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An Analysis of State-owned Enterprises and State Capitalism in China

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I. Executive Summary

China's economy has been undergoing a historic transformation since 1978, when private enterprise was frowned upon, capitalists were considered class enemies, and the economy was virtually closed to foreign trade and investment.

Since that time, market-oriented reforms have produced an economy that would have been unthinkable in the mid-1970s. China's economy is the world's second largest national economy, a powerhouse in international trade, and a major destination for foreign investors. China not only has a private sector, but private entrepreneurs are allowed to join the Chinese Communist Party (CCP). China has not one stock exchange but two, and Chinese firms, including firms owned by the government, raise funds in international capital markets. China's state-owned enterprises (SOEs) have restructured and several are among the world's largest companies.

SOEs are the subject of this study, which was conducted for the U.S.-China Economic and Security Review Commission. The conclusions below are based on an extensive review of data, books, and articles about the Chinese economy and SOEs. Background interviews and discussions with individuals knowledgeable about SOEs in China also inform the results. The key conclusions of this study are as follows.

- The state sector in China consists of three main components. First, there are enterprises fully owned by the state through the State-owned Assets and Supervision and Administration Commission (SASAC) of the State Council and by SASACs of provincial, municipal, and county governments. Second, there are SOEs that are majority owners of enterprises that are not officially considered SOEs but are effectively controlled by their SOE owners. Finally, there is a group of entities, owned and controlled indirectly through SOE subsidiaries based inside and outside of China. The actual size of this third group is unknown. Urban collective enterprises and government-owned township and village enterprises (TVEs) also belong to the state sector but are not considered SOEs.

- The state-owned and controlled portion of the Chinese economy is large. Based on reasonable assumptions, it appears that the visible state sector—SOEs and entities directly controlled by SOEs, accounted for more than 40 percent of China's non-agricultural GDP. If the contributions of indirectly controlled entities, urban collectives, and public TVEs are considered, the share of GDP owned and controlled by the state is approximately 50 percent.

- The flip side of this accounting is that the share of GDP accounted for by the non-state sector, including foreign invested firms without ties to the government of China, is also approximately 50 percent. This is lower than other estimates, but still represents explosive growth by the private sector and other non-state enterprises since the late 1970s.

- Based on the current direction of economic policy making, the state sector in China will continue to play an important role, even if the state's share of GDP shrinks further. There are several factors underlying this conclusion. First, the ruling CCP has not expressed an interest in becoming a bastion of free market capitalism. It is pursuing *socialism with Chinese characteristics*, which mandates a prominent role for state ownership. Second, SASAC has articulated a number of industries that are important to China's economic and national security and indicated that these strategic industries will remain wholly or largely under the government's control. In other important so-called pillar industries, the state will remain a major player, with significant, though not majority, ownership. Third, China's latest five-year plan indicates it is pursuing a "national champion" strategy for certain industries that the government views as important. These include not only strategic industries, but also cutting-edge, emerging industries. Given the current make-up of China's economy, these national champions are likely to be SOEs or entities they directly control. In the steel industry, for example, this consolidation has involved an SOE absorbing private firms. Fourth, SOE's appear to be a key enabler in the government's plans to encourage indigenous innovation in China so that the country relies less on foreign technologies. In the past (e.g., high speed rail), the government used SOEs to acquire foreign technologies through joint ventures and licensing agreements with foreign firms. The government appears to be using the same approach with current efforts to develop a civil aviation industry.

- China's SOEs are potentially formidable competitors because they benefit from a number of government preferences in China. Based on recent U.S. regulatory filings by SOE-owned entities, SOEs and their subsidiaries benefit from preferred access to bank capital, below-market interest rates on loans from state-owned banks, favorable tax treatment, policies that create a favorable competitive environment for SOEs relative to other firms, and large capital injections when needed. Further, Chinese SOEs also appear to dominate China's expanding government procurement market.

- Aside from the indications provided by government policies, there are institutional reasons why China's SOEs are likely to remain important economic players. First, bank lending remains the most important form of formal finance in the Chinese economy.

