

## **How Much “State” is in China’s State Enterprises? A Case Study of ZTE Corporation in an Era of Reform**

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### **Abstract**

There has been much debate about the role of the Chinese state, especially the efficacy of its state enterprises. This debate has been complicated by China’s state enterprise reform that produced a variety of state enterprises the characteristics of which challenge conventional definitions of such enterprises. By examining closely a major enterprise, ZTE Corporation, insights can be gained regarding a type of state enterprise, referred to as a “state holding enterprise”. Reform experiments have produced progressive reduction in state ownership without commensurate diminution of state control. Yet this control is only lightly exercised through ensuring compliance with state strategies. Corporate strategizing and management have been left in the hands of professional managers while even the board of directors is composed of company veterans. At the same time, links with the state has brought the Corporation a range of benefits from finance to preferential access to business opportunities. Whether it is state-control or government preferences which brought sustained profitability to the Corporation remains an open question. However, its track record of innovation, manifested through the number of patent applications, suggests that the quality of management did play an important role.

**Keywords:** *State enterprises, ownership, control, China*

### **1. Introduction**

The state has played a dominant role since the establishment of the People’s Republic of China in 1949, with this role fulfilled by state enterprises since 1978. Reform of state enterprises was a central area of reform in the country’s transformation towards a socialist market economy. One product of

this reform is that it is very hard to characterize a state enterprise in China today. Some enterprises are 100% owned by the state, while others are partially owned with varying degrees of state control. Some are held by a state enterprise which is a subsidiary of another state enterprise. In addition, there are enterprises over which the state has control despite having less than a controlling ownership share. Because of the complicated ownership of these enterprises, as well as an unclear link between ownership and control, characterizing state enterprises is not a simple matter.

This situation raises questions that have implications for both the applicability of theory as well as the meaning of state enterprise as currently understood. The western concept of public enterprise is defined by ownership, whether in whole or in part, by the state. Through ownership, control is exercised. To the extent it is the latter which really matters for the state, two related questions are, first, how control is exercised, and second, how does this control affect enterprise performance. Existing theories answer the latter question by pointing to the inferior performance of state enterprises compared to their private counterparts.

Gaining insights into the above issues in the China context is the overarching objective of this paper. The specific objectives are to: (1) clarify the meaning of state and state enterprise in the Chinese context, (2) assess the applicability of extant Western theories of public enterprise in light of (1) above, (3) link the complexity of Chinese state enterprises ownership and control and performance to the reforms that brought the situation about, and (4) view all the above through analyzing the case of ZTE Corporation, a large enterprise officially classified as a “state-holding enterprise”.

In the next section, we provide through a brief literature review the extant theoretical framework underlying this paper, making the case that the Chinese state does not necessarily conform to this framework. A review of China’s state enterprise reform that has produced the types of enterprises today is undertaken in section 3. Using a case study approach, we profile in section 4 ZTE Corporation, relating its development to the reforms mentioned earlier. The discussion is centred on the evolution of the magnitude and nature of state ownership and control. How these links with the state impact enterprise performance is the subject of section 5. The concluding section 6 draws together the main findings and highlights several implications, including for the application of existing theories.

## **2. Theoretical Underpinnings: Contestations of the Role of the Chinese State**

Western models have been extensively applied to China’s state sector. These models, based on agency theory, property rights theory, public choice theory

and neoliberalism, argue against state ownership of enterprises. Agency theory postulated that there would be interest conflicts between the principal and the agent if their interests diverged (Bebchuk and Fried, 2004). Property rights theory implied that the more direct and strengthened were the rights to the property, the better its assets would be used (Alchian and Demsetz, 1973). Public choice theory then argued that when politicians and government officials represented the state to manage public resources, they would give priority to their own interests instead of public interests that state enterprises were to cater to (Tullock, 1987). Finally, neoliberalism emphasizes the efficiency of private enterprises since private sectors face competition and open markets both of which lead to efficiency.

The above four economic theories suggested privatization of state enterprises as the appropriate strategy in the economic development of a nation. If privatization was adopted by state enterprise according to above theories, the enterprise would be much more efficient. Thus, mainstream theories combine to argue for decreased state involvement in order to realize better enterprise performance.

However, the four preceding theories have limited applicability to China, which has lived under a social and political system quite unlike the modern (Western) notion of a nation state against which these theories had been framed. However, other Western theories have partial relevance for China's state enterprises. One is the concept of "economic embeddedness" in which it is argued that human economy was always embedded in society (Granovetter, 1985). The term "embeddedness" expresses the idea that the economy was not autonomous as it was assumed in economic theory, but subordinated to politics, religion, and social relations. Contrary to the market liberalism's view that the state was "outside" of the economy, the state is part of society (Polanyi, 1957).

Another is market socialism, where a socialist state owns the means of production but the prices of commodities are determined by the free market (Buchanan, 1985; Gregory and Stuart, 2004). China is referred to officially as a socialist market economy which stemmed from the Chinese economic reform introduced by Deng Xiaoping. Also called "socialism with Chinese characteristics" (Deng, 1984), it was defined as "a multi-ownership-oriented basic market economic system, with the public ownership in the dominance" (*People's Daily Online*, 2007). When China began its reform, it felt that it could combine socialism with elements of the market economy (Bremmer, 2009; *The Economist*, 2012). As explained later, China's state enterprises are examples of this approach.

Features of the developmental state also apply to China. A developmental state is a state that follows a state-designed development path that favours state interventionism over a liberal open market (Leftwich, 1994).

The developmental state was conceptually positioned between a liberal open economy and a central planned model. So it was neither capitalist nor socialist. The China model of development also relies heavily on a proactive state role. This role is not unique to China, being an essential characteristic of the developmental state like Japan (Leftwich, 1995). What is different for China is that the respective states (Japan, Korea) intervened in the market to promote private sector enterprises (*The Economist*, 1997), the Chinese state supported its own enterprises to promote growth – the so-called “state-led model”.

Scholars, especially historians, have argued that China, while adapting to new circumstances, always looks back to its own history in seeking solutions to problems and challenges. Wang (2014) described how the May 4th Movement of 1919 became a reference point for subsequent movements and reforms. This is because it can draw lessons from over two millennia of history. Also the Chinese state’s boundaries are boundaries of China’s civilization, not just political delineations. So the state and institutions exist to make sure its civilization survives. This is why the Chinese state was said to be a civilization state (Jacques, 2011). China’s civilization was heavily influenced by Confucianism which was not democratic but hierarchical by tradition (Dawson, 2005), depended on an orderly structured society, and emphasize a code of behaviour over individual rights (Li, 1997).

