A Model on the Contract Management Responsibility System in China*

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PRELIMINARY AND INCOMPLETE.
PLEASE DO NOT CIRCULATE.

*To be completed
1 Introduction

In the mid-1980s, the Chinese government implemented a series of reforms to improve the efficiency and productivity of the state-owned enterprises (SOEs). The center of these reforms was the contract management responsibility system (CMRS), which was adopted by over 90 percent of the SOEs by 1987, two years after its introduction (Byrd, 1991; Fan, 1994; Chen, 1995). In a typical CMRS contract, the state transferred the full control right of the SOE to a delegated manager through a contract. In return, the manager was responsible to deliver a pre-determined “rent” to the government. The “rent” could either be a fixed amount that increased annually over the course of the contract or a fixed percentage of the profit, which varied between 5 and 20 percent. Most of the contracts adopted the former arrangement, where the exact amount was negotiated between the manager and the state on a case-by-case basis. Any residual profits were then at the disposal of the manager for purposes of investment, improving employees’ benefits and so on. With rare exceptions, the typical length of these contracts was three years. However, because neither the state nor the manager was willing to bear the risk of long-term contracts, they re-negotiated the terms of contracts at the end of each year.

The Chinese government and many scholars were very optimistic about the CMRS reform, as they believed that the managers were given the highest incentive to maximize the profits. Moreover, the increased autonomy should also allow firms to make better decisions. However, the empirical evidence ranged from inconclusive to negative. Depending on the sample and methods of data construction, previous studies reported mixed results on the changes in total factor productivity (TFP) of the SOEs after the reform and a steady decline in profits relative to firms with other ownership structures (Choe and Yin, 2000). The undesired outcomes of the system included the pursuit of short-term profit, lack of long-term investment, income inequality between the SOE employees and the rest of the population, as well as corruption of the managers. After realizing the
pitfalls of CMRS, the Chinese government revised the guidelines a few times in the early 1990s and eventually replaced it with the Modern Enterprise System (MES) and the Group Company System (GCS) in mid 1990s.

In our paper, we use a simple model to show that the negative effects of the reform came from some key flaws of the CMRS. First, even though the managers have total control over day-to-day operations, the ownership still belonged to the government. There existed uncertainty on whether the government would renew those contracts. This problem was further exacerbated by the short span of these contracts, which resulted in the managers’ pursuit of short-term profit at the expense of long-term investment. Moreover, in order to secure their positions, managers also increased workers’ benefit above the market efficient level to gain their support. Once they have secured their positions, the government was forced to soften the penalty even if the managers missed the targets. Finally, the lack of supervision and auditing allowed the managers to dispose state assets for quick profit and personal gains.

2 Institutional Background of CMRS

2.1 Economic reform Background

The state economy of China was established after the government confiscated the enterprises owned by foreign and bureaucratic capitalists shortly after the country was founded in 1949. The core of the economic system relied on the SOEs, which were under full control of the government. Managers of SOEs had little authority over business planning including research and development, product innovation, investment decisions, marketing, or even day-to-day operations such as production scheduling, material purchases, and employee appointment and removal. The salaries of the managers and other employees depended on their ranks within the bureaucratic system and had
almost no relationship with the performance of the SOEs, which was mediocre at best. It didn’t take long before the government identified the low efficiency as one of the main reasons behind the disappointing performance. In his famous article, *On the Ten Major Relationships*, Mao Zedong attributed the problem of low efficiency to the lack of motivation of the SOE employees and local government officials. He believed that if the SOEs were under the supervision of provincial governments, local officials would have higher incentive than the central government officials because the profit of the SOEs would go to local state revenues. Therefore, the first round of reforms focused on the administrative system. Starting from late 1950s, the administrative authority of many SOEs were transferred to local governments. At the same time, some operational rights were also allocated to the managers of the SOEs. The reform was one of the main reasons that caused the chaos of the economy at the end of 1950s. In 1962, the adjustment began and the administrative authority was again drawn back to the central government, as well as the operational rights. Similar experimental reforms were implemented several times before 1978, but the consequences were always the same: they all fell into the decentralization - chaos - drawback - death cycle.

