

Control Modes and Outcomes of Transformed State-Owned Enterprises in China: An Empirical Test

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ABSTRACT The transformation of state-owned enterprises (SOEs) into efficient entities has been an important approach in transition economies. However, the transition literature reveals little about how control structure affects firm performance of transformed SOEs. Drawing on agency theory, we distinguish three modes of control in transformed SOEs: state-controlled, dispersedly controlled, and privately controlled modes and argue that actual control after transformation plays a critical role in determining performance. Examining the impact of different control modes in China, we find that the key is who controls the transformed firm. Non-state-controlled (dispersedly controlled and privately controlled) firms are more likely to have enhanced post-transformation performance and reduced agency costs than state-controlled firms.

KEYWORDS control mode, organizational transformation, performance, state-owned enterprise

INTRODUCTION

The transformation of state-owned enterprises (SOEs) under the pressure of market competition has been viewed as an important pathway for state property to solve the inherent inefficiencies and agency problems of state ownership in transition countries (Megginson & Netter, 2001; Perotti, Sun, & Zou, 1999). In the past two decades, the Chinese government has used ownership structure strategically to transform SOEs to improve firm performance. The transformation has created various cross-ownership forms, such as cooperative enterprises, shareholding corporations, and limited liability companies, with different combinations of state and non-state shareholders. The transformed SOEs, jointly owned by distinct shareholders with clearly defined property rights, are spread across the boundaries of the

different sole-ownership types (e.g., private vs. state), also changing the landscape of the control structure of firms (e.g., the right to control the firm following the transformation).

Previous studies have largely focused on the effect of ownership percentages (shares) on firm performance (Ang, Cole, & Lin, 2000; Estrin, Hanousek, Kocenda, & Svejnar, 2009; Wei, Xie, & Zhang, 2005). However, the effects of control rights (i.e., who actually controls the firm) have been neglected. Control rights may not be fully equivalent to or defined by the percentage of shares owned by different owners. Given that the owner–manager relationship in transformed firms can be in a wide range from dominant state control, dispersed control, to dominant private control, it stands to reason that the different control modes may substantially affect the transformation outcomes. We thus raise the question: how do control rights, as demonstrated by different modes of control, affect the relative performance of transformed SOEs, controlling for ownership?

Our study makes two main contributions to the transition literature. First, it extends agency theory (Jensen & Meckling, 1976) to explore how continuing state control affects the outcomes (economic performance and agency costs) of transformed SOEs, as compared to those with state withdrawal. From an agency theory perspective, managers are agents under the control of certain shareholders (e.g., state owners, private owners, or dispersed owners). We argue that different shareholders, in turn, will set different performance expectations for managers. Under such expectations or pressures, the true control rights of owners over the recombinant property may play a critical role that will eventually affect transformation outcomes.

Second, while there has been much research on the relationship between ownership structure and performance (Mar & Young, 2001; Simon, 1996; Wu, 1997), very little research has provided adequate explanation or empirically explored the impact of control rights on post-transformation outcomes. Our study focuses on the control rights of parties embedded in transformed firms and may offer additional insights into existing theoretical controversies. For example, while some studies expressed a rather pessimistic view that Chinese SOEs may face the danger of extinction (e.g., Nolan, 2001), others are more optimistic about the future of Chinese SOEs and suggest that these firms may transform themselves and survive the historic economic reform (Boisot & Child, 1996; Lin, 2011). Our findings may also have important implications for organizational scholars, policy makers, and business investors alike.

Our study also contributes to the empirical literature by tracking the influence of control rights in transformed SOEs on performance in a longitudinal setting. We classify control rights into three distinct modes – state-controlled, dispersedly controlled, and privately controlled – and develop hypotheses to examine whether the non-state-controlled modes will outperform the state-controlled mode. This approach goes beyond previous studies that have focused on the effects of sole-

ownership types or ownership percentages on firm performance. We tested our hypotheses using a sample of transformed SOEs based on the National Industrial Census of China from 2000 to 2005.

THEORETICAL BACKGROUND AND HYPOTHESES

China provides an important setting to understand the outcomes of transformed SOEs with different types of control mechanisms. Before 1979, there were only two sole-ownership forms: SOEs and collectively owned enterprises. Although China has not abolished the old and yet deeply entrenched centrally planned institutional framework, certain market-based institutions have been introduced and are rapidly growing. As a result, the two institutional frameworks coexist, compete, and interact, giving rise to a diversity of organizational forms. During the first decade of the institutional transition, China's industrial landscape was characterized by a diversity of organizational forms and a plurality of property rights (Nee, 1992). Foreign and private ownership date back to the 1980s and have grown rapidly since 1991 (Hussain & Chen, 1999; Tan, 1999; Zhang & Keh, 2010).

We begin by identifying research gaps in the transition literature. First, previous studies on performance have largely focused on ownership type but ignored different control modes across different types of firms. Since diversity of ownership types presents opportunities to compare 'partially similar cases', previous research has focused on performance differences associated with various ownership types, suggesting that private and foreign firms usually outperform the SOEs (Nee, 1992; Peng, Tan, & Tong, 2004; Tan, Li, & Xia, 2007). Ownership type is a more transparent organizational variable that can be viewed as a proxy of other less transparent organizational phenomena (Tan, 2002). These studies, however, ignore some less transparent variables such as control mode embedded in mixed ownership types.

Second, building on the early transition in China, scholars have developed typologies of sole-ownership types: non-marketized firms such as non-marketized SOEs, marketized firms, or collective enterprises (Nee, 1992), private firms (Boisot & Child, 1996), and wholly foreign-owned enterprises. Studies have typically focused on the effects of a state sole-ownership structure vs. a non-state sole-ownership structure on firm performance (e.g., Boisot & Child, 1996; Nee, 1992; Tan, 2002). However, the sole ownership-based approach does not specify other distinct marketized categories, such as mixed ownership structures. Little is known about how control modes in mixed structures affect the outcome of transformed SOEs.

Finally, previous studies on SOE transformation in China have focused on corporatization as a process of clarifying property rights in which the state withdraws its control rights in various degrees (Perotti et al., 1999; Xiang, 1998). Corporatization is normally seen as a first necessary step toward privatization, but it should not be viewed as privatization itself (Csaba, 1992; Djankov & Murrell,

2002). The notion of corporatization is also far from unequivocal because corporatization and privatization have been interchangeably used in the transformation literature (Wei et al., 2005). For example, when an SOE is changed to a privately controlled firm, the transformation can be considered a more privatized version of corporatization. In contrast, when an SOE is changed to a state-controlled firm, the transformation can be considered a less privatized version of corporatization. As such, it is difficult to evaluate the outcome of transformed SOEs.