Like the four theories before them, the above four theories of the Chinese state stress the importance of the role of the state and argues for the preservation of that role. Clearly, the Chinese assumption is diametrically opposed to that of mainstream Western theories considered applicable to public enterprises.

An increasing number of empirical studies of state enterprises now support this view (Ren, Zeng and Krabbendam, 2010; Woetzel, 2008; Zheng, Liu and Bigsten, 2003). These recent studies represent a major reversal of early empirical studies up to the 1990s which confirmed theoretical expectations about loss-making state enterprises. What accounted for this change? The answer lies in a series of major reforms state enterprises went through, discussed next.

### **3. China’s State Enterprises Reform**

Since the open door policy was adopted in 1978, the reform of the Chinese economy towards what Deng Xiaoping called “socialism with Chinese characteristics” followed a path that was in many respects unique. This uniqueness stemmed as much from the fact that it was gradual, pragmatic and experimental as from the simultaneous promotion of a non-state sector made up of private enterprises, foreign invested enterprises and

collectives alongside a large state enterprise sector undergoing reform. “Corporatization” was introduced to enhance the efficiency of the state enterprise while retaining the dominant position of the state, with larger autonomy for enterprise management to benefit from managerial incentives. At the same time, 100% state ownership was gradually transformed into a shareholding system of majority state shareholding with minority private equity participation (Cao, 2000).

Before China’s economic reforms in 1978, the state controlled the whole economy; all enterprises were owned and managed by the state, with planned pricing instead of market pricing. This system resulted in the loss of incentive to perform with poor performance the result (Groves, Hong, McMillan and Naughton, 1994). State enterprise reform took two main tracks – improvement of cooperate governance by better monitoring and giving incentives to employees, and reducing the proportion of state ownership (Boubakri, Cosset and Guedhami, 2009).

Corporate governance reforms were sequentially implemented. In the Third Plenary Session of the Eleventh National Congress in December 1978, it was announced that the management autonomy of state enterprises would be expanded by linking managers’ performance to their rewards. This was to be achieved in two ways. The first was increasing autonomy with respect to production plans which gave managers more rights in setting prices and wages, hiring and firing employees, investing of fixed capital and in foreign trade through a profit retention scheme. The second was linking profits or losses of state enterprises to employees’ benefits, with managers allowed to share part of enterprise profits.

This reform consisted of several major initiatives. 1984 saw the dissociation of state enterprises from the government and the separation of ownership rights and control rights. In January 1987, the contract responsibility system under which managers were allowed to share part of the profits was launched (Wang, 2004). After the contract was signed, the manager became the legal representative of the state enterprise and was responsible for its profits and losses. In November 1993, the Third Plenary Session of the Fourteenth National Congress set the target that enterprises would be legal entities in a modern enterprise system. Together with the corporatization of state enterprises, a corporate governance structure was adopted (Zhou and Xia, 2008).

In 2005, the China Securities Regulatory Commission (CSRC) allowed state enterprises listed on China’s stock exchanges (see below) to set up equity incentive plans under stringent conditions (China Securities Regulatory Commission, 2005). These conditions included precise definitions of the nature and quantum of incentives, which employees were to be recipients, the proportion of the general capital allocated to incentive payments, and the

lock-up period of the incentive equity. Thus, China's corporate governance reform has sought to link managerial incentives to enterprise's performance.

Governance reforms were accompanied by ownership reforms. In 1986, the state was motivated to introduce a joint-ownership system to state enterprises. Under these latter reforms, state enterprises would see state ownership progressively reduced, some becoming joint-stock enterprises through listing, foreign investment joint or intersect holdings (Zhou and Xia, 2008).

From 1987, state enterprises were equitized. In 1990 and 1991 respectively, the Shanghai and Shenzhen Stock Exchanges were founded to allow listing of state enterprises. Next, shares in listed enterprises were separated into tradable shares and non-tradable shares. The state and "legal persons" (legal entities like the state, statutory bodies and corporations) held non-tradable shares which gave the government unchallenged control over the listed enterprises. In contrast, tradable shares were open for trading in the two Stock Exchanges and owned by institutional and individual shareholders.

However, one outcome of this reform was conflict between holders of non-tradable shares and tradable shares. Since earnings of non-tradable shares were not influenced by the share price and the enterprise's valuation, enterprise managers could pursue their own interest instead of that of the enterprises and thereby harm the interests of holders of tradable shares. This did indeed occur – diversion of enterprise assets and profits by the former resulted not only in losses to tradable shareholders but also affected investor confidence in Chinese capital markets (Jiang and Habib, 2012). An early effort by the state to reduce the number of non-tradable shares by selling them on the stock markets was unsuccessful on account of the poor response from these markets and had to be abandoned.

To deal with the split share issue, a pilot program was launched in March 2006 which resulted in some non-tradable shares being converted into tradable shares. However, the initial flood of these shares into the stock markets caused considerable instability (*China Daily*, 2005). To stabilize the situation, the State-owned Assets Supervision and Administration Commission (SASAC), formed in 2005 to oversee state assets, stipulated that state-holding enterprises had to maintain a minimum state-share proportion, while enterprises in strategic industries, those crucial to the country's security, such as finance and banking, telecommunications and transportation, needed to retain sufficient proportions of non-tradable shares to maintain state control. Hence, state shareholders who sold down to below these requirements needed to buy back shares through the share market to meet SASAC requirements (China Securities Regulatory Commission, 2005).

Further, on 4 September 2005, the CSRC promulgated "the share-trading reform of listed enterprises regulations" to eliminate interest conflicts between

holders of tradable shares and non-tradable shares. Under these regulations, changes in the status of non-tradable shares had to be approved by at least two-thirds of all holders of non-tradable shares, while holders of tradable shares needed also to be consulted. Whatever was agreed had to be approved by the appropriate SASAC. Once approval was obtained, the Board of that enterprise had to convene a meeting of all shareholders to endorse the scheme.

With these institutional arrangements in place, the trend towards more tradable shares accelerated, so that by 2014, only a tenth of state enterprise shares were non-tradable (Table 1).