After the culture revolution, a period in which most economic reforms were suspended, the central government pushed for more radical changes under the assumption that the previous failed reforms was the result of a rigid system of traditional socialist economy. Intervention of government was regarded as the main reason for the bad performance of the SOEs since the 1950s, and the solution seemed to be allowing the firms to make their own business decisions. In the late 1970s, China began experimental reforms to improve SOE efficiency by allocating more autonomy to the SOEs. One of the main objectives of these reforms was to move from a commanding system under

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1 The same philosophy still exists in China’s current reform plans. In 2016, China Oil & Foodstuffs Corporation (COFC), a central owned SOE was selected as experimental enterprise of allowance of more autonomy. COFC was allowed 18 autonomies, including its one year and 5 year strategy. State as owner, has rights of residual control and the exercising the rights is to protect the interests of the state, including the rights on medium and long term strategy.
which SOEs obeyed detailed centralized commands from the government to a system that allows the SOEs to make their own decisions. The experiment began in 1978 with six pilot enterprises in Sichuan Province when Zhao Ziyang - who later became the General Secretary of the Central Committee - was the general secretary of CCP in the province. By the end of June 1980, more than 6,000 SOEs were allowed to make such autonomous decisions such as production, investment and marketing. They accounted for about 45 percent of the total outputs of all SOEs. The allowance of more autonomy promoted the development of market for factors and products, including the creation of markets for industrial materials; the deregulation of trucking and wholesale trade; expanded opportunities to hire consultants and temporary or contract workers; new mechanisms for enforcing contracts and resolving commercial disputes; the growth of trade and professional associations; and the expansion of advertising.

Another important component of the reforms in the post culture revolution era was to increase incentives. Equalitarianism under Mao was regarded as the main reason for the lack of efficiency and productivity. Deng Xiaoping, who was recognized officially as “the chief architect of China’s economic reforms and China’s socialist modernization”, on the other hand advocated for the use of material incentives as the reward for industry and initiative.

Chinese land reform in later 1970s began with the implementation of family-contract responsibility system, which leased the government-owned farmland to individual families. The reform received immediate success as it motivated the enthusiasm of farmers. The reform in rural area shed lights on the reform of SOEs. The government started to allow each SOE to set its own employee compensation scheme. Under the traditional socialist economy, the SOEs had to deliver almost all profits to the state. In early 1980s, in order to motivate the enthusiasm of the SOEs, a profits retention system was implemented, which

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4One day Deng Xiaoping decided to take his grandson to visit Mao. “Call me granduncle,” Mao offered warmly. “Oh, I certainly couldn’t do that, Chairman Mao,” the awe-struck child replied. “Why don’t you give him an apple?” suggested Deng. No sooner had Mao done so than the boy happily chirped, “Oh thank you, Granduncle.” “You see,” said Deng, “what incentives can achieve.” (“Capitalism” 1984 ).
allowed the SOEs to retain a portion of the profits to establish workers bonus funds and enterprise
development funds. But the amount retained by the SOEs was decided by the government. The
complaints of the uncertainty of the retention of profits dampened the enthusiasm of the SOEs.
In 1984, the reform of profits retention system was launched on an experimental basis. That was
the beginning of contract management responsibility system, which fixed the amount of profits
submitted to the government and give SOEs more incentive to improve productivity.

The development of market and the rise of private sector encouraged the government to expand
the reform to more areas. Seeing the success in allocating more autonomy and giving higher incentives to the SOEs, the government wanted to introduce another round of reform with both features. Under the important reform Decision of the Central Committee of the Communist Party in October 1984, contract management responsibility system (CMRS) was implemented in some selected SOEs, which allowed SEOs three main autonomies, including production decision, distribution of retained profits and compensation of managers and workers. They also implied a substantial increase in the economic resources over which managers had direct control. Thus the authority and control of resources by SOEs increased substantially. The reform also reduced a number of specific instructions given to SOEs by government agencies. Under CMRS, the SOEs were allowed to keep the remaining profit after surrendering a fixed amount to the government and the SOEs could control and distribute the retaining profits to managers and workers, and also invest. Within the responsibility contract, the SOE acquired authority over decision about the quantity and variety of output, production methods and selling price, which was decided by planning before the reform. Just one year of fully implementation of CMRS, the experience of CMRS was summarized as the separation of rights of ownership and management, which became the core content of the Enterprise law under Ownership by the Whole People in 1988.
2.2 Implementation of CMRS