Although cross-ownership transformation has emerged and gradually spread in China since 1992 (Perotti et al., 1999; Xiang, 1998), the state has not completely withdrawn its control rights. What remains unclear is how continuing state control affects the outcomes of transformed SOEs, as compared to non-state-controlled ones. As the state has no intention of giving up its control rights completely in certain business operations, state control is expected to remain dominant in many transformed firms (Megginson & Netter, 2001; Xiang, 1998). In an effort to draw more definitive conclusions, we examine to what extent the improvement in firm performance of transformed SOEs depends on whether the state withdraws its control rights from the transformed firms. Since SOE transformation creates new principal–agency relationships (i.e., new owner–manager relationships) that may be different from the traditional principal–agency relationships, we use agency theory (Eisenhardt, 1989; Jensen & Meckling, 1976) to examine the effects of control rights on the outcomes of transformed SOEs.

An Agency Theory Perspective

Agency theory (Fama, 1980; Jensen & Meckling, 1976) suggests that shareholders (the principal) empower managers (the agent) to perform some service on their behalf. Agency theorists emphasize the governance mechanisms and incentives to deal with the agency problems (Eisenhardt, 1989; Jensen & Meckling, 1976). Certain corporate governance may enhance a firm's performance by controlling or monitoring the agent's behaviour. The theory takes into account agency problems, incentives, and monitoring mechanisms for understanding the relationship between differences in corporate governance and organizational outcomes (Daily, Dalton, & Cannella, 2003). The traditional approach emphasizes the divergent goal and interest between shareholders and managers in an agency relationship, which unavoidably generates costs. Because agents may not always act in the best interests of principals, firms are likely to fail to maximize the principal's wealth (Eisenhardt, 1989). The implicit or explicit assumption in the traditional agency-theory approach is that maximizing the principal's value is a common goal to all shareholders. However, the underlying assumption is questionable in the sense that state and non-state shareholders may have divergent goals and interests.

In this study, we adopt an alternative approach by emphasizing the different goals of state and non-state shareholders, which may provide a more useful and

realistic approach to the study of relative performance in the case of transformational change in the transition context. Our arguments are built on the rationale that transformed SOEs with different shareholders (principals) have different demands. In traditional SOEs, the ultimate principal is the state. Profit maximization is not the only goal of the state owner (Estrin et al., 2009; Williamson, 1985). The state may want to preserve jobs, which is one of the major causes of inefficiencies for SOEs. Agency costs occur when SOE managers pursue political or social objectives imposed by the state above and beyond profit-seeking. Hence, SOEs in emerging economies pose different agency problems from those faced by firms in mature markets. In this sense, state control or withdrawal may be an important factor that cannot be ignored for understanding relative firm performance of transformed SOEs.

It is useful to devote more research attention to determine the applicability of agency theory in the setting of SOE transformation to address the performance issue. The separation of ownership and control in SOEs has been a central approach of state property transformation (Djankov & Murrell, 2002; Simon, 1996) to deal with such problems as soft budget constraints and poorly specified property rights – the major institutional deficiencies at the outset of the institutional transition. For example, under pressures that most SOEs were loss-making, China has promoted a ‘modern enterprise system’ and a ‘shareholding institutional reform’ that separate ownership from control since the early 1990s. SOE transformation had led to various hybrid ownership structures that link state and non-state property rights through ownership ties. Control structures associated with different levels of agency costs and incentives may have important implications on post-transformation outcomes.

In contrast to previous studies that have focused on the effects of ownership type or ownership percentage on firm performance (Estrin et al., 2009), our research focuses on the effect of control rights. Control rights become a central issue because they can be decoupled from the ownership percentage when clarified property rights allow transformed firms to distribute their shares among non-state investors such as domestic individuals and foreign investors. Control rights affect agency costs and firm performance because who actually controls plays a critical role in the governance structure, regardless of ownership type or ownership percentage. For example, a traditional SOE can be transformed into a limited liability company (ownership type change) with minority state ownership (ownership percentage change), but the state may still maintain its control over the company for several years after the transformation. Our purpose is to examine the short-term effect of continuing state control on performance.

In traditional SOEs, the agency problem exists because managers typically have less incentive to boost efficiency because the enterprises are embedded in the administrative-bureaucratic system of the government. As Estrin et al. (2009: 705) noted, “The politicization of enterprise decision making may also open firms up to

lobbying and unproductive rent seeking' (see also Shleifer & Vishny, 1997). SOE managers' discretion and behaviour are constrained by their job security and the dependence on the government for critical resources. To reduce the possibility of losing their jobs or secure a stable flow of resources, they are more likely to fulfil the objectives set by the government than by the principle of efficiency. One of the purposes of SOE transformation is to restructure a new principal-agent relationship in order to minimize agency costs. Since SOE transformation shifts from a dependence on the government to a dependence on the market for resources, it also changes their career concerns from unproductive rent seeking to efficiency seeking. Accordingly, traditional agency problems can be reduced to some degree. Due to the different demands from different types of principals (i.e., state vs. non-state owners), the agency considerations should also be different. Managers in transformed firms must adjust their operation strategy to enhance their efficiency so as to compete in the market, resulting in different firm performance.

Our argument is that actual control, rather than nominal change, affects post-transformation outcome because different control modes may affect how firms restructure the principal-agent relationship. In state-controlled firms after transformation, managers would still be acting in the state's (principal's) best interests by maintaining jobs and inefficiencies while steadily moving toward the market. In contrast, in transformed firms, where the principals shift to private owners, foreign investors, or non-state business groups, these new principals are more likely to demand profitability from the agent (managers) than the state. As a result, the change in control rights from the state to non-state owners in transformed SOEs is more likely to reduce agency problems and thus enhance relative firm performance.

A Typology of Control Modes and Hypotheses

In contrast to the state planning era that was predominantly shaped by state control, the Chinese economic reform has produced a spectrum of control rights embedded in transformed firms, varying from predominantly state control to predominantly private control. Firms under each of these control types not only face different institutional environments but also possess heterogeneous institutional advantages and disadvantages (Tan, 2002). In this study, we distinguish three modes of control rights into state-controlled, privately controlled, and dispersedly controlled modes. First, the state-controlled mode refers to a transformed SOE with the state having the control rights. In some cases, although the state does not have majority ownership, it still has the right to control the transformed firm by contracts or agreements. In this type of mode, government agencies still play an important role influencing business operations.