The above reforms have produced what official sources refer to as three types of state-owned enterprises today, only one of which fits the public enterprise stereotype in western economics. The first type consists of enterprises 100% owned by the state – state-owned enterprises, state-owned corporations and state legal person joint ownership enterprises. The second type, referred to as state-holding enterprises, are those in which the state has majority ownership (capital or share) (more than 50%), or have the highest ownership among other shareholders with the same enterprise even if it is a minority shareholder (less than 50%), or where the state exercises control through other state-controlled shareholders. The third type, referred to as state joint-ownership enterprises, consists of those in which the state has minority ownership and exercises no control (National Bureau of Statistics of China, 2008).<sup>1</sup> An enterprise that state legal persons joints ownership with other legal

**Table 1** Tradable and Non-tradable Shares in China's Share Markets (2004-2014)

	<i>Total Issued Shares (billion)</i>	<i>Tradable Shares (billion)</i>	<i>% of Shares Tradable</i>
2004	714.94	257.71	36.05
2005	762.95	291.48	38.20
2006	1489.76	563.78	37.84
2007	2241.69	1033.15	46.09
2008	2452.29	1257.89	51.29
2009	2616.29	1975.95	75.52
2010	3318.44	2564.20	77.27
2011	3609.55	2885.03	79.93
2012	3839.50	3133.96	81.62
2013	4056.91	3674.42	90.57
2014	4361.01	3910.43	89.67

Source: China Securities Regulatory Commission (2015). Securities market yearly data. Retrieved from <<http://www.csrc.gov.cn/pub/newsite/sjtj/zqscy/>>.

person or state joint share enterprises could be defined as state-holding or state joint-ownership enterprises according to the specific definition above.

State enterprises are also classified based on administrative institution/control. Thus, they are distinguished between the central government's "central enterprises" ("*Yangqi*") directly under the supervision of the State-owned Assets Supervision and Administration Commission (SASAC) and provincial/local state enterprises supervised by lower level SASACs. Considered to be central to the nation and economy, central state enterprises are involved in electric power and power grid, telecommunications, coal, civil aviation, shipping, petroleum and petrochemical. According to SASAC, as of 30 June 2010, the total number of "Yang Qi" was 125 of which 113 were 100% state-owned. The subsidiaries of "Yang Qi" are classified as primary, secondary, tertiary and lower-tier subsidiaries. Primary subsidiaries are the subsidiaries directly subordinate to the "Yang Qi". Secondary subsidiaries are affiliated to primary subsidiaries. By analogy, lower-tier subsidiaries are subordinate to their parent enterprises. It is also needed to be highlighted that there are two social service organizations managed by the state like a corporation (State-owned Assets Supervision and Administration Commission, 2010). They represent a form of institution that is engaged in education, technology, health, culture, etc., initiated by the state for social welfare and funded by state assets. However, according to regulations from the State Council, they are akin to but distinguished from Non-Governmental Organization (NGO) or Non-Profit Organization (NPO) not only because they were not just established but also supervised by government institutions, and they can also engage in for-profit activities or set up subsidiaries (just like For-Profit Organization) (State Council, 2004).

Also distinguishable as a group are the financial institutions, all strategic enterprises, which are supervised by the People's Bank of China (PBC), the China Banking Regulatory Commission (CBRC), the China Securities Regulatory Commission (CSRC), the China Insurance Regulatory Commission (CIRC) and the State Administration of Foreign Exchange (SAFE). All remaining state enterprises are supervised by other departments under the State Council or collective organizations, and involved industries included tobacco, gold, railway, port, airport, radio and television, culture, publishing and other industries. Social service organizations also exist under these enterprises.

#### **4. A State Enterprise in Transition – ZTE Corporation**

Given the variety of state enterprises, efforts to classify them are futile. The approach here is to rely on a case study. Methodologically part of ethnography, case studies permit deep insights into issues and is also appropriate in situations where it was impossible to separate the phenomenon from its



context, as indeed is the case of state enterprises under continuous reform (Yin, 2009).

To ensure significance, the case selected needs to be important by virtue of its scale of operations or its contribution to national strategy. These criteria led to the selection of ZTE Corporation (ZTE), a major manufacturer of electronic communications equipment (ZTE Corporation, 2016a). From the government's perspective, it, together with firms like Huawei Technology Co. Ltd., spearheads the country's drive to upgrade national technological capability under the Medium and Long-term Plan for Science and Technology Development 2006-2020.

ZTE Corporation is officially classified as a state-holding company – the state, though a minority shareholder, is the largest shareholder among all shareholders, and it also exercises control through its holding company – ZTE Holdings. Its corporate history, divisible into phases, is an eloquent documentary of the progress of state enterprise reform. The period from its formation in 1985 as the Shenzhen Zhongxing Semiconductor Co. Ltd. to about 1992 marked its first phase.

As the workshop director and the chief technology officer of the state military industry enterprise Aerospace System 691 Factory, Hong Weigui was selected as the enterprise's representative to go to the Shenzhen Special Economic Zone to look for partners to form a new technology enterprise. In May 1985, with the approval of the Shenzhen government, Shenzhen Zhongxing Semiconductor Co. Ltd. was founded with Hong Kong's Yunxing Electronics Trading Company as the foreign partner, and two state enterprises, China Great Wall Industry Corporation Shenzhen Branch (now merged into Shenzhen Aerospace Guangyu Industry (Group) Corporation) and Aerospace System 691 Factory, as equity owners. With registered capital of 2,800,000 Yuan and 66% of ownership from Aerospace System 691 Factory, the new company appointed Hong Weigui president. The contract responsibility system was adopted when the Board chose one of the three main shareholders to take the operating responsibility through a contract against which its share capital and dividends were pledged. In December 1992, a group of technicians and managers from Shenzhen Zhongxing Semiconductor Co. Ltd. incorporated a private enterprise Shenzhen Zhongxing Weixiantong Equipment Co. Ltd. with registered capital of 3,000,000 Yuan. This company would have a significant role to play in ZTE Corporation's development. It should also be noted that while Shenzhen Zhongxing Weixiantong Equipment Co. Ltd. was legally a private enterprise, its owners were employees of a state enterprise. As will be demonstrated later, this ownership pattern has major implications for ownership and control.