In 1984, the first round of CMRS was implemented. Within two years, the government pushed it with great force to all levels of officials across the country. Under the CMRS, the manager or a group of managers of the SOEs, or sometimes the firm’s entire work force agreed to fulfill the obligation to deliver a fixed amount of profits to the state, in return for total autonomy and full retention of any excess profits. The introduction of the CMRS was an attempt to align the interests of the managers and workers to those of the state in the hope of maximizing the SOEs’ profits, which were the main fiscal income for the government. The retained profits were under the full discretion of the enterprises for re-investment, bonuses, non-pecuniary benefits and other welfare facilities. In most cases, bonuses were tied to the profits, which allowed the managers as well as workers to have stronger financial incentives in order to enhance enterprise performance. However, because the SOEs were given full autonomy, there was no guarantee that only profitable firms would give out high bonuses. The CMRS was similar to a fixed rent contract, or a tenant contract that guaranteed the government a fixed fiscal income and at the same time allowed managers and workers to keep the residual profits. The tenor of the contracts was designed to be renewable every three years, but nobody could foresee how long the government would keep the reform going, given most previous reforms had been short-lived.

The responsibility contract was signed between the SOE and its supervisory government agency on a negotiation basis. The most important clause of the responsibility contract was the amount of the profits that to be delivered to the government. It could be a positive amount if the SOE was making profits before the CMRS, or a negative amount if it was operating at a loss. For example, the manager could sign a contract that required her to keep the loss below a certain level. The government was unwilling to spend more money to subsidize the firm than the agreed amount, which usually depended on previous year’s loss. Not surprisingly, the bargaining between the two parties
focused mainly on the rent level. It was an extremely complex process because of the uncertainties around firms’ profitability as the economy was in a chaotic and transitional stage. Moreover, the lack of proper accounting and auditing system further increased the problem of asymmetric information between the state and the SOEs. As a result, more than 80% of the contracts set the target level only for one year and the two parties would renegotiate the terms again next year.

In order to restrict the managers’ power, a special arrangement was setup between the mangers and workers under the CMRS. According to the rule of CMRS, the workers representative committee had the utmost authority over the respective SOEs. This committee was responsible to oversee the decisions made by the managers, which included targets for total profits, profits to be turned over to the state, the distribution of retained profit and compensation for managers and workers. The mechanism of co-decision-making represented an attempt to align the interests of the managers and workers to those of the state, not just the interests of the managers. Under China’s political system, the workers were the owner of the country, which included the SOEs. Hence the government believed that as the "owners" of the country, the workers representative committee would be able to monitor the manager’s behavior on behalf of the state. This created an incentive for the manger to gain the support from the workers through employee compensation. A stronger worker support would increase the bargaining power of the managers with the state, especially when they faced the risk of being displaced after missing the profit target. (Dong Furen, 1992; Liao Qun 1992).

2.3 Results of the CMRS

At the end of 1986, State Council published Provisions on Deepen Reform of State Own Enterprises. In this Provisions, the focus of reform of SOEs transferred to implementation of CMRS and allowance of more autonomy, and turn the SOEs into a profit business entity of its own. At the end of 1987, 78% of SOEs implemented CMRS. In February of 1988, State Council issued Interim
regulation on Whole People Owned Industrial Enterprises Contract Management Responsibility System, which stipulated that the amount of profits of submitted should base on the profits submitted last year. In 1987, under the incentive of CMRS, the SOEs seemed to perform well. The total output of the SOEs, total profits of the SOEs and the revenue submitted to the state by the SOEs increased by 11.3%, 12.9%, and 12.2% respectively. In 1988, the total output and total profit again increased by 12.6% and 17.2%. However, all these numbers were in nominal terms. Because of the high inflation in 1987 and 1988 (7.3% and 18.5%), the real value of profits only increased by 5.2% in 1987, and actually decreased by 1.1% in 1988. At the end of the first round of CMRS, the profits of all SOEs decreased 57% (Dong Furen, 1995).

One might wonder if the unsatisfactory performance was a result of the overall economic conditions in China, which was going through a transitional period. The evidence is more obvious if we compare the performance of the SOEs with that of non-SOEs around the same time period. John McMillan and Barry Naughton (1992) the output of SOEs had grown at 7.6% annually from 1978 to 1990, while the non-SOE sector’s growth rate reached 17.6%. Interestingly, the performance seemed to be deteriorating each year over the course of the CMRS, both in the average profitability as well as the number of firms that met the targets set up by the contracts. At the end of the first round of the CMRS, only 70% of SOEs were able to reached the objectives. Hence the government had to soften the penalty ex-post and kept many managers who failed to meet the target. The problem of soft penalty further distorted managers’ incentives and exacerbated the poor performance (Fan, 1994). As the risk of being displaced has lessoned, lower and lower amount of profits were submitted each year (Du Haiyan, 1992). By the time CMRS was completely replaced by another round of reforms in 1998, the total profits of all the SOEs became -7.8 billion RMB.