Second, we refer to the privately controlled mode as a transformed SOE with dominant private control by domestic individuals or foreign investors. In practice,

some SOEs can be transformed into privately controlled structures in the forms of private cooperative firms, private limited liability companies, private shareholding corporations, or foreign controlled structures in the form of Sino-foreign joint ventures. Although private ownership and control structures give privatized firms greater autonomy, it also results in a lower level of institutional protection.

Finally, we define the dispersedly controlled mode as a transformed SOE with a diversified governance of control in which not a single dominant shareholder can be identified. The mixed property is controlled neither by the state nor by a private owner as each owner plays a minority role in the transformed SOE. Instead, it is collectively owned and controlled by a plurality of individuals, organizations, or investors. By giving up certain freedom and autonomy and turning the firm into a hybrid form, the transformed SOEs can secure benefits only available for traditional SOEs.

In this framework, our agency-theory-based approach is different from the property-rights-based approach. The property rights approach emphasizes property rights clarity, managerial autonomy, restructuring, and marketization to solve the inefficiency problem of state property (Bortolotti & Siniscalco, 2004; Nee, 1992; Walder, 1995). In this perspective, transformation allows SOEs to become legal entities with fewer soft-budget constraints and better clarified property rights separated from the state (Wu, 1997; Xiang, 1998; Zhu, 1999), ignoring the different demands on firm performance between state and non-state owners. According to this view, the failure of a traditional non-marketized SOE as an economic organization is primarily caused by ill-defined property rights, the lack of managerial autonomy, and soft-budget constraints (Kornai, 1980). The implication is that creating a clearly defined property rights structure is essential to restructuring state ownership (Xu, 2000). In this sense, as long as property ownership is clearly defined, secure, and transferable, property use can be arranged to achieve the highest economic efficiency, regardless of whether the government withdraws its control rights from business operations or not.

The property-rights-based approach, however, is not without its deficiencies. One of the aspects it may have overlooked is that state control may divert managerial objectives away from profit maximization and toward employment and social welfare maximization (Williamson, 1985), especially in the transition context (Estrin et al., 2009). Previous studies frequently attribute the poor performance of SOEs to the ambiguity of property rights that is associated with government ownership (e.g., Wu, 1997; Xiang, 1998; Xu & Wang, 1999; Zhu, 1999). Arguably, simple status change without state withdrawal may not necessarily transform an SOE into an efficient business organization based on market competition. For example, transformation can result in simple combinations of the original SOEs into 'business groups' with general managers and directors appointed by the state (Buckley, Clegg, & Tan, 2005; Wu, 1997; Yiu, 2011). Since profitability is not the only goal the government assigns top managers (e.g., CEO) in transformed SOEs,

the state as a dominant shareholder still imposes non-market objectives that are likely to conflict with the objective of firm profitability (Andrews & Dowling, 1998; Bai & Xu, 2005). Following this reasoning, the desired performance is more difficult to be fully achieved through the state-controlled mode.

It is generally believed that the poor performance of SOEs triggers the transformation or privatization, and transformation, in turn, improves firm performance (Djankov & Murrell, 2002; Estrin et al., 2009; Shleifer & Vishny, 1997). However, the empirical literature reports mixed results across transition economies. According to their survey of the literature, Djankov and Murrell (2002) found that transformation had a positive and significant effect on firm performance in Central and Eastern Europe (CEE) but insignificant in the Commonwealth of Independent States (CIS), suggesting that insider vs. outsider control may play an important role in explaining the different transformation outcomes.

Our control mode typology may extend previous studies by shedding light on whether relative firm performance after transformation is actually determined by whether the transformed SOEs can shift away from the state control and whether new shareholders can effectively deal with the traditional and emerging agency problems. Due to the rise of new agency problems (e.g., state-assets stripping) (Xu, 2000), in addition to existing agency problems in traditional SOEs (e.g., excess employment), different control structures (i.e., state-controlled or non-state-controlled) may have different mechanisms to control for the agency problems. We argue that non-state-controlled structures are more likely to reduce agency costs than the state-controlled structures in transformed firms. We develop hypotheses to test our arguments discussed above.

Control modes and relative performance of transformed SOEs. In a privately controlled mode, private owners and foreign investors can reorganize the transformed firm by following market rules (Hassard, Sheehan, & Morris, 1999; Xiang, 1998). Previous studies have demonstrated that sole private firms, including foreign-funded firms, outperform SOEs (Buckley et al., 2005; Li, Li, & Zhang, 2000; Tan, 2002). It is reasonable to argue that transformed SOEs with private control rights will display enhanced firm performance as survival pressures in market competition make privately controlled firms more efficient (Perotti et al., 1999). Although the transformation is implemented by the government, the transformed firm with private control is no longer a government unit. A privately controlled firm is responsible for its own profits and losses in the market. Thus, its operations become the most market-oriented or marketized, which may lead to better performance. Thus, a better understanding of the effect of SOE transformation on firm performance is to single out the effect of a privately controlled governance structure.

In a dispersedly controlled mode, however, the answer remains less clear. Scholars have shown that ownership diversification is negatively related to firm performance because it increases information asymmetry and reduces the monitoring

ability of dispersed owners on managerial behaviour (Hill & Snell, 1989). This argument may not be simply applied to the context of SOE transformation for several reasons. First, given that transformed SOEs with high concentrations of less efficient state ownership as an initial condition, it stands to reason that the participation of non-state owners may bring market mechanism to enhance firm performance. As SOE transformation reflects a step to mimic Western corporate forms, with state withdrawal, non-state owners tend to make the transformed firm more marketized (i.e., a shift away from government planning to market mechanisms) in order to survive in the market.

Second, Nee (1992) argues that, under the conditions of partial reform, hybrid ownership will perform better because they can benefit from both market forces for efficiency and the state redistributive mechanism for resources. When dispersedly controlled structures take place, SOE transformation increases incentives to monitor divergent management behaviour (Chan, Lin, & Zhang, 2007). Hence, both non-state-controlled modes (dispersed and privately controlled structures), as compared to the state-controlled structure, are more likely to marketize state property that falls outside the bounds of central planning (Boisot & Child, 1996; Xu, 2000).