The second phase began with the enterprise's transformation into the Shenzhen ZTE Holdings and lasted just three years until 1996. In March

1993, Zhongxing Weixiantong Equipment Co. Ltd. merged with two state enterprises – Shenzhen Aerospace Guangyu Industry (Group) Corporation and Aerospace System 691 Factory to form a joint venture company “Shenzhen ZTE Holdings” with the state owning 51% of shares. It was run by Zhongxing Weixiantong Equipment Co. Ltd. and owned by both state and private parties. Thus Shenzhen ZTE Holdings is an example of the “state holding and private operating” system in which the state as owner delegated management to a private shareholder but the private shareholder had to pledge its share rights. State ownership with private management occurred with state enterprise reform to loosen ownership but retain control. In 1995, Shenzhen ZTE Holdings began its internationalization strategy.

Phase 3 (1997-2003) saw the enterprise listing on the Shenzhen Stock Exchange. On 18 November 1997, Shenzhen ZTE Holdings incorporated Shenzhen ZTE which issued 65,000,000 shares with a price of 6.81 Yuan per share as its initial public offering at Shenzhen Stock Exchange. It was the first listed Chinese enterprise manufacturing large scale telecommunications equipment. Shenzhen ZTE is thus also an example of a state enterprise listing to tap outside capital and at the same time subjecting itself to the discipline of the market.

It was in this period that Shenzhen ZTE’s technological potential was recognized by the government. In 1998, the State Economic and Trade Commission identified Shenzhen ZTE as one of the national technology centres, rendering it eligible for preferential treatment in the form of duty-free import of new technologies, instruments, and materials for R&D (Lian, 2012). Tax exemptions and relief were also accorded to expenditures for pilot projects and fixed assets investment for science and technology facilities. But the last two were terminated since 2000.<sup>2</sup> As evidence of its growing capability, Shenzhen ZTE cooperated with the Guangzhou Railway Corporation to construct the first home-engineered railway telecommunications system, thus breaking the monopoly held by foreign enterprises in this area.

The last stage focusing on shareholding reform was from June 2003, when Shenzhen ZTE Co. Ltd. was renamed ZTE Corporation to enter the international market, which is also a part of the government strategy of state enterprise reform to build internationally competitive firms. On 9 December 2004, ZTE Corporation was the first A-share listed enterprise (A-shares refer to Yuan-denominated shares which can only be traded in the SSE) which listed in the Hong Kong Stock Exchange and issued H-shares (Hong Kong dollar 3.1 billion denominated shares listed in Hong Kong).

In accordance with the shareholding reform mentioned earlier, “Directions for ZTE Corporation’s split share reform” was announced by the Board on 23 November 2005 and adopted by ZTE Corporation on 25 December 2005.

Because seven state-holding enterprises were state legal person shareholders, SASAC's review and approval of this proposal was required (Shenzhen Stock Exchange, 2005).

The non-tradable shares could not be traded or transferred in the first 12 months of their issue, no more than 5% of the general share capital from ZTE Holdings could be circulated after 12 months, 10% after 24 months and 37.41% after 36 months. Further ownership protection was accorded holders of non-tradable shares through the setting of a higher price than tradable shares when the former became tradable.

In 2006, to support its expansion in the international market, ZTE Corporation transferred competent management staff overseas to support its international expansion (ZTE Corporation, 2016b).

Finally, according to the annual report of ZTE Corporation, with the approval of the CSRC, the first phase of equity incentive plans for employees was implemented on 13 March 2007, and 85,050,238 shares were allotted to 4,022 qualified employees. This step could be seen as using incentives to boost employees' performance.

## **5. Ownership, Control and Governance**

Changes in the ownership structure have major implications for the degree of state ownership, while the institution of split shares has a major bearing on control. How this control is exercised has to do with governance of the enterprise. And all these factors affect ZTE Corporation's performance.

### ***5.1. Ownership Changes***

Table 2 tracks ZTE Corporation's state ownership changes based on milestones in its corporate history. At the end of 1998, state ownership in the form of legal person shares numbered 223,600,000, amounting to 68.80% of the general capital. There was no foreign owned share. The state legal person shares were owned by seven state enterprises, and ZTE Holdings was the holding company with 62.80% of the general capital. Since ZTE Corporation was listed in Hong Kong in 2004, Hong Kong Securities Clearing Company Nominees Limited (HKSCCNL), the foreign shareholder, was the second largest shareholder. Individual owners included top management and other qualified employees who were beneficiaries of the equity incentive scheme. ZTE Holdings held the most shares among state legal person shares; the remaining state legal person shares accounted for only a small proportion (6%) of the total.

With each corporate milestone, state ownership, reflected by the percentage of shares held by state legal persons, diminished. By 2004,