The state banking sector dominates the landscape in China and tends to favor SOEs at the expense of private sector firms. Second, SOEs are in general an important instrument of government policy. The government uses SOEs to facilitate structural change in the Chinese economy, to acquire technology from foreign firms, and to secure raw material sources from beyond China's borders. For example, in 2009, the government turned to its SOEs and state-owned banks to provide stimulus to the domestic economy. Third, the CCP and SASAC maintain important influence over the executives of SOEs. These executives face two sets of incentives. On the one hand, the entities they control are supposed to be profitable, and SOE executives are now rewarded based on financial performance. On the other hand, the appointments of top executives to SOE management and their future career paths upon leaving the SOE are determined by the Central Organization Department of the CCP. Thus, SOE executives have an incentive to follow the government's policy guidance. Recent examples, as well as financial disclosure documents, indicate that if maximizing shareholder value conflicts with state goals, SOEs and their wholly-owned subsidiaries are likely to pursue the goals of the state.

- When it joined the WTO in 2001, China promised that the government would not influence, directly or indirectly, the commercial decisions of SOEs. China does not appear to be keeping this commitment. The state does influence the commercial decisions of SOEs and the most recent five-year guidance does not herald a change in this regard. If anything, China is doubling down and giving SOEs a more prominent role in achieving the state's most important economic goals. For some U.S. firms whose participation in China's economy facilitates the government's goals, China will continue to be a profitable market. For others, especially those in strategic and emerging industries that the government is targeting, the Chinese market may become far less hospitable.

II. Introduction

China's breathtaking economic reform, including the rise of private enterprise, has often led observers to assume that the country's economic system has been transformed into a capitalist economy dominated by private enterprise.[1] A number of economic, political and policy trends demonstrate that the Chinese economy has become more market-oriented. Chinese statistics show a dramatic rise in the number of ostensibly private enterprises since the late 1970s. China now has stock exchanges in two cities and hundreds of Chinese firms now have listings in exchanges beyond the mainland. In 1978, capitalists in China were official "class enemies" but in 2001 they were welcomed into the Chinese Communist Party (CCP).[2] China's once insular economy—imports in 1978 were only $10.5 billion—now imports more than one trillion dollars annually and is one of the top destinations for foreign investments. Chinese firms, including privately owned firms, are now major competitors in advanced country export markets and major foreign investors.

In a world in which central planning has been so utterly discredited, it would be natural to conclude that the Chinese government and, by extension, the Chinese Communist Party have been abandoning the institutions associated with the communist economic system, such as reliance on state-owned enterprises (SOEs), as fast as possible. Such conclusion would be wrong. Although China's reliance on private enterprise and market-based incentives has been growing, and the CCP's treatment of private enterprises and entrepreneurs has been changing, it would be a mistake to write off the country's SOEs as dying vestiges of China's Maoist past or to minimize the current role of the state and the CCP in shaping economic outcomes in China and beyond.

True, the private sector nominally is responsible for a growing share of economic activity in China. Still, the Chinese government and SOEs remain potent economic forces. Indeed, some of China's SOEs are among the largest firms in China and the world. They are major investors in foreign countries. They have been involved in some of the largest initial public offerings in recent years and remain the controlling owners of many major firms listed on Chinese and foreign stock exchanges. In short, SOEs still matter.

This study, prepared for the United States-China Economic and Security Review Commission, seeks to answer a number of questions about SOEs and the role they play in China's economy, politics, and foreign policy. These questions can be broadly grouped as follows: 1) What are SOEs and how important are they to China's economy? 2) How does the state and the CCP influence SOEs, their subsidiaries, and other economic entities that it does not fully own? 3)

[1] (Engardio 2005).
[2] (Tsai, Capitalism without Democracy: The Private Sector in Contemporary China 2007) 44.

What is the nature of the relationship between SOEs and the Chinese government? 4) What are the economic ramifications of Chinese state capitalism? Each section below corresponds to the individual issues and questions addressed by the Commission in its RFP data February 7, 2011.