Finally, when share ownership becomes more dispersed, non-state owners are more likely to use professional audit as a monitoring mechanism to mitigate agency problems in China (Chan et al., 2007). In studying the relationship between ownership structure and firm value of transformed SOEs in China from 1991 to 2001, Wei et al. (2005) found that dispersed structure with state withdrawal increased firm value measured by Tobin's Q , while state-controlled structure decreased firm value. A dispersedly controlled structure is also likely to transform SOEs into marketized or quasi-marketized firms than a state-controlled structure in response to market pressures by following competition rules to improve firm performance. Anecdotal evidence also suggests such a pattern. For example, according to a printing industry executive we interviewed, the cost of printing 1,000 pages (a standard measure) is 18 yuan and 7 yuan for SOEs and non-SOEs, respectively (Jia, 2009).^[1]

From an alternative perspective, Freund (2001) argues that SOE transformation without state withdrawal fails to alter managerial behaviour to market behaviour because managers are still acting under the guidance of the state plan and the directors rarely face hard-budget constraints. When the state retains control rights, government bodies can still use their owners' rights to interfere with business decisions (Simon, 1996). As state shareholders tend to pursue political rather than profit-maximizing objectives, the transformation with control rights held by the state is likely to be affected by non-market mechanisms. Because of the different goals (e.g., excess employment vs. profit-maximum) between the state and non-state principals, with the state withdrawal of its control rights, the non-state principals are more likely to play shifting roles in the transformed firm, placing stricter

efficiency demands on the agent. Therefore, the transformation of an SOE to a non-state-controlled firm may result in higher levels of marketization, leading to better performance.

Hypothesis 1: Transformed SOEs with a dispersedly controlled mode will perform better than those with a state-controlled mode.

Hypothesis 2: Transformed SOEs with a privately controlled mode will perform better than those with a state-controlled mode.

Control modes and agency costs of transformed SOEs. In their study of incentive management during privatization, Rodriguez, Espejo, and Cabrera (2007) suggest that different agency relations exist before and after privatization, providing opportunities to refine and extend agency theory in this specific context. A particular type of agency cost exists in state-controlled economies in the form of government interference over the firm (the SOE). For instance, the state may force firms to keep an excessive number of employees to alleviate local unemployment pressure, fund social welfare projects, or produce products with no markets. Numerous studies have dealt with this issue from different angles (e.g., Boisot & Child, 1996; Li, Li, & Zhang, 2000; Nee, 1992; Walder, 1995, 2011). Needless to say, a major goal of the economic transition is to reduce such agency cost by changing the control structure of the firm. For the firms that have been changed into privately owned or dispersed structure, state interferences are expected to be reduced. However, anecdotal evidence suggests that the state still interferes even on the private firms. For example, according to a business executive we interviewed, when a bank applied to open branches in a major city, the local government demanded it to open the same number of branches in a poor rural area which apparently did not have enough customers to sustain the new branches (Cheng, 2010). Some local governments demand firms to give raises to employees if the firm is profitable in three consecutive years (Xinjingbao, 2007).

From the perspective of monitor efficiency, because managerial behaviour is monitored inadequately or ineffectively due to the dispersal of state representation, the newly gained managerial autonomy may exacerbate the agency problems in transformed SOEs (Mar & Young, 2001; Zhu, 1999). La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1998) argue that given the relative absence of external monitoring and internal incentives, agency problems in many emerging markets may be more severe. Some managers may attempt to conceal information regarding state resources to promote their own interests during the transformation process. For example, property transformation has led to a depletion of state-assets through both legal and illegal state-assets stripping (Xu, 2000). The agency problem in transformed firms with high state ownership can be magnified since top managers are likely to be appointed by the government without meaningful per-

sonal ownership or incentives in these firms (Wei et al., 2005). Managers in transformed firms with state-controlled mechanisms are likely to make decisions that promote their own interests at the expense of the interest of the state shareholder (Xiang, 1998).

New agency problems are also associated with non-state minority shareholders. The vast majority of individual investors are relatively small in dispersed ownership structures. These minority owners lack the ability to claim damages and protect their interests (Chan et al., 2007; Xu & Wang, 1999). At high levels of state ownership are a unique feature of ownership structure in many transition economies, which may be different from those in developed countries. Lane, Cannella, and Lubatkin (1998) noted that the agency framework may not apply universally across different countries. Some minority owners with a certain degree of control (through voting or managing rights) may behave opportunistically in state-controlled structures. For example, non-state (minority) owners may have a strong incentive to extract resources from the SOE instead of putting effort into the SOE (Perotti et al., 1999). Many SOEs carry some non-performing assets (i.e., welfare facilities), but non-state investors that hold the shares of a transformed SOE are not interested in taking on these assets (Gu, 2001).

In addition, in state-controlled firms, the state relies on the board of directors to preserve the value of state properties, but many directors are paid by the local government according to their administrative ranks. They may not have sufficient incentives and managerial ability to monitor the management's behaviour (Chan et al., 2007; Xu & Wang, 1999). Therefore, transformed SOEs with continuing state control may have difficulty dealing with the opportunistic behaviour of non-state managers satisfactorily. Given these conditions, transformation with continuing state control rights may not fully resolve the existing inefficiency problems of non-marketized SOEs and may create new agency problems for the state property.

When non-state owners have the control rights, they are more likely to make an effort to deal with the opportunistic behaviours of managers because of changes in the incentive structure and thus may substantially reduce agency costs in transformed firms. For example, Chan et al. (2007) found that the demand for differentiated audits by listed Chinese companies is systematically associated with a decrease of government shares and a corresponding increase of dispersed shares. Non-state new owners or investors may also place strict demands on managers to maximize the return on their investments. Through selling state ownership, many SOE managers also become owners in transformed firms. When managers become owners, they may also place demands on themselves to enhance efficiency. Thus, SOE transformation to a non-state-controlled structure may reduce agency costs.

Hypothesis 3: Transformed SOEs with a dispersedly controlled mode are more likely to reduce agency costs than those with a state-controlled mode.

Hypothesis 4: Transformed SOEs with a privately controlled mode are more likely to reduce agency costs than those with a state-controlled mode.

Empirically, we also examine firm performance, taking into account how control structures minimize agency costs. The enhanced relative performance in transformed firms may be associated with reduced agency costs.