**Table 2** Change in State Ownership of ZTE Corporation (1998-2015)

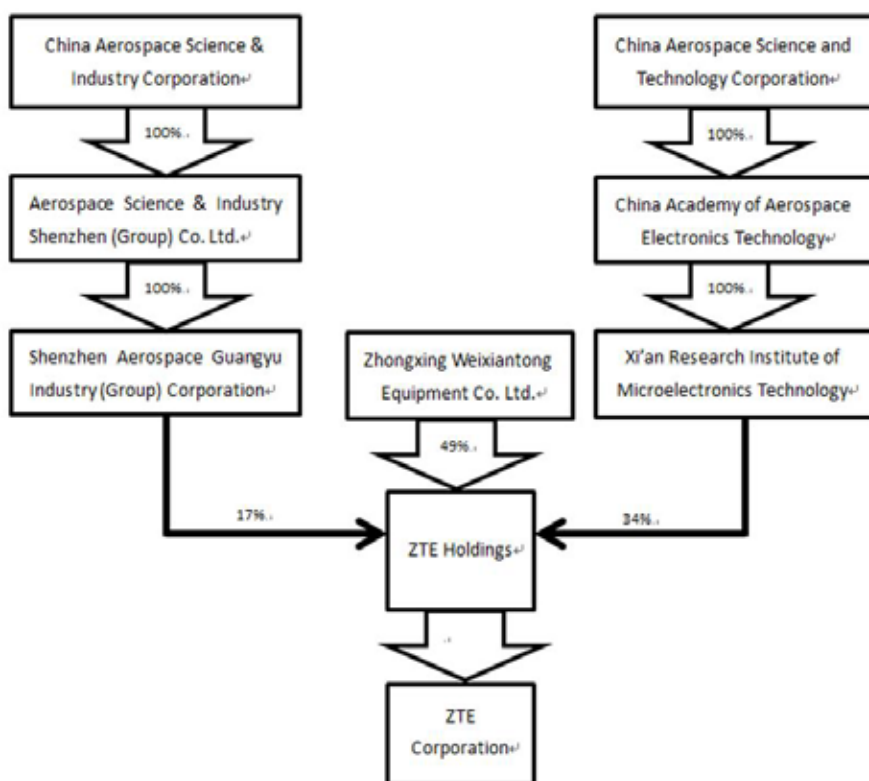
<i>Year</i>	<i>% Shares Held by State Legal Persons</i>	<i>Reason(s) for Change in % of State Ownership</i>	<i>% Shares Held by ZTE Holdings</i>	<i>% Shares Held by HKSCCNL</i>
1998	68.80	Share structure at formation of Shenzhen ZTE Corporation.	62.80	N/A
1999	64.90	Share placing was adopted to all shareholders with total 19,500,000 shares. But state legal person shareholders gave up the placement. As a result, the general capital was increased without the state legal person shares' increases.	59.24	N/A
2001	57.90	Since 13 March 2001, 50,000,000 shares were issued to the public.	52.85	N/A
2004	48.18	ZTE Corporation issued 160,151,040 H-shares which were circulated in at Hong Kong Stock Exchange on December 9. It regulated that the state corporation shareholders had to reduce to hold some shares as the amount as 0.9% of those H-shares.	44.10	14.80
2005	40.86	Since ZTE Corporation adopted the split share structure reform, holders of non-tradable shares paid 2.5 shares for every 10 shares to holders of tradable shares as a sort of compensation.	37.41	16.62
2008	39.07	Through share placement, 58,294,800 H-shares were issued.	35.52	16.66
2009	37.25	85,050,238 shares were granted to 4,022 qualified employees.	33.87	15.89
2010	35.73	58,294,800 H-shares were issued and a warrant call "ZTE ZXCI" exercised the option at the price 42.39 Yuan per share and 21,523,441 A-shares were subscribed successfully.	32.45	18.27
2011	34.04	On 13 June, ZTE Holdings reduced the holding shares of 48,495,000 of ZTE Corporation through Shenzhen Stock Exchange.	30.76	18.27
2015	33.88	A-shares increased to 25,741,682 shares because the employees of equity incentive plans exercised stock options. A-shares increased to 687,508,255 shares because of the implementation of the 2014 annual profit allocation and capital accumulation fund turning into share plan on 17 July 2015.	30.59	18.17

Source: Annual reports of ZTE Corporation (1999-2016).

state ownership had fallen to below 50%, making it no longer a majority shareholder, and, by conventional definition, no longer a state enterprise. Under the Chinese classification, however, ZTE Corporation remains a state-holding enterprise. By 2015, state ownership has fallen to a third, of which 30% is held by ZTE Holdings. Much of the state ownership decline is attributable to the fall in the share ownership of ZTE Holdings.

Throughout this transformation, ZTE Holdings remains the key entity for ZTE Corporation. It is therefore important to understand the ownership structure of ZTE Holdings itself. As shown in Figure 1, “Yangqi” China Aerospace Science and Technology Corporation was the second largest shareholder that owned 34% proportion of ZTE Holdings in 2015. Another “Yangqi” China Aerospace Science & Industry Corporation owned 17% of ZTE Holdings. In total, these two state-owned enterprises owned 51% of ZTE

**Figure 1** Ownership Structure of ZTE Holdings, as of 2016



Source: <<http://www.casic.com.cn/n101/n127/index.html>> and annual reports of ZTE Corporation (1999-2016).

Holdings. Since state enterprises had over 50% ownership, the conventional definition of a state enterprise applies to ZTE Holdings. More importantly, that state enterprises have 51% ownership translates into effective control of ZTE Holdings by the state. The largest single shareholder (49% of shares) was Zhongxing Weixiantong Equipment Co. Ltd. which was a pure private enterprise owned by individuals.

With ZTE Holdings owning just 30.59% of ZTE Corporation in 2015 (Table 2), the 51% state ownership of ZTE Holdings translates into just 15.60% of state ownership of ZTE Corporation. However, because ZTE Holdings is the holding company of ZTE Corporation and the largest of the shareholders (HKSCCNL owns 17% and all other shareholders less than 1% each), it retains full control of the latter. Thus, while state ownership had fallen to the point that it was only a minority shareholder, the state retained control through its majority ownership of the holding company.

There is more to this ownership than these numbers suggest. Although the state through ZTE Holdings has an equity stake of only 15.60% in ZTE Corporation, the other shareholders of ZTE Holdings are former employees of the original state enterprise. Together with the state, these shareholders can be considered “insiders” in the Corporation. There would also be other “insider” minority shareholders who are beneficiaries of the Corporation’s incentive program. To the extent that these “insiders” grew up with the Corporation, their “ownership” counts for much more than ownership as legally defined. They, together with HKSCCNL the nominee company voting with ZTE Holdings which appointed them, would ensure that there would be *de facto* state ownership and little contest in board decisions.

The nature of private sector ownership in ZTE Corporation – the private sector participation coming from employees of state enterprises – is not uncommon in China. While new private enterprises have undoubtedly emerged as a result of the gradual liberalization of the economy, many of today’s private enterprises began life as collectives<sup>3</sup> and township and village enterprises (TVEs) (Gregory, Tenev, & Wagle, 2000). Others were small state-owned enterprises (SOEs) that were privatized, especially under the “grasp the large and let go the small” state enterprise reform policy beginning in 1995. Thus, the public-private enterprise distinction, already less well-defined given the embedded nature of the state in civil society described earlier, is made even more opaque by China’s state enterprise reform experience.

## **5.2. Corporate Governance**

How is this control exercised? It is exercised through governance of the enterprise on the one hand and its relations with the state on the other. The state’s control over ZTE Holdings is reflected in the composition of its

Board of Directors. Interviews with ZTE Holdings top management show the Board of Directors having 9 directors from the three shareholders: Zhongxing Weixiantong Equipment Co. Ltd. (4), Xi'an Research Institute of Microelectronics Technology (3) and Shenzhen Aerospace Guangyu Industry (Group) Corporation (2). State-appointed directors outnumber others 5 to 4.

ZTE Holdings is represented on ZTE Corporation's Board by five directors, a third of the total number of directors, while the remaining directors have been selected for their expertise rather than to represent any single or group of shareholders.

