial privatization may therefore trigger a depoliticization of decision-making at the enterprise level. Wong et al. (2004) have shown that different types of shareholders are associated with varying degrees of political control in China's listed enterprises. We therefore investigate the determinants of labor restructuring for these two types of SOEs separately. We expect that political-economic determinants of labor retrenchment will be more evident for traditional SOEs than for corporatized SOEs, while business-related determinants will be more evident for corporatized SOEs.

4. DATA AND METHODS

4.1 Data and Variables

Data Sources and Sample Enterprises

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The empirical data for our research comes from a World Bank survey of China's enterprises. The survey was conducted by China's National Bureau of Statistics in 2001. It covers 323 SOEs, of which 197 are traditional and 126 are corporatized. The sample enterprises are randomly drawn from ten sectors in five cities. A summary of enterprise distributions across sectors and cities is shown in Table 2.

Insert Table 2 about here

As shown in Table 2, the five cities are Beijing, Chengdu, Guangzhou, Shanghai, and Tianjin, covering municipalities in China's highly developed eastern coastal belt (Beijing, Guangzhou, Shanghai, and Tianjin) as well as the central region (Chengdu). The chosen locations also represent different levels of market reforms, with Guangzhou representing the most liberal province in terms of private sector development and Shanghai representing a national base of SOEs concentrating in heavy industry.

The ten sectors include five service sectors—accounting, advertising and marketing, business logistics, communication, and information technology—and five manufacturing sectors—apparel and leather goods, consumer goods, electronic equipment, electronic components, and vehicles and vehicle parts. The five chosen manufacturing industries reflect China's current or potential competitive sectors,[4] while the five service sectors represent fast-growing and relatively technologically advanced portions of China's

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[4] For example, apparel and leather products, electronic equipment, respectively, accounted for 11.5% and 16.8% of China's total exports in 1999.

industry.

The data set provides us with a broad variety of enterprise-level data, which allows for the measurement of the most important business-related determinants of labor policy choices. We complement the data set with socioeconomic regional data to cover potential political-economic determinants of employment restructuring. The socioeconomic data are derived from China's Labor Statistics Yearbook and the China Statistical Yearbook.

Dependent Variables

We construct the labor-retrenchment-rate variable as a direct measurement with which to investigate how SOEs are tackling the surplus labor issue. The variable is defined as the ratio of a labor reduction in the current period to the total work force of the preceding period. Accordingly, the labor retrenchment rate is positive if an enterprise reduces the number of workers it employs in the current period and negative if it increases the number.

Independent Variables

The determinants—business-related and political-economic factors—mentioned in the previous theoretical discussion serve as explanatory variables.

Enterprise Performance. We employ two alternative variables—sales revenue and profit—to measure enterprise performance. These variables are deflated by industrial price indices created by the China Statistical Yearbook and are transformed into logistic form.

We first estimate a baseline model using the current value of the two performance variables alternately as the determinant. We use current performance because labor

adjustments, in comparison with capital adjustments, are usually short-run responses that can react more quickly and directly to current performance. We do not expect a serious problem of endogeneity when current value of performance is used. Specifically, for the first variable of sales revenue, a reduction in an enterprise's excessive labor is unlikely to affect its production capacity and sales volume. For the second variable of profit, a reduction in labor redundancy is likely to improve the enterprise's profit, so the effect of labor reduction on profit is positive, which is the opposite of our hypothesized negative effect of profit on labor reduction in the model. In sum, the endogeneity problem, if any, will not cause an identification problem for our estimation. We take yet another step to use lagged enterprise performance as an instrument for current performance, and we reestimate the model as a robustness check.

Competition. We use two proxies for competition. The first is the number of competitors for an enterprise's major business line as estimated by enterprise managers. The second is an enterprise's ratio of exports to sales, which implies its exposure to competition on the international market. The more an enterprise integrates into the world market, the more severe the competition it faces, and the stronger incentives it has to improve labor efficiency.