METHOD

Sample

Our sample was constructed from the National Industrial Survey of China from 2000 to 2005, which is conducted by China's National Bureau of Statistics (NBS) whereby all manufacturing enterprises that have annual sales of 5 million yuan (about US\$600,000) and above are required by law to report accurate information about their registration status, assets, and other financial information. The NBS developed a logic-testing method that links related variables together to detect illogical data. The method employs more than 30 logistic tests to check the quality of the survey data (NBS, 1994). Our time window was limited because consistent data before 1999 were unavailable. A firm was included in our sample if its registered ownership status was an SOE in 1999 or the year before transformation, but changed to a non-state firm thereafter. To ensure the quality of the data, we also double-checked to make sure that the SOEs had the same registration status 2 years before its transformation, which led to a sample of 3,329 firms. Because of missing values for some key financial variables (i.e., total assets, sales, net income, or registered capital) during the sample period, 47 firms were excluded from the analysis. The remaining 3,282 generated a panel data set with 11,117 firm-year observations. Since our study focuses on the transformed firms during the sample period according to our conceptualization, we excluded untransformed SOEs from our sample. For example, if a firm was an SOE in 2002, it became a limited liability firm in 2003. Then, the observation in 2002 was excluded from our sample. We then tracked this firm from 2003 to 2005 during our sample window. As such, our tests were based on an unbalanced panel dataset.

Measures

Dependent variable. We used four dependent variables, including two performance measures: return on assets (ROA), and labour productivity, as well as two agency costs measures: the administrative expense ratio and subordination relationship, explained below. *ROA* was calculated by the ratio of net profit to year-end assets for each firm and year. *Labour productivity* was measured as the ratio of net

sales to the number of employees for each firm and year. Since many SOEs faced the problem of surplus labour, a lower level of labour productivity might reflect a higher proportion of employment associated with a certain control mode.

To measure the agency costs of the firm, the *administrative expense ratio* was calculated by the administrative expenses scaled by annual sales for each firm and year. It reflects how effectively managers controlled administrative costs. This measure of agency costs is consistent with previous studies in the context of organizational transformation in China (e.g., Ang et al., 2000; Wang & Deng, 2006).

Subordination relationship was a dichotomous variable, coded 1 if the transformed SOE had an administrative relationship with the government, and 0 otherwise. We use the official survey item '*lishu*' to measure it. *Lishu* (隶属) means 'subordinate to', or 'belong to'. Due to China's legal origin in the continental law (which favours more governmental control), the Chinese government exerts controls or interferences of various degrees on all firms (Guthrie, 2005; Walder, 1995), including privatized firms, through subordination (or administrative) relationships. According to Hu and Hu (2002), although such a state-firm relationship is getting less explicit after privatization, it is still deeply rooted in the local political economic structure and the state is extensively entrenched in firms' operations. The unique external control structure involves political objectives and thus increases the agency costs of the firm, which may harm firm performance.

Independent variables. China's official classification of ownership types does not clearly specify which owner controls the operations of the transformed SOE. We derive the control mode of the firm based on the following two items from the National Industrial Census of China, 'state control status' and 'registered ownership type'. The first item has three categories: (i) 'state absolute control' (国有绝对控股); (ii) 'state relative control' (国有相对控股); and (iii) 'others (or non-state control)'. State relative control refers to a control mode in which the state controls a transformed firm through a contract even though the state is in a minority ownership position. A firm is classified as state-controlled if it is in one of the first two categories.

Among non-state-controlled firms, we examined the second item, the registered ownership type, to determine its control mode. According to the State Administration for Industry and Commerce of China (1998), firms must register their ownership type based on the ownership, control, and operation mode of the firm. For example, if a firm is owned and governed by one or more private owners, then it should be classified as a privately owned firm. We defined a privately controlled firm if the controlling shareholders were specified as domestic individuals or foreign investors. According to China's Corporate Law, private enterprises refer to profit-making economic organizations invested and controlled by domestic

individuals, which take several forms, including sole proprietorships (私营独资), private partnership enterprises (私营合伙), private shareholding corporations (私营有限责任公司), or private limited liability companies (私营股份有限公司). There were three types of non-state-controlled foreign-funded enterprises: wholly foreign-owned enterprises (外资企业), Sino-foreign equity joint ventures (中外合资), and Sino-foreign cooperative joint ventures (中外合作).

Finally, we referred to a dispersed mode of control if the controlling shareholders in a transformed SOE were unspecified. This category included dispersedly controlled cooperative enterprises (合作企业), shareholding corporations (股份公司), limited liability companies (有限责任公司), and collectively owned enterprises (集体企业). To test our hypotheses, we created two dichotomous variables for the privately controlled mode and the dispersedly controlled mode, respectively, and used the state-controlled mode as an omitted category for comparison.

Control variables. The literature has documented a number of firm, industry, and location variables that may also affect firm performance. We controlled for relevant variables known in the literature to exclude alternative explanations. Non-state ownership may outperform state ownership (Megginson & Netter, 2001). We thus included a variable indicating the share of *state ownership* for each firm and year, measured by the ratio of the capital invested by the state to the total invested capital. This ownership share is a continuous variable. We also controlled for firm age because older SOEs have inertia and are less likely to change their established routines. We expect newer firms are more likely to adapt to the changes. We measured *firm age* by using the logarithm of the number of years since the firm was founded. The Chinese government tends to control large SOEs, which, in turn, may affect firm performance. We controlled for *firm size* by using the logarithm of total assets in the preceding year for each firm and year in our analysis.

We took into consideration the effects of *capital intensity*, as it tends to be correlated with firm performance. Capital intensity was measured by the invested capital divided by the number of employees for each firm and year. A firm's poor debt position may negatively affect its performance. This variable *debt-to-equity ratio* was measured by a firm's total debt expressed as a percentage of its equity. A change in the top leader may bring about a new climate for organizational change, which in turn will affect firm performance. We controlled for a *change in the legal representative* using a dummy variable, coded 1 if a firm's representative of the legal person (*faren daibiao* 法人代表) was changed after the SOE was transformed. A legal person (*faren* 法人) is defined in China as an institution or legal entity with the rights and liability to the firm assets. The representative of the legal person is usually the top leader of the firm since the legal representative is the controlling shareholder of the entity.

Analyses

We use fixed-effects models to test our hypotheses, which are shown to be the preferred model based on the Hausman test (Hausman, 1978). A standard OLS estimation of the impact of control changes on firm behaviour and firm performance is likely to be problematic due to the omitted variable bias. Specifically, firms that experienced changes in ownership control may be different from those that did not go through such changes and these differences may be unobservable to researchers. Furthermore, the differences may be correlated with the firm's ownership control decisions. Without controlling for these unobserved firm differences, we may mistakenly attribute the resulted differences in firm performance to the effects of firm control modes. For example, the government may have chosen SOEs with the best initial management and performance to first switch to private control as it wants to showcase the success of the reform. Then by attributing all the positive impact on firm performance to the control mode, the OLS method will overestimate its effects. It is also possible that the SOEs with the worst management and performance are the ones to experience ownership control reforms first (Li & Rozelle, 2003, 2004) because the government was in a rush to shed the fiscal burden. In this case, the OLS estimates will understate the effects of the control mode.