Board directors and senior managers had worked in management in various capacities within the related entities of ZTE Corporation and its parent companies.<sup>4</sup> There are no bureaucrats among them. As already indicated, this close connection to the holding company also bolsters ZTE Holdings' *de facto* control of ZTE Corporation. That all members of the Board are "insiders", those who grew up in or had been part of the component entities of ZTE Corporation and were knowledgeable about both the operations and the technology of the business, is likely to be more material to the success of the Corporation, given the technology intensity of the business, than the much touted autonomy from state control (Li, Xia, Long and Tan, 2012).

The Board of Directors of ZTE Corporation held office for three-year terms. In the five terms since its incorporation, Board members made all the major strategic decisions about the Corporation. They also oversaw top management's appointments and dismissals. The top management took charge of day-to-day operations like recruiting management personnel, supervising enterprise operations, and setting market strategies.

According to interviews with ZTE Holdings' top management, ZTE Corporation was totally independent of the holding shareholder ZTE Holding in respect of employees, assets, finance and accounting, businesses and internal organization managements. Thus, for major decisions, ZTE Corporation did not rely on the state but took decisions deemed to be in the best interest of the corporation. For instance, the technology policies were set by the Chief Technology Officer and his team, who had the final say. And the state through ZTE Holdings did not exercise control over ZTE Corporation through finance. Employees of ZTE Corporation were paid by the Corporation and not by ZTE Holdings.

Whether a *de facto* role is played by government officials in ZTE Corporation is unclear however. Although state enterprise reform had officially ended the role of government officials in these enterprises' administrative hierarchies, interviews with officials revealed that it was not uncommon for state enterprises to be supervised by central and local government officials under overt administrative systems.<sup>5</sup> ZTE Corporation is not under this

category of major state enterprises, and there is the possibility that such an overt system did not exist.

In common with other state enterprises, ZTE Corporation has a (mandatory) Party Committee. Traditionally, this Committee functioned to ensure policies of the Communist Party were followed and implemented, participating in decision making, supervision, employment of key persons, and even day-to-day operations. However, interviews with bureaucrats suggest that the Committee in ZTE Corporation functioned far less intrusively than those in major state enterprises. There could be some truth to ZTE Corporation President Hou Weigui's testimony in a Congressional hearing in Washington DC on 14 September 2012 that the Party Committee had no say in major decision-making and the day-to-day operations of the Corporation. He added that he was not a Communist Party member or a member of ZTE Corporation's Party Committee.<sup>6</sup>

Finally, two indicators point to ZTE Corporation's autonomy from state control. First, while it is customary for part of the after-tax profits of state enterprises to be surrendered to the state (Ministry of Finance of the People's Republic of China, 2013), ZTE Corporation made no such repatriation. Second, prices of major state enterprises products that are closely associated with people's life had to comply with state pricing guidelines (The Central People's Government of the People's Republic of China, 2005b). But again for ZTE Corporation, it is free to set prices based on market demand.

Since ZTE Corporation's listing in Hong Kong, financial reports were prepared according to Hong Kong accounting standards which conformed to international accounting standards (International Financial Reporting Standards) and Chinese accounting standards (Generally Accepted Accounting Principles) and were audited by professional accounting firms. Generally speaking, employees were hired and fired by the human resource department according to their capacities and performance. Additionally, employees were paid and rewarded according to industry benchmarks, with bonuses set based on profitability.

### ***5.3. Relations with the State***

ZTE Corporation's relationship with the state took several forms. First, the state ensured that its policy were followed when President Jiang Zemin visited ZTE Corporation in 2000 and issued important instructions in regard to major issues like technology trade combination policy and stock options issue.

Second, the government leadership also motivated ZTE Corporation to embrace innovation and go global. In 2010, President Hu Jintao visited the ZTE Corporation booth at the Expo on "Emerging Industries of Strategic Importance" in Shenzhen, giving his endorsement to TD-LTE deployment.



In 2011, a member of the Standing Committee of the Political Bureau of the Communist Party of China Central Committee, Li Changchun, visited China Content Broadcasting Network and motivated ZTE Corporation to persist in innovation to revitalize China.

Third, in 2003, Chinese President Hu Jintao came to the ZTE Corporation headquarters to encourage ZTE Corporation to accelerate the “going global” pace. Also when ZTE Corporation signed strategic cooperation plans with other countries’ companies such as India’s Sistema and Hi3G Sweden, the signing ceremony was attended by the presidents of both countries.

Not unexpectedly ZTE Corporation has a good relationship with the central and local (Beijing and Shenzhen) governments. This relationship is built on compliance with the country’s technology strategy. This compliance saw ZTE Corporation investing heavily in R&D and hiring many R&D staff (Table 3), including for “TD-CDMA”, “TD-LTE” and “Gota” – related technologies and products. Also, consistent with the policy of collaboration with research institutes and universities – “*Ke Jiao Xing Guo*” (Development through Promoting Science Technology and Education), ZTE Corporation founded a corporate training centre – ZTE University – to deliver corporate training in 2013. Also, in order to acquire technological support for its products, ZTE Corporation established the Industry-University-Research Institute Collaboration Forum to target long-term development. This forum makes full use of the advantages in R&D of the universities. Publications by ZTE Corporation, such as the journals *ZTE Communications*, *ZTE Technologies* and *Mobile World*, track its technological development.

ZTE Corporation’s support of the state has been rewarded. ZTE Corporation was able to bid successfully for businesses with major state enterprise clients such as China Unicom, China Telecom, China Mobile, and Guangzhou Railway. When the central government promoted Chinese telecommunication industries and products overseas, ZTE Corporation would have the opportunity to bid for projects. An example: during celebrations for the 60th anniversary of the establishment of Australia–China relations in 2012, the door was opened to ZTE Corporation as part of China’s proposed cooperation with Australia. ZTE Corporation also plays a role when the Chinese government provides assistance to third world countries. Sometimes, when the state offered telecommunication projects which enjoyed preferential treatment, ZTE Corporation was asked to tender. And when China offered preferential loans to Papua New Guinea for infrastructure development including the installation of a telecommunication system, ZTE Corporation is one of the companies selected.