The sources consulted include recent books and articles that describe China's economic transformation; various U.S. government documents that describe economic reforms, the policymaking process in China, and the role of SOEs; documents related to China published by multilateral organizations such as the World Trade Organization, the International Monetary Fund, and the Organization for Economic Cooperation and Development; and China's five-year plans. Most of the data on SOEs were obtained from the *China Statistical Yearbook 2010*, which contains extensive data through 2009 on SOEs and state-holding enterprises. Certain industry-related data were also obtained from Chinese industry associations through Haver Analytics. Financial information on SOEs was obtained from the Chinese web sites of the SOEs in question and from disclosure documents submitted by SOE-subsidiaries to the U.S. Securities and Exchange Commission. Interviews and informal discussions with individuals from the public and private sectors knowledgeable about the Chinese economy also informed the analysis herein. We do not believe that any information in this report would be considered a state secret but we nevertheless have chosen not to identify these individuals by name.

III. Overview of state capitalism in China

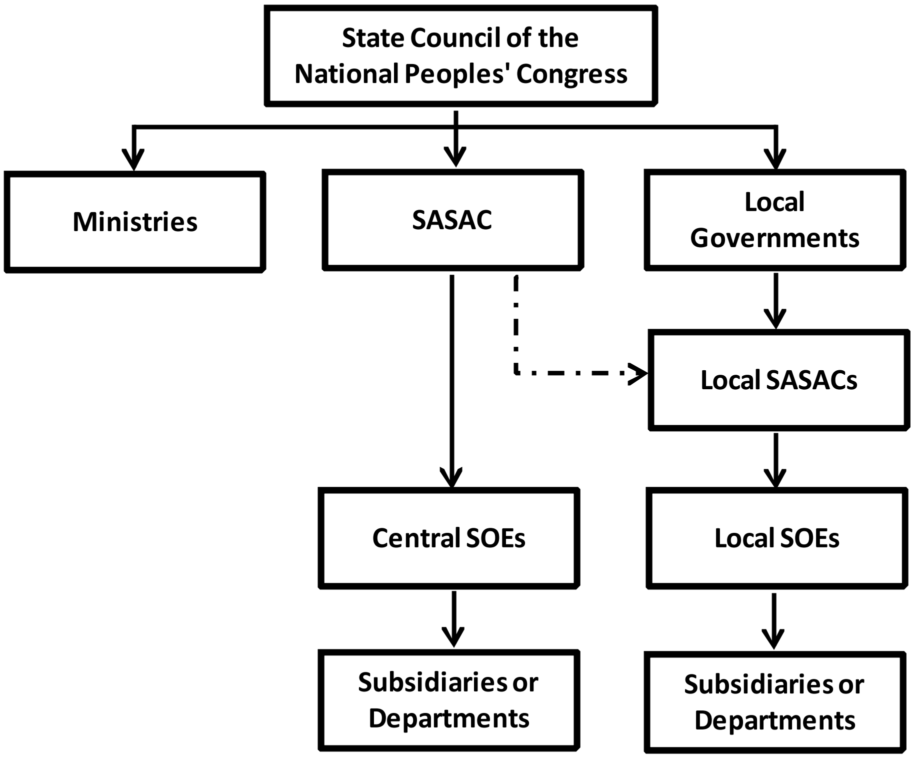
China's state sector consists of SOEs reporting to central, provincial, and local levels of government. The Chinese government defines SOEs as enterprises in which all assets are owned by the state.[3] SOEs are either centrally owned or owned by provincial or local governments. Centrally-owned SOEs include entities managed by the State-owned Assets Supervision and Administration Commission of the State Council (SASAC); state-owned financial institutions supervised by the China Banking Regulatory Commission (CBRC), China Insurance Regulatory Commission (CIRC), and China Securities Regulatory Commission (CSRC); and entities managed by other central government ministries such as the Ministry of Commerce, Ministry of Education, Ministry of Science and Technology, and others ministries.[4] Central SOEs have been increasing in importance relative to local SOEs.[5]

The SASACs are analogous to holding companies; they hold the shares of SOEs that previously were held directly by the state. The SASACs were created by the State Council in March 2003 via Decree 378 (2003). Amended legislation in 2009 formally "assigned SASACs the legal

[3] (National Bureau of Statistics 2002).
[4] (Lee 2009) 8.
[5] (Lee 2009) 8-9.

liabilities and rights of investors holding SOE shares on behalf of the state and the responsibility of guiding and supervising further SOE reforms."[6] In all, there are approximately 300 SASACs in China. In addition to the central government SASAC, there are about 30 provincial SASACs overseeing provincially controlled SOEs, and scores of municipal SASACs supervising local SOEs.[7] The position of SASACs within the government-SOE hierarchy is shown in Figure III-1.