To control for the unobserved firm characteristics discussed above, we use a fixed-effects model. Specifically, we begin with estimating the following model:

$$y_{it} = \alpha_t + \alpha_i + \beta_1 \cdot (\text{dispersed_control})_{it} + \beta_2 \cdot (\text{private_control})_{it} + \Gamma_{it} z_{it} + \varepsilon_{it} \quad (1)$$

where y_{it} is the firm performance or agency cost measure of firm i in year t , $(\text{dispersed control})_{it}$ is an indicator that takes a value of 1 for a firm with dispersed ownership (0 otherwise), $(\text{private control})_{it}$ is an indicator that takes a value of 1 for a firm with a private party as the controlling shareholder (0 otherwise), and z_{it} is a vector of the control variables (firm age, assets, debt-to-equity ratio, capital intensity, state ownership, and change in legal representative) in firm i in year t . The coefficient β_1 thus gives the effect of having dispersed control, while β_2 gives the effect of having private control rights. Both effects are compared to the comparison group of the omitted state control variable. The firm-fixed effects and year-fixed effects are estimated by α_i and α_t , and the random error term is given by ε_{it} .

RESULTS

Table 1 presents the descriptive statistics and correlations between the variables. We examined the variance inflation factor (VIF) to detect multicollinearity. The highest VIF among all models was 1.96, thus ruling out multicollinearity concerns.

Table 1. Descriptive statistics and correlations

Variable	Mean	SD	0	1	2	3	4	5	6	7	8	9	10	11	12
0 State control	0.42	(0.49)													
1 Private control	0.15	(0.36)	-0.35												
2 Dispersed control	0.44	(0.50)	-0.74	-0.37											
3 Administrative expense ratio	0.61	(37.88)	0.01	-0.01	-0.01										
4 Subordination relationship	0.81	(0.39)	0.34	-0.59	0.09	0.01									
5 Return on assets	0.02	(0.08)	-0.07	0.05	0.03	-0.01	-0.07								
6 Labour productivity	233.05	(794.51)	0.03	-0.01	-0.02	-0.00	-0.01	0.10							
7 State ownership	0.27	(0.41)	0.61	-0.25	-0.43	0.01	0.25	-0.10	-0.00						
8 Firm age	28.06	(72.76)	0.06	-0.04	-0.03	-0.00	0.05	-0.02	0.01	0.04					
9 Log of assets (firm size)	11.24	(1.63)	0.43	-0.23	-0.23	0.01	0.20	0.01	0.12	0.29	0.06				
10 Debt-to-equity ratio	2.72	(136.00)	-0.01	0.01	0.01	0.00	-0.01	-0.00	0.00	-0.05	0.00	-0.00			
11 Capital intensity	98.02	(1,737.46)	0.03	-0.01	-0.02	0.00	0.01	-0.00	0.82	0.03	0.00	0.04	-0.00		
12 Change in legal representative	0.33	(0.47)	0.07	0.02	-0.08	0.01	-0.08	-0.03	0.03	0.03	0.01	0.03	0.01	0.02	

Note:

* Correlations with absolute value greater than or equal to 0.018 are significant at the 0.05 level.

Table 2 gives the results from our baseline fixed-effects regression for testing the four dependent variables: the administrative expense ratio, subordination relationship, total ROA, and labour productivity. Columns (1)–(4) are the baseline regressions that focus on the effects of control rights on firm agency costs and firm performance. To further study whether reduced agency costs are indeed the mechanisms by which transformed firms improve their performance, we include the two agency costs in the explanatory variable list, with the estimation results shown in columns (5) and (6).

Hypotheses 1 and 2 predict that transformed SOEs with dispersed control or with private control will outperform those that remain state-controlled. As shown in column (1) in Table 2, the total return on asset is higher for these firms compared to the transformed SOEs that are under state control, and the effects are positive and significant, thus supporting Hypotheses 1 and 2. Column (2) uses labour productivity as an additional performance measure. The effects of both private and dispersed controls are significantly positive, providing further support for Hypotheses 1 and 2. Hypotheses 3 and 4 state that transformed SOEs with dispersed control or with private control will also reduce agency costs as compared to transformed SOEs that are under state control. The results in column (3) do not provide support to these two hypotheses. The results in column (4), however, are negative and significant, suggesting that the likelihood of having a subordination relationship decreases with a dispersed or private control mode, relative to a state control mode. Columns (5) and (6) in Table 2 include the two agency costs among the explanatory variables in the two performance regressions. As predicted by the theory, higher agency costs are shown to hurt firm performance. Thus, the lower agency costs after transformation [columns (3) and (4)] will lead to better firm performance. Furthermore, with the inclusion of the agency cost variables, the effects of both dispersed control and private control on firm performance all decreased in magnitude. This supports the hypotheses that reduced agency costs are indeed the mechanisms through which firms improve their performance.

Furthermore, we want to draw attention to the differences between the effects of private control and those of dispersed control. When the two specific agency cost variables (no subordination relationship and administrative costs) are not controlled for [see columns (1) and (2) in Table 2], the private control mode's positive effects on firm performance are significantly larger than those of the dispersed control mode based on the *F*-test. However, when the two agency mechanisms are taken into account [see columns (5) and (6) in Table 2], the two control modes have more similar positive effects on firm performance. In other words, although the private control mode and the dispersed control mode share a common positive impact on firm performance, the larger positive effect accompanying the private control mode can be explained by the lower probability of the firm having a subordination relationship with the government [see column (4) in Table 2].