Government's fiscal position. To approximate the government's financial leverage, we focus on the ratio of the balance of the government's budget to gross domestic product (GDP). It is assumed that governments under a budget deficit are more likely to refrain from providing employment directly through SOEs than are governments with a balanced budget or a surplus.

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Absorption capacity for laid-off workers. We use two proxies to capture the local absorption capacity for surplus labor. First, we calculate the ratio of reemployed laid-off workers to laid-off workers who have not been reemployed. Second, we use employment growth rates in the private sector, including foreign-involved enterprises. The private sector was formally promoted as a convenient channel for absorbing redundant workers and farmers in 1997 and is closely correlated with local growth and development. The two proxies for reemployment chance are constructed at the city level.

Control Variables

Some factors can jointly affect labor retrenchment and our explanatory variables. We introduce five control variables to capture possible confounding effects. The first control variable is SOE age. Older SOEs with a long tradition in the planning apparatus are subject to stronger political control and interference owing to their established and stable network relationships with the government administration. At the same time, age is likely to be negatively related to the extent of an SOE's work force adjustment, because older SOEs tend to have a higher level of organizational inertia. We therefore introduce the variable of SOE age to eliminate the possible confounding age effect.

We also use an SOE's total work force in the previous year to control for SOE size. A large work force may be connected with a higher degree of underemployment and therefore with higher potential for labor retrenchment than a smaller work force. On the other hand, SOE size may be negatively related to the degree of labor retrenchment because there is a cost advantage for the government in using larger SOEs to provide employment. Assume

that a local government decides that 5,000 positions for underemployed workers need to be secured. Option 1 would be to bargain with 10 enterprises, each with 5,000 employees, to convince each to keep 10% of its redundant workers. Option 2 would be to bargain with 100 enterprises, each with 500 employees, to convince each to keep 10% of its redundant workers. Clearly, transactions costs would be much higher for option 2. This assumption is consistent with the finding that privatization of large enterprises in Central Eastern European countries is shaped by political-economic determinants, while progress in the privatization of small enterprises is unaffected by such determinants (Opper 2004). We therefore introduce the size of an SOE's work force in the previous period to capture the conflicting effects associated with SOE size.

The third control variable is unionization rates, defined as the proportion of workers joining unions in different regions, to capture the bargaining position of workers vis à vis the government and managers. According to Olson (1968) we may expect that underemployed workers could articulate their interests more effectively and could threaten to weaken a government's public support base if they were better organized. Although China's labor unions have historically been subordinated to the interests of the Chinese Communist Party and therefore lack an independent voice comparable to that of unions in capitalist economies, unions are nevertheless the only bureaucracies in China that hold a pro-worker stance. We therefore control for the unionization rate to remove the possible confounding effect.

We also introduce a set of industrial dummies as control variables in our specification. On the one hand, industrial sectors may be burdened with underemployment to varying

degrees because the government has fostered various national and local industrial policies since 1989. On the other hand, industrial sectors may be correlated with our hypothesized political-economic determinants. For example, different industries are likely to be associated with different market competition conditions and varying enterprise performance. Finally, year dummies are introduced to capture potential year-specific business cycle effects.

4.2 Regression Models

We use the following model to estimate the determinants of labor retrenchment (see Djankov and Murrell 2002).

$$Y_{it} = \alpha + \beta X_{it} + \gamma P_{it} + + \delta CONTROL_{it} + \eta Sector + \theta Year + \varepsilon_{it} \qquad (1)$$

where i and t represent enterprise i and period t respectively; ε_{it} is the error term. Y is a measure of labor retrenchment ratio, X consists of variables representing business-related factors, and P comprises political-economic factors. Control is a vector of control variables. And Sector and Year are sector and year dummies to control the variation across sectors and over years.

Two estimation issues are worth noting. First, we use white-corrected standard errors to deal with potential heteroskedasticity. Second, we are unable to perform enterprise-specific effects in our analysis since the socioeconomic environment variables vary across cities but not across enterprises.