In contrast to the poor performance, the compensation of managers and workers of the SOEs increased dramatically after the implementation of CMRS. The average salary and welfare (including
welfare fees, price subsides, and house subsides) of SOE employees increased 66% and 101% from 1986 to 1990. Salary of employee accounted for a large part of cost, which was one of the reason for low profitability. Although the revenue increased, profits did not increase at the same time. The benefits of employees did not even include the distribution in kind, like houses, durable consumer goods and household supplies. In 1990, the SOEs invested 37 billion RMB in total on employee houses, or 137 RMB per employee, which was approximately the average monthly salary of a worker at that time. (Dong Furen 1995).

3 Model

3.1 Baseline Model

In this section, we use a simple model to explain why the CMRS did not deliver the results that the government was hoping to accomplish. We begin our discussion by examining the baseline model in which a modified version of CMRS could potentially give the first best outcomes. This is probably what the state had in mind when the reform was introduced, even though it is impossible to verify. Then we add more features of the contract that correspond to what happened in reality to show what went wrong under the system.

In the baseline model, we assume the state signs infinitely long contract with the managers. The managers have to pay a fixed rent to the government every period and retain all residual profits. We assume a single period model and allow the manager to keep all profits from operation and long-term investment to reflect there is no uncertainty on the ownership of residual income. Following Hart, Shleifer and Vishny (1997), we assume the managers can channel resources into cost innovation or/and investment. An example of cost innovation is increasing workers’ incentive through higher wages, which were strictly regulated by the state prior to the reform. Cost innovation
and investment differ in their return horizon. While cost reduction yields immediate effect on the profit, investment return is realized at the end of the period. The manager then maximize her total income by choosing the optimal level of cost innovation and long-term investment:

\[
D(w) - w - i + s + (\Pi(i) + B - s - L(s)) - r,
\]

(1)

where \( B \) is the continuation value of the SOE after the first period; \( D(w) \) is the increase in profit from paying workers wage \( w \); \( \Pi \) is the profit from long term investment and finally \( r \) is the rent paid to the state. Finally, we assume the manager can engage on short-term profit generating activities that are detrimental to the firm’s productivity in the long run. Such activities include selling properties, cutting budget on equipment maintenance and over-investing in merchandises that may only be popular in the short run. Hence for any short-term profit \( s \) the firm generates, there would be a loss \( L(s) \) in the long run. We assume \( L(s) \) is a convex function, such that the marginal long-term loss is increasing is short-term gain. Taking the first derivatives, we yield:

\[
D'(w) = 1;
\]

\[
\Pi'(i) = 1;
\]

\[
s = 0.
\]

Hence the managers would choose socially optimal level of cost innovation and long-term investment. Moreover, the managers will not engage in any long-term destructive activities, \( s \). Finally, the state would choose \( r \) such that the manager’s residual profit equals to her outside option. Not only are SOEs operating at the socially optimal level, the state is also able to obtain the largest amount of profit while satisfying manager’s incentive constraint and participation constraint.
3.2 Uncertainty in Contract Extension

The first natural modification of the baseline model is to shorten the length of the contract, which in reality lasted only one year. We assume that the contract ends at the end of period 1, before the return from long-term investment is realized. There is a probability $\lambda$ that the government will not extend the lease with the same manager. Knowing that with probability $1 - \lambda$ she may not be able to reap the benefit from the long-term investment, she now maximizes:

$$D(w) - w - i + s + \lambda(\Pi(i) + B - s - L(s)) - r.$$  \hfill (2)

The new optimal level of investment becomes $\Pi'(i) = \frac{1}{\lambda}$. Since we assume the investment return function is monotonically increasing and concave, it implies that the manager is under-investing, compared to the socially optimal level. Given that the manager’s participation constraint still has to hold, the government has to reduce the rent, resulting in less state revenue. This is a classic example of the hold-up problem as described in Hart and Moore (1999). Managers are less willing to invest in long-term projects if they can easily be replaced before the profits are realized. Moreover, short-termism is now a real issue because the manager may not be the one to bear the long-term loss. $L'(s) = \frac{1 - \lambda}{\lambda}$. Given $L(s)$ is a convex function, the smaller $\lambda$ is, the more short-term gain the manager will pursue at the expense of long-term productivity. However, the model still doesn’t explain the prevalence of excessive employees’ benefits under the CMRS, especially in more profitable SOEs.