Figure III-1: Structure of relationships among SOEs, SASACs and central and local governments



Source: Deng, Morck and Wu.

How big is the state sector in China? How big is the private sector? Ironically, given the pronouncements on the vibrancy of China's private sector, the truth is that nobody knows for sure. For a number of years, this was a relatively easy question to answer because China was a centrally planned economy dominated by SOEs. But after three decades of privatizations, restructuring, joint ventures, and mergers and acquisitions involving SOEs, the answers to these questions remain elusive, despite the fact that China actually has quite detailed data on the subject.

This section responds to Question 1 in the Commission's original RFP. Using official data on SOEs and other entities directly controlled by SOEs, this section demonstrates that the state

[6] (Deng, et al. 2011) 11.
[7] (Deng, et al. 2011) 48.

sector remains a potent force in the Chinese economy. It uses these data to estimate the share of GDP accounted for by entities directly owned or controlled (through sufficient shareholdings) by the state. These data are also compared with data indicating the size of the private sector in China. But before turning to the data, it is helpful to review the different types of business entities that exist in China.

State-owned enterprises are business entities established by central and local governments, and whose supervisory officials are from the government.[8] In official statistics, this category of firms includes only wholly state-funded firms. This definition excludes share-holding cooperative enterprises, joint-operation enterprises, limited liability corporations, or shareholding corporations whose majority shares are owned by the government, public organizations, or the SOEs themselves. A more encompassing category is "state-owned and state-holding enterprises." This category includes state-owned enterprises plus those firms whose majority shares belong to the government or other SOE.[9] This latter category, also referred to as state-controlled enterprises (SCEs), can also include firms in which the state- or SOE-owned share is less than 50 percent, as long as the state or SOE has controlling influence over management and operation.[10]

Definitions of the various types of business registration categories are shown in Table III-1. China's National Bureau of Statistics (NBS) provides data in two broad categories for industrial enterprises: domestically funded enterprises and foreign funded enterprises. Industrial enterprises include extraction; agricultural processing (e.g., husking, flour milling, wine making, oil pressing, silk reeling, spinning and weaving, and leather making); manufacturing; and repairs of industrial product.[11] Based on the definitions provided by NBS, all entities with foreign funds are excluded from the category of domestically funded enterprises. The state-holding enterprise (SHE) designation cuts across other registration categories. The NBS's China Statistical Yearbook for 2010 (CSY-2010) provides information on state participation in other ownership categories, such as joint ownership enterprises and limited liability companies, but does not specify all the entities for which the state has a direct or indirect controlling share. As shown in Table III-2, the specified categories in the CSY-2010 for industrial firms leave at least half of the industrial SOE universe unaccounted for.

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[8] (Lee 2009) 5.
[9] (Lee 2009) 6.
[10] (World Trade Organization 2010) 54 (*fn.* 84).
[11] (National Bureau of Statistics of China 2010).

Table III-1: Business registration categories defined in CSY-2010

Registration status	Definition
Domestically Funded Enterprises	
State-owned enterprises	Non-corporate economic entities, where all assets are owned by the state.
State-holding enterprises	Enterprises where the percentage of state assets (or shares by the state) is larger than any other single share holder of the same enterprise.
Collective-owned enterprises	Economic entities where assets are owned collectively. Ownership is considered to be public.
Cooperative enterprises	Economic units set up on a cooperative basis, with funding partly from employees of the enterprise and partly from outside investment, where the operation and management is decided by all the members who also participate in the production.
Joint ownership enterprises	Economic units established by joint investment by two or more corporate enterprises or institutions of the same or different types of ownership.
Limited liability corporations	Economic units with capital from 2 to 49 investors. Limited liability corporations include state sole funded corporations and other limited liability corporations.
Share-holding corporations Ltd.	Economic units with total registered capital divided into equal shares and raised through issuing stocks.
Private enterprises	Economic units invested or controlled (by holding the majority of the shares) by natural persons who hire workers for profit-making activities. Included in this category are private limited liability corporations, private share-holding corporations Ltd., private partnership enterprises and private sole investment enterprises.
Foreign Funded Enterprises	
Enterprises with Funds from Hong Kong, Macao and Taiwan	All industrial enterprises registered as the joint-venture, cooperative, sole (exclusive) investment industrial enterprises and limited liability corporations with funds from Hong Kong, Macao and Taiwan.
Foreign funded enterprises	All industrial enterprises registered as the joint-venture, cooperative, sole (exclusive) investment industrial enterprises and limited liability corporations with foreign funds.