5. EMPIRICAL RESULTS

5.1 Descriptive Statistics and Sample Data

Table 3 shows the descriptive statistics of variables included in our regression model. Three facts stand out in comparing statistics from traditional and corporatized SOEs. First, for corporatized SOEs, the number of workers and amount of capital, on average, are 1,180 workers and 247 million RMB, while traditional SOEs have almost twice as many workers and twice as much capital. Consistent with the official policy of "seizing the big and relieving the small" (*zhua da fang xiao*), privatization in China was first confined to relatively small SOEs. Second, corporatized SOEs are much younger than traditional SOEs, with an average age of 20.97 and 28.39 years, respectively. Finally, it is shown that the return on asset (ROA) of corporatized SOEs is three times that of traditional SOEs, although the value of sales and profits in corporitized SOEs is less than that of traditional SOEs.

The sampled SOEs cut around 4.3 percent of their work force on average between 1998 and 2000; the degree of labor reduction in traditional SOEs was slightly higher (4.7%) than that of corporatized SOEs (3.8%). The difference in work force reduction between traditional and corporatized SOEs is consistent with the fact that corporatized SOEs usually succeed in reducing redundant labor when they undergo corporatization.

We notice that, on average, enterprise managers expect to have more than 313 competitors, which reflects the severe competition in the production market in the sample sectors. Surprisingly, managers of traditional SOEs perceive stronger competition (381

competitors, on average) while corporatized SOEs perceive weaker competition (205 competitors, on average).

As indicated in Table 3, the export-to-sales ratio for SOEs is slightly higher than that for corporatized SOEs (7.38 vs. 5.43), which is consistent with the long-standing policy of granting foreign trade rights mainly to wholly state-owned enterprises in foreign trade. In parallel, the larger size of traditional SOEs may place them in a stronger position to compete on the global market.

The fiscal position to GDP ratio on average is negative, although the size of the budget deficit is moderate (around 1.44%). The average annual reemployment rate and the employment growth rate in the private sector are 45.21% and 42.72%, respectively, which reflects a relatively favorable socioeconomic environment for labor reform over the survey period. The unionization rate is generally high, with around 60% of the local work force being organized in trade unions.

Insert Table 3 about here

We also conduct a Pearson correlation test and find that all correlations are lower than the threshold value of 0.7, which suggests that our model is unlikely to suffer problems due to multicollinearity.

Insert Table 4 about here

5.2 Regression Results

Table 4 presents the results of our regression analyses of the determinants of labor retrenchment among China's SOEs.[5] First, we notice that enterprise performance is significantly and negatively correlated with the degree of labor retrenchment.[6] This finding is consistent with H1 and is consistent with two different interpretations of the nexus between government and enterprises in labor decisions. The first interpretation is that the government has transferred decision-making autonomy in labor decisions to managers and has also sufficiently hardened SOEs' financial constraints so that managers in enterprises with declining performance are compelled to reduce their work force. The second interpretation is that labor decisions in SOEs are still controlled by the government, but the government's decision to use SOEs to provide excessive employment depends on enterprise performance. The government tends to use SOEs with improving performance to keep excessive labor but to allow SOEs with declining performance to reduce labor. From our estimates, we are not able to distinguish between these two interpretations. Nevertheless, both explanations independently and jointly suggest that economic forces meanwhile have had a significant effect on the recent wave of labor restructuring.

Regarding the relationship between competition and labor retrenchment, we find a significantly positive relationship only between the number of competitors and the degree of labor retrenchment for corporatized SOEs. For both traditional and corporatized SOEs, there is no significant relationship between the integration into international markets and the degree of labor retrenchment. Our study therefore provides only limited support for H2.

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[5] As we discuss above, we include sector and year dummies in the regressions to control for firm-specific and year-specific effects. To save space, we do not report the estimated coefficients of these dummies.
[6]

Market competition tends to generate more pressure for managers in corporatized SOEs, while labor decisions in traditional SOEs are less significantly affected by competitive pressure.