Another dimension of this recognition is the state’s favoured treatment of the enterprise in recognition of its achievements in technology. In the early years of ZTE Corporation’s establishment, its products were recognized by

the Ministries of Posts and Telecommunications and Information Industry and the State Science and Technology Commission. And this Corporation itself also received the central and local governments' recognition. In 1996, ZTE Corporation was recognized by the State Science and Technology Commission as one of key high-tech enterprises under the National Torch Program and by the State Council as one of the 300 key state enterprises. This recognition arises from the state's drive for indigenous innovation under the Medium and Long-term Plan 2006-2020 referred to above. As early as 1998, the State Economic and Trade Commission identified ZTE Corporation as one of the national technology centres which rendered it eligible to enjoy preferential treatment in the form of duty-free imports of materials, income tax exemption on the sale of technology products, and incentives for investment. In 1999, ZTE Corporation was also involved in the State Council's National High Technology Research and Development Program. State recognition of ZTE Corporation's contribution also came in the form of the presence of state dignitaries in major ZTE Corporation events. For instance, ZTE Corporation's Pakistan branch was opened in 1999 with Premier Li Peng present, while in 2000, President Jiang Zemin and Vice Premier Wu Bangguo visited ZTE Corporation.

ZTE Corporation managers interviewed also disclosed that it is relatively easy for ZTE Corporation to secure special state funds like science and technology innovation supporting funds and awards. For exports, the state provided export tax rebates for ZTE Corporation. Other export incentives were also offered to ZTE Corporation. For instance, the China Development Bank (CDB) contracted with ZTE Corporation to buy some of the latter's accounts receivable if it was able to meet its export quota. ZTE Corporation could also get loans at lower than market rates from CDB. And for specific projects in developing countries, ZTE Corporation could secure preferential loans. In 2012, CDB announced it would increase its strategic cooperation with ZTE Corporation in the next five years to the amount of USD20 billion (ZTE Corporation, 2012). According to its financial statement, ZTE Corporation had government subsidies and tax preference in previous years till 2013.

Beyond financial incentives, the state was prepared to allow a change in "Hu Kou"<sup>7</sup> to attract talented workers to ZTE Corporation and retain productive employees. Cheap land was offered by local governments to ZTE Corporation to construct research centres, factories, and affordable housing. For normal commercial loans, ZTE Corporation had better access to credit than private enterprises.

The above suggests that state control of the enterprise is exercised through ensuring compliance of and support for state strategies rather than through the placement of bureaucrats on the board or intervention in the

management of the Corporation. Indeed, the last function is “outsourced” to professional managers who make all the key decisions for the Corporation. Financial support comes not from direct payment of employee wages but from preferential financial arrangements available to the Corporation. These arrangements represent just one dimension, albeit the most important, of the state’s support of the Corporation.

#### 5.4. Corporate Performance

How has this enterprise model of minority state ownership, state control over policy but with enterprise autonomy in day-to-day operations performed over the years? Table 3 shows performance indicators based on sales and profits for the period 2001 to 2015. These show growing sales yielding a healthy rate of return of 3.7% or more during those years.

In 2015, total sales reached 100,186.4 million Yuan, a 23% increase over the previous year, a high one within this industry. International sales made up 47% of total sales, having grown 15%, elevating it to become the world’s fourth largest mobile phone manufacturer.

**Table 3** Financial Performance of ZTE Corporation (2001-2015)

<i>Year</i>	<i>Total Sales (million Yuan)</i>	<i>Expenditure on R&amp;D as % of Sales</i>	<i>Net Profits (million Yuan)</i>	<i>Rate of Return (%)</i>	<i>R&amp;D Staff/ Total Staff (%)</i>
2001	9,440.9	11.10	414.0	4.39	45.5
2002	10,795.9	10.45	703.6	6.52	42.0
2003	17,036.1	9.01	1,028.3	6.04	37.6
2004	21,220.1	10.67	1,272.5	6.00	32.5
2005	21,740.7	9.01	1,287.7	5.92	31.2
2006	23,214.6	12.20	767.0	3.30	34.6
2007	34,777.2	9.23	1,252.2	3.60	35.1
2008	44,293.4	9.02	1,660.2	3.75	33.8
2009	60,272.6	9.59	2,458.1	4.08	33.5
2010	69,906.7	10.14	3,250.2	4.65	32.8
2011	86,254.5	9.85	2,060.2	2.39	33.6
2012	84,118.9	10.50	(2,840.9)	(3.37)	38.0
2013	75,233.7	9.81	1,357.6	1.80	37.5
2014	81,471.3	11.06	2,633.6	3.23	35.9
2015	100,186.4	12.18	3,207.9	3.20	37.5

Source: Annual reports of ZTE Corporation (2002-2016).

What might account for the Corporation's success? One explanation may lie in the model of light state control only in the form of ensuring national strategy compliance combined with autonomous management. However, the many areas of state support would also have given ZTE Corporation an edge over private sector competitors.

A better measure of ZTE Corporation's performance is its achievements in technology. As a technology company, ZTE Corporation's success must necessarily be built around technology. The innovation theme of ZTE Corporation was from "Made in China" to "Created in China". Pursuing this objective, the company had indeed progressed from basic material processing to the forefront of the Chinese technology sector. It made efforts in indigenous innovation while also introducing foreign advanced technologies to reach international standards. For these efforts it was rewarded and recognized by both Chinese government and other countries' governments. As early as 1986, an R&D team created the first generation of 68-lines stored program control exchange ZX-60. Sequential improvements led to the licensing and adoption of ZTE Corporation's equipment for use in China. In August 1995, it became the first within the industry to receive the ISO9001 Quality Certificate, and in 2000, it also received the 2000 edition 9001 standard authentication. In

**Table 4** The Global Top Five PCT Applicants and the Number of International Applications (2008-2014)

<i>Year</i>	<i>Rank 1</i>	<i>Rank 2</i>	<i>Rank 3</i>	<i>Rank 4</i>	<i>Rank 5</i>
2008	Huawei 1,737	Panasonic 1,729	Philips 1,551	Toyota 1,364	Robert Bosch 1,273
2009	Panasonic 1,891	Huawei 1,847	Robert Bosch 1,586	Philips 1,295	Qualcomm 1,280
2010	Panasonic 2,154	ZTE 1,863	Qualcomm 1,677	Huawei 1,528	Philips 1,435
2011	ZTE 2,826	Panasonic 2,463	Huawei 1,831	Sharp 1,755	Robert Bosch 1,508
2012	ZTE 3,906	Panasonic 2,951	Sharp 2,001	Huawei 1,801	Robert Bosch 1,775
2013	Panasonic 2,881	ZTE 2,309	Huawei 2,094	Qualcomm 2,036	Intel 1,852
2014	Huawei 3,442	Qualcomm 2,409	ZTE 2,179	Panasonic 1,682	Mitsubishi El 1,593

Source: *PCT Newsletter* by World Intellectual Property Organization (WIPO), 2009-2015 at <<http://www.wipo.int/pct/en/newslett/year.jsp>>.