Source: National Bureau of Statistics of China.

Table III-2: State-ownership data in CSY-2010: specified and unspecified data on enterprises

	Number of industrial enterprises	
SOE + SHE	20,510	1
SOE	9,105	2
Implied SHE	11,405	3=1-2
State joint ownership enterprises	131	4
Joint state-collective enterprises	169	5
State sole funded limited liability corporations	1,454	6
Minimum number of enterprises for which SOE ownership is not specified	9,651	7=3-4-5-6

Source: National Bureau of Statistics of China.

It turns out that a high proportion of shareholding companies are controlled by SOEs. For example, a review of data from the China Securities Regulation Commission, summarized in an OECD study of Chinese SOEs, indicates that state-owned non-tradable shares accounted for about one-fifth of all shares of SOEs who had floated shares in domestic markets.[12] In addition, central and local SOEs own shares through legal entities.[13] Indeed, according to the OECD study, when the ultimate owners of listed firms are traced, SOEs accounted for a very high proportion of listed firms, as shown in Figure III-2.[14] A similar point can be made about limited liability corporations (LLCs).[15] Official data do have a separate category for “state-sole funded” LLCs[16] but other LLCs can be partially owned by SOEs or by SOE-owned subsidiaries.[17]

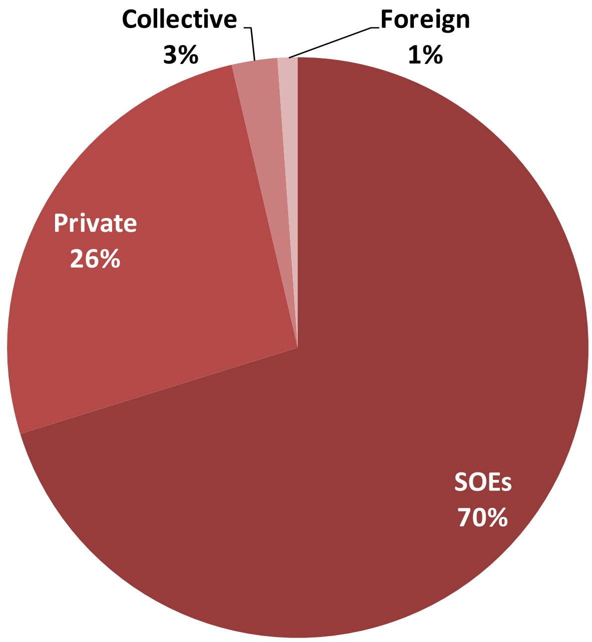
Based on an updated version of the CSMAR database relied upon by the OECD study, it appears that SOEs continue to maintain a major presence in listed firms after trades that result in changes in equity structure. From 2005 to 2009, the median state share following such trades was 51 percent. And while the majority of trades led to the state share declining, nearly one fifth of trades led to an increase in the combined state share.

Unfortunately, the breakdown between SOEs and non-SOE entities is less complete in other major economic sectors. Data on the construction industry, for example, include information about SOEs, but do not include data on SHEs in construction. Data on the SOE role in services are even less detailed.

In short, aside from pure 100-percent SOEs, there are a number of entities in China with mixed ownership in which SOEs, and therefore the government, play a controlling or prominent role. Some of these entities are captured in official economic statistics but some are not.