The fiscal position of local government is negatively related to the degree of labor retrenchment in traditional SOEs but not in corporatized SOEs. H3 is therefore only supported for traditional SOEs. Our results indicate that labor decisions in traditional SOEs are shaped by budgetary conditions of local government either through direct transfer effects (via subsidies to SOEs or expenditure on social welfare provision) or indirect incentive effects of soft-budget constraints. The labor decisions in corporatized SOEs are unrelated to government fiscal position, suggesting relatively independent labor decisions.

The reemployment ratio and the growth of employment in the private sector are positively related to the degree of labor entrenchment in traditional SOEs; in particular, the coefficient of the reemployment ratio for laid-off workers is significant. On the other hand, the coefficients for corporatized SOEs are not only statistically insignificant but also negative. As a result, our estimates support H4 for traditional SOEs but not for corporatized SOEs. As we assume that local absorption capacity, rather than the objectives of profit-oriented business entities, is the government's major political concern, this result once again suggests that labor decisions of traditional SOEs are related to government objectives, while labor decisions of corporatized SOEs are unrelated. The relationship between reemployment chances and labor retrenchment seems fairly robust. Using other proxies such as changes in the official local unemployment rate and the percentage of registered laid-off workers from SOEs in the reemployment market, our estimation results

are confirmed, which underscores the critical role of the local employment situation in SOEs' labor retrenchment.

In addition, we notice that initial employment status is positively and significantly associated with the labor retrenchment rate, which might suggest that the labor redundancy problem is more serious in large enterprises, resulting in their need to cut more labor to survive during the economic transition. Enterprise age has a positive effect on corporatized SOEs but little effect on traditional SOEs. Finally, the labor union variable exhibits no significant effect on labor entrenchment for either traditional or corporatized SOEs, which suggests that unionization is not an effective avenue by which workers can resist labor reduction.

The regression results of the model using lagged performance as the instrument variable are shown in Table 5.

Insert Table 5 about here

Two items in Table 5 are worth noting. First, we find that not only the reemployment ratio for laid-off workers but also employment growth in the private sector negatively and significantly affect a enterprise's labor retrenchment decisions, reinforcing Hypothesis 4, which states that absorption capacity has a significant impact on labor decisions in traditional SOEs. Second, the coefficient of competition for traditional SOEs is marginally significant, which implies that competition pressure urges enterprises to reduce more surplus labor, even in traditional SOEs. Other regression results in Table 4 remain

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unchanged except that the coefficient for one of the performance variables in corporatized SOEs becomes statistically insignificant.

6. CONCLUSION

This study examines the determinants of the restructing of China's SOEs in the late 1990s, which was eventually implemented to speed up employment restructuring after two decades of only gradual and often hesitant reforms. Our particular interest was to examine the business-related and political-economic determinants of labor retrenchment in China's traditional and corporatized SOEs, the objective being to shed light on the relationship between SOEs and government in the increasingly marketized economy.

Our study yields four major findings. First, we find that the degree of labor retrenchment is negatively related to enterprise performance, suggesting that poor performance is a major force driving labor restructuring. Second, we find that market competition is related to both traditional and corporatized SOEs, but its effect is more evident for corporatized SOEs in our sample. This suggests that market competition gradually becomes an effective disciplinary force for managers of China's SOEs. Furthermore, we offer evidence that decisions about labor retrenchment in traditional SOEs are related to the local government's fiscal position and to local reemployment conditions for laid-off workers. In contrast, labor decisions in corporatized SOEs are not related to these two variables.