In order to make themselves irreplaceable and gain more bargaining power, managers would build a strong tie with the workers, which at that time, still had a strong voice in firm’s management and could not be easily fired. If the employees are very loyal to the current leader, the government would be hesitant to replace him with a new leader, as the cost for the new manager to settle down will be high. Given the cost innovation in our model refers to the workers’ incentives, we also allow
\( \lambda \) to positively depend on \( c \). If the workers were “well” compensated under the manager, it is less likely for the government to replace him. The new optimization problem in period 1 becomes:

\[
D(w) - w - i + s + \lambda(w)(\Pi(i) + B - s - L(s)) - r.
\]

(3)

Under the new setup, optimization conditions become:

\[
D'(w) = 1 - \lambda'(w)(\Pi(i) + B - s - L(s));
\]
\[
\Pi'(i) = 1/\lambda(w);
\]
\[
L'(s) = \frac{1 - \lambda(w)}{\lambda(w)}.
\]

Given \( \lambda(w) \) is a strictly increasing function in \( w \), \( D'(w) \) is below 1, which indicates that workers’ benefits are above the socially optimal level. Moreover, the problem of over-compensation is more severe in more profitable firms, represented by having a larger continuation value \( B \) in our model. At the same time, the conclusion that firms are under-investing in their long-term projects still holds because \( 1/\lambda(w) \) is greater than 1. There is also divergence in firms’ under-investment because they have different \( \lambda \)-s: less profitable firms will invest even less than more profitable firms. Similarly, less profitable firms are also more focused on short-term profits. The intuition is twofold. First, managers of less profitable firms have less incentive to over-compensate the employees to secure their positions, therefore they care less about future profits and engage in more myopic behavior. Moreover, the loss in long-term productivity from short-termism will create a feedback loop that further suppresses managers’ willingness to retain the position. Hence the model makes the following three predictions regarding workers’ compensation, short-termism and long-term investment that are consistent with empirical observations: 1. All else equal, employees of SOEs in more lucrative
sectors (larger $B$) will receive better compensation because the manager has higher incentive to
gain their support. 2. All SOEs will be under-investing in their long-term projects. This problem
is more severe in less profitable firms. 3. Less profitable firms will engage in more activities that
generate short-term cash flow at the expense of long-term profits.

3.3 Uncertainty in Profitability

So far we assume there is no uncertainly in our model. The government knows the exact profitability
of the SOEs, which allows it to extract the maximum rent without violating manager’s participation
constraint. Hence it is strictly better for the managers to exert the second-best effort and pay off
the rent to the government. In reality, because the SOEs were so inefficient prior to the reform that
nobody knew their true profitability. Moreover, as deregulation was taking place in some market,
the price for inputs and outputs varied dramatically year to year. As a result, the negotiated
levels of rent differed tremendously among the SOEs, depending on the bargaining power of the
managers.

For simplicity, we assume there are two states of the world, in which the profit in the bad state,
$\Pi_b$ is a fraction of the profit in the good state, $\Pi_g : \Pi_b = \theta \Pi_g$ for some positive $\theta < 1$. Under this
setup, both the optimal level of capital investment as well as the realized profit will be higher in the
good state. The socially optimal amount of capital that maximizes the expected profit would be:
$P_g \Pi'_g(i) + (1 - P_g)\Pi'_b(i) = 1$, which is in between the optimal level of capital in the good state and
in the bad state. Moreover, we assume that if the manager is able to pay the rent, the government
will extend the lease with certainty. Otherwise there is probability $1 - \lambda(w)$ that the manager will
be replaced, as discussed in previous section. Even though the managers were obligated to deliver
the specified amount of rents per contract, in reality many of them were able to blame it on external

\footnote{The arbitrariness in rent was one of the main complaints of the system.}
factors and retained their positions. Some earlier studies documented this type of "soft penalty" under the CMRS (Fan, 1994).