Table 2. Results from the fixed-effects regression†

<i>Variable</i>	(1)	(2)	(3)	(4)	(5)	(6)
	<i>ROA</i>	<i>Labour productivity</i>	<i>Administrative expense ratio</i>	<i>Subordination relationship</i>	<i>ROA</i>	<i>Labour productivity</i>
Private control†	0.012** (0.00)	39.70** (15.46)	-0.94 (1.31)	-0.66** (0.01)	0.01† (0.00)	22.62† (18.00)
Dispersed control†	0.005* (0.00)	19.53* (11.86)	-0.77 (1.01)	-0.09** (0.01)	0.00* (0.00)	17.13† (11.93)
Administrative expense ratio†					-0.00 (0.00)	-0.14† (0.11)
No subordination relationship†					-0.01** (0.00)	-25.72* (13.99)
State ownership	-0.02** (0.00)	-73.26** (13.24)	0.20 (1.12)	0.03** (0.01)	-0.02** (0.00)	-72.52** (13.25)
Firm age	-0.00 (0.00)	-0.17** (0.06)	-0.00 (0.00)	0.00** (0.00)	-0.00 (0.00)	-0.17** (0.06)
Log of assets (firm size)	0.003** (0.00)	50.47** (2.91)	0.04 (0.25)	0.01** (0.00)	0.003** (0.00)	50.63** (2.91)
Debt-to-equity ratio	-0.00 (0.00)	-0.000 (0.03)	0.000 (0.00)	0.00 (0.00)	-0.00 (0.00)	-0.00 (0.03)
Capital intensity	0.00 (0.00)	0.37** (0.00)	0.00 (0.00)	-0.00 (0.00)	0.00 (0.00)	0.37** (0.00)

Change in legal representative	-0.01**	-4.35	0.89	0.03**	-0.01**	-4.99
	(0.00)	(9.43)	(0.80)	(0.01)	(0.00)	(9.44)
Year 01	0.01	-3.22	-0.19	-0.04**	0.00	-4.21
	(0.00)	(18.93)	(1.61)	(0.01)	(0.00)	(18.94)
Year 02	0.01*	2.32	-0.17	-0.04**	0.01†	1.33
	(0.00)	(18.41)	(1.56)	(0.01)	(0.00)	(18.41)
Year 03	0.01	26.70	-0.20	-0.04**	0.01	25.68
	(0.00)	(18.02)	(1.53)	(0.01)	(0.00)	(18.03)
Year 04	0.01*	66.99**	1.36	-0.16**	0.01	63.08**
	(0.00)	(17.96)	(1.52)	(0.01)	(0.00)	(18.10)
Year 05	0.01*	104.83**	-0.29	-0.13**	0.01†	101.49**
	(0.00)	(18.01)	(1.53)	(0.01)	(0.00)	(18.10)
Constant	-0.004	-77.82**	-0.45	0.96**	-0.00	-75.54**
	(0.00)	(14.82)	(1.26)	(0.03)	(0.00)	(14.88)
Observations	11,117	11,117	11,117	11,117	11,117	11,117
R-squared	0.01	0.68	0.001	0.40	0.02	0.69

Notes:

† $P \leq 0.10$; * $P \leq 0.05$; ** $P \leq 0.01$.

‡ One-tail significance test is applied.

Standard errors in parentheses.

ROA, return on assets.

To further validate our results, we conduct various robustness tests. We first ran statistical tests to assess whether the estimates for the control mode variables (private control and dispersed control) are different in the ROA and productivity models with and without administrative costs and subordination relationship. The results show that the estimated coefficients for private control and dispersed control are significantly different from each other in Models 1, 2, and 4 (at 10 percent significance level), but not significantly different in the other models. These results further support the argument that the different effects of private control and dispersed control are due to their different effects on administrative costs and subordination relationship.

We also included the interaction terms between firm size and control modes to address the possibility that large firms are both more likely to be controlled by the state and the government support to these firms may help their performance. We find that the previous findings remain largely unchanged, with the following exception. The interaction term between firm size and controlled modes have positive and significant effects on firms' labour productivity. In other words, large firms that have private control or dispersed control tend to have higher labour productivity. This is further evidence that private and dispersed control modes have beneficial effects on firm performance.

Lastly, we include another set of additional variables to capture the possible effect of foreign share. We find that the addition of company shares owned by the Hong Kong, Macau, and Taiwan (HMT) investors and other foreign investors does not change the previous results. This testifies to the robustness of our results.

DISCUSSION

A major challenge facing all transition economies is how to overcome the inherent inefficiencies of state business assets. SOE transformation in China has followed an approach of 'the establishment of a more clearly defined property rights structure of multiple ownerships with public ownership as the core . . .' (Wu, 1997: 1239). We have explored the research question of whether continuing state-control rights affect the outcomes of transformed SOEs. The results suggest that when SOE transformation leads to control rights change to non-state-controlled modes (dispersed or privately controlled modes); non-state owners are likely to place stricter efficiency demands on the agents or managers than the state, resulting in enhanced performance and reduced agency costs. Our findings support the argument that control modes are an important factor affecting transformation outcomes.

In this study, we extend agency theory to the study of SOE transformation in a transition economy by showing that state withdrawal is important to enhance the relative performance of state property. Previous studies have used more transparent organizational variables such as ownership type to predict organizational

performance. Our study provides complementary insights by using a less transparent variable – control modes, which provide fresh insights by distinguishing the three control modes (state-controlled, dispersedly controlled, and privately controlled) to understand transformation outcomes. Our findings suggest that examining the general effect of SOE transformation without differentiating control or shareholders' demand does not tell us much, and may even be misleading. The key to understanding performance consequences rests on who holds the control rights after the transformation. Our findings suggest that both privately and dispersedly controlled structures positively influence firm performance in terms of both ROA and labour productivity. In addition, the results show that the non-state control modes are more likely to abandon the subordination relationship, leading to better performance than the state control mode.

Policy makers and researchers drawing from the property rights perspective believe that corporatization can effectively transform SOEs into efficient and competitive entities (Xiang, 1998; Zhu, 1999). When SOEs are corporatized into legal entities such as limited liability or shareholding firms, state ownership in the transformed firms is legally separated from the state bureaucracy. As a consequence, the state becomes a shareholder of the transformed firms and no longer bears unlimited liability (Xiang, 1998). In practice, government agencies at various levels exercise *de facto* ownership rights over transformed SOEs. Although researchers from the property rights perspective also advocate direct privatization because private ownership is the most high-powered incentive instrument (e.g., Grossman & Hart, 1986), when mass privatization is not possible, this view predicts that maintaining the *de jure* status of SOEs, while giving the manager more control and residual claim rights, may enhance state ownership performance (Li et al., 2000). Since transformation aims to marketize SOEs (to shift away from the central planning) in an attempt to push organizational operations based on market competition, one proposition is that the transformation in general may have a positive influence on firm performance. This line of reasoning suggests that transformed SOEs may outperform traditional SOEs without state withdrawal.