In summary, this study suggests that China's recent adjustment processes have been driven at least partly by economic forces, as evidenced by the negative relationship

between labor retrenchment and enterprise performance in both traditional and corporatized SOEs. In this sense our study suggests that to some extent restructuring is possible without ownership reforms. Nonetheless, the significant relationship between political-economic determinants (as measured by local reemployment chances and fiscal constraints) and labor retrenchment suggests that local governments still employ traditional SOEs if this is deemed necessary to support social stability. Corporatized SOEs with non-state shareholders, on the other hand, seem to enjoy greater autonomy in labor decisions, as a direct relationship between the enterprise's labor policies and the political-economic conditions could not be substantiated. Our results on corporatized SOEs support the idea that depoliticization of enterprise decision-making—one of the major enterprise reform objectives in formerly centrally planned socialist economies—can actually be achieved without full-scale privatization. This finding is consistent with Wong et al (2004), who found significant depoliticization effects for China's partially privatized listed enterprises. This study supports the possibility of de-politicization for labor decisions in China's corporatized SOEs not undergoing stock listings.

The differences between pure and corporatized SOEs in terms of labor retrenchment, however, underscore the fact that some degree of non-state ownership is beneficial for the depoliticization of enterprise decision-making. The results are consistent with the arguments of Shleifer and Vishny (1994), which suggest that the existence of private owners and their individual interests in profit maximization reduces the bargaining power of politicians and thereby increases the costs of political interference in enterprise decision-making.

Skeptics might claim that the greater freedom of corporatized SOEs could simply reflect a selection bias in the sense that the government only corporatized those SOEs that were not needed as policy tools. In fact, the selection effect is consistent with the observation that China's central government delayed SOEs' ownership reforms to preserve SOEs as tools of employment provision. Based on our results, we are unable to determine whether the government voluntarily refrains from using corporatized SOEs as policy tools or whether it is simply unable to exert effective control owing to resistance from private investors. In light of our recent empirical findings on the persistence of political control of decision-making in China's partially privatized listed enterprises (Opper et al. 2002, Wong et al 2004), and given the fact that the state retains a controlling share in corporatized SOEs, we have doubts that government will completely restrain from involving in any decision-making and that our results could be fully attributed to a selection bias. Instead, we expect that they reflect the complementary effect of both mechanisms.

References

Aghion, P., Blanchard, O., Burgess R., 1994. The Behavior of State Firms in Eastern Europe, Pre Privatisation. *European Economic Review* 38 (6), 1327-1349.

Bai, C.-E., Li, D., Tao, Z., Wang, Y., 2000. A Multitask Theory of State Enterprise Reform. *Journal of Comparative Economics* 28 (4), 716-738.

Bodmer, F., 2002. The Effect of Reforms on Employment Flexibility in Chinese SOEs, 1980-94. *Economics of Transition* 10(3), 637-658.

Brada, J.C., 1996. Privatization in Transition – or Is It? *The Journal of Economic Perspectives* 10, 67-86.

Brada, J.C., Singh, I., Torok, A., 1994. *Firms Afloat and Firms Adrift: Hungarian Industry in the Transition.* Sharpe, Armonk, N.Y.

Brooks, R., Tao, R., 2003. China's Labor Market Performance and Challenges, *IMF Working Paper*, 03/210.

Buchanan, J.M., Tollison, R.D., Tullock, G., eds., 1980. *Toward A Theory of the Rent-Seeking Society.* College Station: Texas.

Denis, D.J., Kruse, T.A., 2000. Managerial Discipline and Corporate Restructuring Following Performance Decline. *Journal of Financial Economics* 55, 391-424.

Djankov, S., Murrell, P., 2002. Enterprise Restructuring in Transition: A Quantitative Survey. *Journal of Economic Literature* 40(3), 793-837.

Dong, X.-Y., Putterman, L., 2002. Soft Budget Constraints, Social Burdens, and Labor Redundancy in China's State Industry. *Journal of Comparative Economics* 31, 110-133.

Dong, X.-Y., 2003. China's Urban Labour Market Adjustment: A Summary of Literature Review. *Working paper*, University of Winipeg.

Dong, K., Ye, X.F., 2003. Social Security Reform in China. *China Economic Review* 14 (4), 417-425.

Estrin, S., Gelb, A., Sing, I., 1995. Shocks and Adjustments by Firms in Transition: A Comparative Study. *Journal of Comparative Economics* 21, 131-53.