[12] (Lee 2009) 16. The denominator includes A, B, and H shares.
[13] According to an OECD study of Chinese SOEs, consistent data sets that distinguish between state-owned and non-state-owned legal entity shares are difficult to find. (Lee 2009) 18.
[14] See also, (J. Wang 2010) 25. “To ensure state control, the government limits individual shares to less than one-third of the total. In other words, the state still controls more than two-thirds of most listed companies, either through the holding of state shares by {government agencies} and SOEs, or indirectly through legal-person shares.”
[15] (State-owned Enterprises in China: Testimony of Derek L Scissors 2011).
[16] For example, a review of the form 20-F for 2010 for the China Telecom Corporation Limited, which is fully owned by the SOE China Telecommunications Corporation, indicates that the firm has 5 wholly-owned subsidiaries in China, each of which is a joint stock company with limited liability.
[17] For example, a review of the form 20-F for 2010 of Aluminum Corporation of China Limited, which is fully owned by the SOE Aluminum Corporation of China, indicates that the firm has 10 partially owned subsidiaries, each of which is a joint stock company with limited liability.

Figure III-2: Breakdown of listed Chinese non-financial firms by identity of the largest shareholders, 2004



1/ Firms are classified as SOE if the share of state-ownership exceeds 10 percent.
Source: Lee.

What constitutes the private sector in China? As shown in Table III-1, the definition of the private sector is specific. It consists of economic units invested or controlled by natural persons who hire labor for profit-making activities.

A common mistake is to assume that any entity that is not an SOE belongs to the private sector.[18] As noted by one China expert, "Share-holding SOEs are manifestly not private actors and assessments of the corporate sector that assume so are fatally flawed from the outset."[19] There is a state sector, which consists of SOEs, and a non-state sector, which consists of firms with other forms of ownership, including pure private ownership by domestic and foreign natural persons and mixed ownership entities in which SOEs are part owners and/or controlling. This point is underscored by Figure III-2. The proliferation of firms in China that raise capital in domestic stock exchanges evidently leads some to assume that all listed firms in China have no ties to the state. However, for the vast majority of these listed firms, the largest shareholders are SOEs.

[18] (State-owned Enterprises in China: Testimony of Derek L Scissors 2011).
[19] (State-owned Enterprises in China: Testimony of Derek L Scissors 2011).

In addition to the purely domestic private enterprises defined in Table III-1, a more inclusive definition of the private sector should include purely foreign-owned firms. Some NBS statistics distinguish between fully and partially foreign-owned enterprises. However, statistics on value added, the most important statistic for measuring the economic footprint of the private sector, do not make this distinction.

A. Economic footprint of SOEs

Given the growing role of private enterprise in China, there is a natural interest in benchmarking the growth of the private sector versus SOEs. The most natural metric for this type of analysis would be the share of GDP of the private sector versus the share of GDP by SOEs. Unfortunately, given the complications described above, there is no published value for SOEs, only estimates and conjectures. An OECD study using data from 2006 estimated the SOE share of GDP to be 29.7 percent, implying that the non-state sector is about 70 percent of the economy.[20] Other estimates of the state's share are higher. In recent testimony before the USCC, Derek Scissors of the Heritage Foundation implied that the state sector accounts for 30-to-40 percent of China's economy.[21] A lawyer working for a western firm in China estimated the SOE share of GDP to be in the range of 40-to-50 percent.[22] Below, Chinese statistics on SOEs and the broader SCE category are reviewed and an estimate is made of the state-controlled share of GDP.

The Chinese government publishes several statistical measures which can be used to assess the size of state-owned enterprises relative to other forms of ownership according to various dimensions. In many cases, the measures of SOE activity consider only wholly-owned SOEs. That is, these SOE measures do not treat entities in which the state ownership share is less than 100 percent, but greater than 50 percent, as being state-owned. Further, the official estimates often do not track ultimate ownership, thereby ignoring enterprises that are not registered as SOEs or state-controlled enterprises even when indirect state ownership is present.