We assume $\theta$ is small enough such that the realized profit in the bad state is not sufficient to cover the rent, i.e. $D(w) - w - i + \Pi_b(i) < r$ for all values of $i$. Therefore under bad state, the manager may extend the lease with probability $\lambda(w)$. When that happens, even though the manager will not have any residual profit in the current period, he will have the continuation value of running the firm, $B$. Put it together, the manager’s maximization problem becomes:

$$D(w) - w - i + s + P_g(\Pi_g(i) + B - L(s) - s)) + (1 - P_g)\lambda(w)B. \quad (4)$$

The new set of optimization conditions are:

$$D'(w) = 1 - (1 - P_g)(\lambda'(w)B);$$

$$\Pi'(i) = 1/P_g;$$

$$L'(s) = \frac{1 - P_g}{P_g}.$$ 

Here again we have over-compensation in workers’ benefits. And the problem is more severe in more profitable industries (large $B$) as well as during bad state of the economy (low $P_g$). At first glance these two conditions seem to be contradictory, but they have subtle difference and both were consistent with empirical observations. Managers in more profitable industries were paying their workers more than other managers because the benefit of being the managers of such firms were higher. At the same time, managers in all firms would over-compensate their employees when they were facing the risk of being displaced. As far as the investment level is concerned, firms are again under investing in long-term projects because there will not be any return for them in bad state of the world.
So far we have assumed that the managers do not have any information advantage over the government, therefore they have to invest at the average level between the two states. One of the most cited and strongest argument for SOE autonomy is that managers will have more information on the market condition than the central government. Therefore ideally the state would want the manager to invest at the optimal levels of capital in both states of the world. A more realistic setup would be assuming the managers are able to distinguish the two states after the rents are negotiated. However, because the rent has to be determined ex-ante, the government cannot set state-dependent rents. Hence the maximization problem of the managers would become \( D(w) - w - i + s + \lambda(w)B \) in bad state of the world. If the managers know they are in the bad state of the world, their return at the end of the time period would be \( \lambda(w)B \) instead of capital investment return, which will be turned over to the government in full to cover the rent. In other words, the profit any investment becomes irrelevant as the managers know they will not be able to deliver the rent. As a result, there will not be any long term investment and managers would engage only in activities that produce short-term cash flows.

4 Discussion and Conclusion

Despite its earlier success in the pilot program, CMRS did not produce the stable revenue for the government as it initially hoped. Instead many industries fell into chaos as prices and wages increased rapidly, triggering high inflation. Manager embezzlement also became so rampant that the state identified it as one of the main challenges in many government reports. The CMRS was the baldest attempt in the history of corporate governance to solve the agency problem between managers and owners. The Chinese government believed that if the managers were given all the residual income, they would act in a way that achieves the maximum profits for their firms. There-
fore together with the highest incentive, the managers were also given the highest autonomy. In retrospect, what the government failed to realize is that unless the managers are truly the owners of the enterprises, it would be impossible to perfectly align their interests with that of the state. Even if they are given the full residual income (instead of stock and options as in many western public companies), there would always be the risk of expropriation from their true owner, the state. As Hart (1993) points out, if residual control and residual claim are not assigned to the same person, hold-up problem would arise and managers would be unwilling to invest.

Another issue exposed by the CMRS is how much autonomy the state should assign to the SOEs. Given the managers and workers do not own the SOEs, more autonomy could potentially be detrimental as they have the ability to increase their own benefits at the expense of the state. In our model, the managers have the incentive to over-compensate the workers in order to gain the support from the workforce to secure their positions, which would bring them utility for being managers. The government set up the workers representative committee in order to balance the power of the managers, but nothing stopped the committee from colluding with the managers. In the model we do not discuss the incentive for the managers to directly channel profits into their own pockets because of its triviality, but it was a common practice in many SOEs. The government finally realized the problem of unconstrained power and set up the State-owned Assets Supervision and Administration Commission of the State Council (SASAC) in 2003. Its main responsibility is to manage the SOEs, including appointing top executives and approving any mergers or sales of stock or assets, as well as drafting laws related to state-owned enterprises.

Finally, the CMRS was unsuccessful because it asked the managers to bear the risk of economic uncertainty. Under classic principal-agent problem, this is inefficient because managers are assumed to be more risk averse than the owner, in this case the state. In our model, we use a different approach and argue that economic uncertainty with soft budget constraint encouraged the managers
to seek non-profit maximizing behavior, especially when in bad economic conditions. This problem becomes even more serious if the managers have more information than the government because the target profit has to be set ex-ante. In the case when the managers know they are unable to deliver the rent, they would divert profit-generating investment money for personal gains, contrary to what the state hopes to achieve by assigning them more autonomy.