Frey, B., Scheider, F., 1978. An Empirical Study of Politico-Economic Interaction in the United States. *The Review of Economics and Statistics* 60(2), 174-183.

Fleisher, B.M., Yang, D.T., 2003. China's Labor Market. Paper presented at the conference on "China's Market Reforms" organized by Stanford Center for International Development, Stanford University, September 19-20.

Groves, G.Th., Hong, Y., McMillan, J., Naughton, B., 1995. China's Evolving Managerial Labor Market. *Journal of Political Economy* 103(4), 873-892.

Kang, J.-K., Shivdasani, A., 1997. Corporate Restructuring during Performance Decline in Japan. *Journal of Financial Economics* 26, 29-65.

Lee, C.K., 1998. The Labor Politics of Market Socialism: Collective Inaction and Class Experiences among State Workers in Guangzhou. *Modern China* 24(1), 3-33.

Li, D., 1998. Changing Incentives of the Chinese Bureaucracy. *AEA Papers and Proceedings* 88(2), 393-97.

Meng, X., Kidd, M.P., 1997. Wage Determinants in China's State Sector in the 1980s. *Journal of Comparative Economics* 25(3), 403-442.

Naughton, B., 1997. Danwei, the Economic Foundations of A Unique Institution, in X. Lü and E.J. Parry, eds., *Danwei. The Changing Chinese Workplace in Historical and Comparative Perspective.* M.E. Sharpe: Armonk, NY.

Nordhaus, W., 1975. The Political Business Cycle. *Review of Economic Studies* 42, 169-190.

Olson, M., 1968. *The Logic of Collective Action: Public Goods and the Theory of Groups*. Schocken: NY.

Opper, S., 2004. The Political Economy of Privatization: Empirical Evidence from Transition Economies. *Kyklos* 57(4), 567-594.

Opper, S., Wong, S., Hu, R., 2002. Party Power, Market and Private Power: CCP Persistence in China´s Listed Companies, in: K. Leicht, ed., The Future of Market Tansition, *Research in Social Stratification and Mobility*, 19, 103-136.

Pinto, N., Belka, M., Krajevski, S., 1993. Transforming State Enterprises in Poland: Evidence on Adjustment by Manufacturing Firms. *Brookings Papers on Economic Activity* 1, 213-270.

Schultz, K.A., 1995. The Politics of the Political Business Cycle. *British Journal of Political Scienc*e 25(1), 79-99.

Shleifer, A., Vishny, R.W., 1994. Politicians and Firms. *The Quarterly Journal of Economics* 109(4), 995-1025.

Wong, S.M.L., Opper, S., Hu, R., 2004. Shareholding Structure, De-Politicization and Enterprise Performance: Lessons from China's Listed Companies. *Economics of Transition* 12(1), 29-66.

World Bank, 1995. *Bureaucrats in Business. The Economics and Politics of Government Ownership* (World Bank: Washington, D.C.).

Whyte, G., 1987. The Politics of Economic Reform in Chinese Industry: The Introduction of the Labour Contract System. *China Quarterly* 111, 365-389.

Zhang, Z., 1994. Harmonize and Perfect the Relationship between Enterprise and Labor. *Jingji Cankao* May 1, 31-42.

Zhongguo Laodong Tongji Nianjian. *China Labor Statistical Yearbook*, various years (China Labor Statistical Yearbook Editorial Office: Beijing).

Zhou, X., 1993. Unorganized Interests and Collective Action in Communist China. *American Sociological Review* 58, 54-73.