Our results suggest that if the state withdraws its control rights, the transformation outcomes can be further improved. The reluctance of state withdrawal to embrace direct privatization in earlier years was partly the result of practical considerations. Scholars have traditionally argued that mass privatization in China is constrained by the SOE burdens of social welfare responsibilities, substantial overcapacity, surplus labour, and heavy debt (Lin, Cai, & Li, 1998; Ramamurti, 2000). It is extremely difficult to adopt a sufficiently large privatization programme when it is coupled with the danger of social turmoil (McMillan & Naughton, 1992; Megginson & Netter, 2001). The political unrest would come about by dramatic privatization and losses of jobs by too many people too rapidly.

However, researchers have also argued that transformed SOEs with state control may result in emergent agency problems (Chan et al., 2007; Zhu, 1999)

and poor firm performance (Xu & Wang, 1999). Even in transformed SOEs, managerial behaviours are still constrained by state agencies to abandon some social burdens or resolve the traditional government-SOE manager agency problems. These may explain why the financial outcome of state-controlled firms was not satisfactory, at least in the first half of the 2000s, as shown in our results. Thus, the state control mode is questionable if the end is to enhance firm performance rather than merely change the status of state property.

Consistent with our findings, in a recent study of SOE transformation through corporatization and stock-market listing, Zhang (2004) found that the transformation failed to significantly improve the performance of the SOEs. Wei et al. (2005) found that government retention of significant ownership in privatized SOEs actually decreased firm value in terms of Tobin's Q. The implications are clear: the important issue is not whether corporatization works, but rather whether or not the state maintains control after the transformation. The results imply that more privatized versions of corporatization may be a viable path to better resolve the inefficiency problems of SOEs in China. We conclude that transformed SOEs with non-state control modes, rather than state control modes, brings a competitive edge, reduces state interferences, and hardens the budget constraints on managers.

Our findings also provide insight for multinational corporations (MNCs) doing business in China or contemplating entering China. MNCs must consider country-specific institutional characteristics when choosing joint venture partners. Transformed firms with continuing state control are likely to perform poorly. MNCs also need to have a longer-term perspective about trends of SOE transformation in China since this process appears to follow a 'trial and error' path. In addition, different agency problems exist in both traditional SOEs and transformed firms. SOE transformation clearly separates ownership from control, which also creates a new situation conducive to 'managerial opportunism' due to informational asymmetry. The need for managerial autonomy as a solution of the inefficiency problems of state property may also increase the probability of moral hazards. If our conclusions are correct, an increased pace of state withdrawal from business operations may create more opportunities for foreign investments. In order to capitalize on these opportunities, MNCs should be equipped with the capacity to evaluate firm performance by type of control rights and to estimate performance gains during the SOE transformation process.

Limitations and Future Research Directions

This study has several limitations that call for additional studies. First, although we have used an agency-theory-based approach, other theoretical perspectives can also shed insights into the state control/withdraw issue. For example, different

ownerships have idiosyncratic abilities to enjoy a transaction cost advantage (Nee, 1992), to benefit from changes in the institutional environment (Tucker, Singh, & Meinhard, 1990), and to control contractual and contextual uncertainties (Ghoshal & Nohria, 1993; Miller, 1988). Such differences may affect a firm's governance structure, asset specialty, and resource dispersal in a dynamic environment (Williamson, 1975). Researchers suggest that changes in the institutional environment stemming from the spread of markets and the changing structure of property rights increasingly favour private organizations (Tan, 2002; Tan et al., 2007). The idea that traditional SOEs must be transformed because they are inherently inefficient is hardly controversial. Future research from alternative perspectives may broaden our knowledge about how the structure of control rights affects the outcomes of transformed SOEs.

Second, because of data limitations, we tested the hypotheses based only on the manufacturing industries between 2000 and 2005, which are relatively less controlled by the government as compared to some service industries, such as financial institutions, telecommunications, and insurance. Given that China's industries vary in terms of marketization and state interference, SOE transformation may be more difficult in these service industries. Whether the results are applicable to more state-controlled service industries awaits further investigation. Although our 6 year longitudinal approach provides useful performance evidence regarding the outcome of transformed SOEs with various control modes, future studies should look at longer time periods to examine the performance of non-state-controlled forms. A longitudinal approach focusing on performance improvements after the transformation is useful to evaluate profitability in association with state withdrawal over time.

Finally, we bring attention to the issue of the convoluted ownership structure among the asset management companies in the state sector. The all-powerful State Asset Supervision and Administration Commission (SASAC) of China oversees some RMB 18 trillion (about US\$3 trillion) state-controlled assets with many complicated ownership and control structures (Li, 2009; Wang, Guthrie, & Xiao, forthcoming). Of these assets, some are wholly owned by the state, some are eclectically put together to achieve a specific goal of the SASAC, and some may be sold, privatized, or written off. The SASAC has issued more than 300 decrees, which are sometimes contradictory, to regulate and control this vast asset. Thus we would argue that our study indicates that the messy structure of state-controlled assets is one of the main reasons for their poor performance. Interestingly, a new study by Wang et al. (forthcoming) shows that state firms under the SASAC supervision improved performance as compared to the old state firms. This finding signifies that more attention is needed to this understudies phenomenon. For example, we should further classify the types of ownership and control modes within this broad category of state-controlled assets and examine in more detail their effects on governance and performance.

CONCLUSION

In transition economics such as China, although many SOEs have been transformed, different control modes have important but unexplored implications for post-transformation performance. Our study has filled this void and provides evidence indicating that poorer performance is associated with transformation without the state withdrawing its control rights. This finding is useful for decision makers to consider the ongoing transformation of SOEs across transition economies. We hope that the three modes of control identified in our study may benefit researchers to further advance our understanding and future theory development regarding SOE transformation.

NOTE

- [1] We realize that SOEs under the SASAC (State-Owned Assets Supervision and Administration Commission of the State Council) have overall high profitability in recent years. But this is primarily due to the extremely large firms that either enjoy preferential treatment by the government or operate in government-controlled industries. For instance, the Chinese government explicitly states that it must maintain 'absolute control' over the following seven industries: defence, electricity production and distribution, petrochemical, telecommunication, coal, civil aviation, transportation, and shipping. In 2006, official statistics showed that the state-owned enterprises in those controlled industries achieved the highest profit growth in China, accounting for 86 percent of total profits made by all state-owned enterprises. The raw material and energy industries had about 50 percent profit growth in the first 5 months of 2006 (Nanfangwang, 2006; Xinhuashe, 2006).

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