2011 and 2012, ZTE Corporation was ranked No. 1 globally by WIPO (World Intellectual Property Organization, 2015), surpassing Huawei, the perennial No. 1 for China (Table 4). In terms of authorizations and applications of the domestic patent for invention, ZTE Corporation was No. 1 in China (ZTE Corporation, 2013).

These technology indicators point to an enterprise that is competitive in its core area of competence. This competence is less a reflection of state support, although it helped to attract talent, than of management capability. In this sense, it provides a degree of vindication for the state enterprise model exemplified by ZTE Corporation, a model that is at variance with the stereotype implicit in existing conceptualization of state enterprises and more akin to the so-called government-linked companies that exist in many countries.

Since ZTE Corporation launched its internationalization strategy, its share of revenue from outside China has soared. 2007 saw international revenues accounted 60% of the total revenue – the first time it exceeded domestic revenues (ZTE Corporation, 2016b). It also cooperated with international high technology companies like IBM. In all, its equipment are used by more than 500 telecommunications companies in more than 140 countries and regions. For some of these countries like Malaysia, it had a significant market share.

## **6. Conclusion**

Although the role of the Chinese state and its enterprises has been viewed through the lens of Western theories as generally negative, a systematic reading of China's history suggests that this view should be contested. Add to this history China's unique state enterprise reform experiments, and an assessment of Chinese state enterprises that is far from clear-cut emerges. Thus, while numerous studies have espoused a negative view of Chinese state enterprises, research endorsing the opposite view, both theoretical and empirical, is growing.

This study has not attempted this assessment but instead focuses on one enterprise, ZTE Corporation, tracing its origins and linking its growth and transformation to China's stepwise state enterprise reform. Because of these changes, it has come to embody the state's strategy of reducing ownership but maintaining control. Yet the term "control" may be a misnomer – ZTE Corporation retains almost complete management autonomy although complying with national strategies of technology development. Even board members, who are instruments of state control, are chosen from within the corporation and its affiliates.

At the same time, state support in the form of tax preferences has undoubtedly helped ZTE Corporation's performance. Such support weakens

arguments that attribute state enterprise competitiveness principally to autonomy and/or the absence of state control. However, since, as shown by the many loss-making state enterprises with state support, preferential treatment by the state does not necessarily translate into better performance, arguments that autonomy begets better performance remain intact (Li, *et al.*, 2012). Still, ZTE Corporation does not easily fit the mode posited of state controlled, dispersedly controlled and privately controlled in that it embodies elements of both state and private control. What appears to be critical to ZTE Corporation's success, apart from managerial autonomy, is the presence of "insiders" both in the state and private entities owning ZTE Corporation who are well versed with the company's operations at the helm. Since these insiders were there from the beginning, it is also not very meaningful to refer to ZTE Corporation's management as being "outsourced".

As a "state-holding company", ZTE Corporation embodies much less "state" than what is normally understood in a state enterprise. Its management is also not in the hands of bureaucrats. Although no generalization is warranted, ZTE Corporation's performance attests to the relative success of the state strategy to stress control over ownership. And this control is limited to providing a strategic direction. In moving from state-owned to state-controlled, more appropriately state-led, China's state enterprises can be said to be at the forefront of the model of state capitalism.

The ZTE Corporation experience speaks also to how not only agency costs have been reduced but also public choice issues have been resolved. It also shows that the importance of property rights can be exaggerated. What has emerged from the interviews is that ZTE Corporation's personnel, from the management down, take pride in what they have created, despite owning very little of the enterprise. This sense of collective pride, attributable to Confucian concepts of collective identity and increasingly recognized as an East Asian trait – of collective pride and shame – has most recently been discussed in the context of a South Korean jetliner crash in San Francisco (Klug and Lee, 2013), can contribute materially to performance.

Finally the relevance of neo-liberal theories has been muted by the complexity of ownership in the specific case of state enterprises like ZTE Corporation and in general by the embeddedness of government in Chinese society. China's state enterprise reform experience has blurred further the lines between state and private enterprises which are central to Western public enterprise theories. Many of China's private enterprises today began life as state enterprises or as collectives. Some, like the private enterprise which is an equity partner of ZTE Corporation, have been formed by state enterprise employees.

With these enterprises, a calculus of ownership and control that is different from that predicated on existing theories has emerged. We believe

it is this calculus, as much as the management autonomy to which much research is directed, that helps to explain good state enterprise performance.

## Notes

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1. Despite this classification, the actual number of each of the three types of enterprises cannot be determined because such a classification is not shown in official statistics. Instead, the *China Statistical Yearbook 2012* lists eight major enterprise types with no obvious way of mapping these onto the three state enterprise groups mentioned.
  2. The last two preferences were terminated in 2000.
  3. Some collectives had been leased out to private entrepreneurs to run, with the option of taking the enterprise private eventually (Ralston, Terpstra-Tong, Terpstra, Wang and Egri, 2006).
  4. For example, Hou Weigui is the president of ZTE Corporation and Zhongxing Weixiantong Equipment Co. Ltd.; Xie Weiliang, is the vice-president of ZTE Corporation, the president of ZTE Holdings, the general manager of Shenzhen Aerospace Guangyu Industry (Group) Corporation and the president as well as general manager of Aerospace Science & Industry Shenzhen (Group) Co. Ltd.
  5. Peoples Republic of China's Law on Public Officials had been approved by the 15th Session of the Standing Committee of the 10th National People's Congress (The Central People's Government of the People's Republic of China, 2005a). There are five general administrative levels for public officials – national, provincial, bureau, county and rural.
  6. The hearing was held because ZTE was suspected by members of the US Congress that it would do the bidding of the Chinese government and would pose a threat to American national security if allowed to do business (supply equipment to American companies) there (Iceo.com.cn, 2013).
  7. The “Hu Kou” system refers to the country's household registration system, which specifies for each household a particular residential location. Residents have full rights and enjoy education and social welfare benefits offered by the state as long as they remain in their specified location, but lose these rights and benefits if they move away without official permission.

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