Table 1. Main Indicators of State-Owned Enterprises in China, 1990–2002

	Main Indicators of State-Owned and State-Holding Industrial Enterprises					
	Number of Enterprises	Gross Industrial Output Value	Value Added of Industry	Total Profits	No. of workers	Labor productivity
	(unit = 1)	(unit = 100 million RMB)	(unit =100 million RMB)	(unit =100 million RMB)	(unit = 10.000)	(yuan-person-year)
1990	74775	12570		388	10346	12150
1991	75248	13934	4019	402	10664	13066
1992	74066	16711	5193	535	10889	15346
1993	80586	22088	7281	817	10920	20227
1994	79731	25301	7903	829	11214	22562
1995	87905	25890	8307	666	11261	22991
1996	86982	27289	8742	413	11244	24270
1997	74388	27859	9193	428	11044	25225
1998	64737	33621	11077	525	9058	37118
1999	61301	35571	12132	998	8572	41497
2000	53489	40554	13778	2408	8102	50055
2001	46767	42408	14652	2389	7640	55508
2002	41125	45179	15935	2633	7163	63073

Source: China Statistical Yearbook (Various Issues)
1. The gross industrial output value in 1995 was calculated in accordance with new stipulations.
2. The overall labor productivity between 1994 and 1995 is incomparable because of a new definition of gross industrial output value.
3. Data before 1994 include SOEs only.

Table 2. Sample Distribution (323 State-Owned Enterprises)

Sectors/Cities	Obs.	Beijing	Chenngdu	Guangzhou	Shanghai	Tianjin
Accounting Services	15	2	5	2	3	3
Advertising & Marketing	20	1	4	2	10	3
Apparel & Leather Goods	50	11	12	6	12	9
Business Logistics Services	52	9	13	12	10	8
Communication Services	20	5	1	6	4	4
Consumer Products	18	1	8	1	5	3
Electronic Components	37	18	10	1	2	6
Electronic Equipment	39	10	8	3	8	10
Information Technology Services	22	3	2	6	4	7
Vehicles & Vehicle Parts	50	8	15	7	11	9
Total	323	68	78	46	69	62

Table 3. Summary Statistics

Variable Name	Unit	All SOEs Obs.	Mean	Std. Dev.	Traditional SOEs Obs.	Mean	Std. Dev.	Corporatized SOEs Obs.	Mean	Std. Dev.
Labor Retrenchment										
Labor Retrenchment Rate	Percent	896	4.37	20.84	562	4.71	19.67	364	3.80	22.69
Enterprise Production and Performance										
Employees	Workers	944	1180.07	4999.6	583	1412.01	6190.52	361	805.49	1814.89
Capital	1000 RMB	962	247172.8	1793799	588	324172.5	21289970	374	126114.4	847683
Age of Enterprise	Year	966	25.5	20.47	590	28.39	20.72	376	20.97	19.23
Sales Revenue	1000 RMB	947	102217.2	487393.7	583	125726.2	594325.1	364	64563.9	224597.1
Profit	1000 RMB	927	19974.8	177921.5	583	23083.8	215738.3	353	14981.5	88140.13
Return on Asset (ROA)	Ratio	938	1.55	10.96	580	0.89	8.55	358	2.62	13.94
Competition										
Number of Competitor	Enterprises	879	313.68	1247.43	542	381.08	1434.42	337	205.28	856.82
Export to Sales Ratio	Ratio	947	6.63	19.64	583	7.38	21.36	364	5.43	16.48

Socioeconomic Environment (by city)		Beijing	Chengdu	Guangzhou	Shanghai	Tianjin
Government Fiscal Position	Ratio	-3.19	2.76	-2.00	-2.66	-3.02
Reemployed Ratio for Laid-Off Workers	Ratio	55.05	43.63	42.38	56.11	26.29
Employment Growth in Private Sectors	Ratio	27.83	24.07	18.88	17.20	14.06
Unionization Rate	Ratio	54.97	54.27	41.70	73.37	71.67

Table 4. OLS Estimation on Labor Retrenchment, 1998–2000

Dependent Variable: Labor Retrenchment Rate	Traditional SOEs		Corporatized SOEs	
Business-Related Factors				
Ln (Sales)	-2.2136***		-3.4366***	
	(0.664)		(1.074)	
Ln (Profit)		-1.3513***		-1.9883**
		(0.460)		(0.884)
Ln (Number of Competitors)	0.8935	0.2408	1.4187*	0.3739
	(0.552)	(0.409)	(0.748)	(0.877)
Export to Sales Ratio	-0.0001	0.0231	0.0178	0.0268
	(0.044)	(0.058)	(0.090)	(0.084)
Political-Economic Factors				
Fiscal Position to GDP ratio	-0.6200**	-0.9874***	-0.7991	-0.4871
	(0.286)	(0.305)	(0.548)	(0.634)
Reemployment Ratio for Laid-Off Workers	0.1877*	0.0661	-0.1398	-0.1666
	(0.098)	(0.064)	(0.095)	(0.104)
Employment Growth in Private Sector	0.0020	0.0817	-0.0569	0.0263
	(0.074)	(0.066)	(0.123)	(0.138)
Control Variables				
One-Period Lagged Ln(Labor)	3.1958***	2.6902***	4.8627***	3.2189***
	(0.915)	(0.762)	(1.264)	(1.144)
Ln (Age)	1.2858	1.3508	5.2032**	8.0920***
	(1.201)	(1.456)	(2.082)	(2.735)
Unionization	-0.1021	0.0035	0.0853	0.1002
	(0.092)	(0.093)	(0.121)	(0.145)
Sectoral Dummies	Yes		Yes	
Year Dummies	Yes		Yes	
Constant	-2.4460	-11.2906	-4.2212	-18.2319
	(9.538)	(11.256)	(12.543)	(14.318)
Observations	479	358	284	232
Adjusted R-Squared	0.163	0.155	0.232	0.236

Note: 1) ***, **, and * represent significant level at 1%, 5%, and 10%, respectively.
 2) The numbers in brackets are white-correct standard error in the presence of heteroskdasticity.

Table 5. Robustness Check Using Lagged Performance as the Instrument

Dependent Variable: Labor Retrenchment Rate	Traditional SOEs		Corporatized SOEs	
Business-Related Factors				
Ln (Sales)	-2.499***		-2.895**	
	(0.657)		(1.176)	
Ln (Profit)		-0.9782*		-1.0596
		(0.554)		(1.234)
Ln (Number of Competitors)	0.8455**	0.4810	1.3418**	0.8466
	(0.4177)	(0.424)	(0.667)	(0.782)
Export to Sales Ratio	-0.0002	-0.0511	0.0121	0.0762
	(0.042)	(0.055)	(0.076)	(0.071)
Political-Economic Factors				
Fiscal Position to GDP Ratio	-0.635*	-0.988***	-0.7872	-0.4936
	(0.324)	(0.321)	(0.562)	(0.595)
Reemployment Ratio for Laid-Off Workers	0.1835**	-0.0097	-0.1154	-0.1436
	(0.074)	(0.071)	(0.106)	(0.112)
Employment Growth in Private Sectors	-0.0065	0.1268*	-0.0068	0.1947
	(0.066)	(0.069)	(0.124)	(0.137)
Control Variables				
One-period Lagged Ln (Labor)	3.3519***	2.4952***	4.5059***	2.4650
	(0.889)	(0.828)	(1.353)	(1.609)
Ln (Age)	1.3885	0.4707	4.9595***	4.4580**
	(1.108)	(1.190)	(1.436)	(1.776)
Unionization	-0.1010	-0.0450	0.1208	-0.0357
	(0.075)	(0.083)	(0.147)	(0.168)
Sectoral Dummies	Yes		Yes	
Year Dummies	Yes		Yes	
Constant	-0.6380	-4.2568	-13.1079	-11.6876
	(8.840)	(8.894)	(13.564)	(15.357)
Observations	476	295	278	190
Adjusted R-squared	0.17	0.19	0.23	0.27
First Stage Regression Lagged Ln (Enterprise Performance) Adjusted R-Squared	0.90	0.76	0.86	0.72

Note: 1) ***, **, and * represent significant level at 1%, 5%, and 10%, respectively.
 2) The numbers in brackets are white-correct standard error in the presence of heteroskdasticity.