In addition, despite the fact that foreign invested enterprises (FIEs) have formed joint-venture operations with state and collective sector firms, they have been officially categorized as FIEs, the implication being that they are private enterprises. State entities have diverted funds

[20] (Lee 2009) 6-7.
[21] (State-owned Enterprises in China: Testimony of Derek L Scissors 2011). "{T}he case for saying the private sector is 60 to 70 percent of the economy is extremely weak. The case for saying the non-state sector is 60 to 70 percent of the economy is better, but it's still subject to this qualification of what would we really call these non-state firms if we had really good information about them."
[22] (Conversation with a lawyer based in Asia Pacific 2011).

offshore to qualify as FIEs.[23] Although operational influence by governing authorities is limited in FIEs, this influence varies considerably by type of firm, sector, and degree of government ownership.

Below, statistics are presented for gross output value, value added, investment, employment, wages, and tax revenues. Each measure includes data for the most recent available year at the time of this writing as well as time series data if available. Afterwards, an effort is made to estimate the true economic footprint of the state sector, taking into account the issues described above.

1. Output and value added

China presents a variety of economic data by registration status and by broad industry sector.[24] The broad industry sectors are primary industries, secondary industries, and tertiary industries. Primary industries are agricultural. Secondary industries are energy, manufacturing, and construction. Tertiary industries are service producing industries.

The GOC reports three measures of output, principal business revenues, gross industry output value (GIOV), and value added. Principal business revenues reflect the revenues earned by businesses for sales of their main products, while GIOV reflects the total volume of final industrial products produced and industrial services provided during a given period. It is analogous to revenue or gross output as published by the U.S. Bureau of Economic Analysis. Value added is also used in the U.S. industry output accounts. In Chinese accounts, it represents gross industrial output value minus intermediate inputs plus value-added taxes. Thus, it represents the amount of value added by a firm to its purchased inputs. Value added has two useful characteristics. First, unlike gross output, value added avoids double counting outputs used as inputs by other firms. Second, value added can be compared directly to GDP.

Because there is little statistical difference between principal business revenue and GIOV, only data on gross industry output value are presented. Official data on the GIOV of industrial enterprises, which include mining, power generation, and manufacturing by registration status, are shown in Figure III-3. Based on these data, SOEs account for approximately one-eighth of industry output by domestically funded firms.

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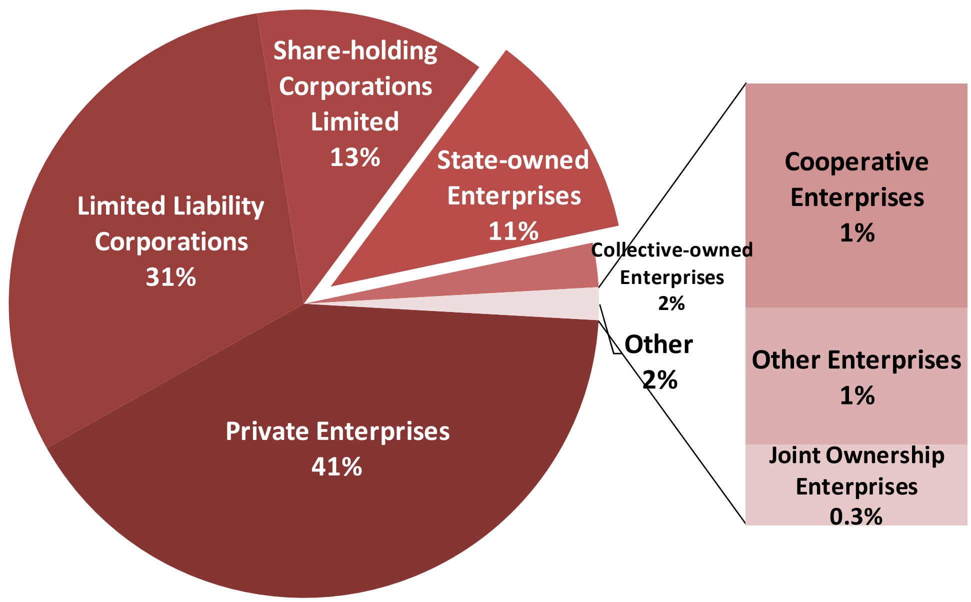
[23] To be established as an FIE, 25% of invested funds must come from overseas. For many years, Chinese firms, including SOEs at all levels, diverted investment through shell companies in Hong Kong in order to register as an FIE. Domestic firms did so in order to take advantage of preferential tax rates and coveted import-export licenses. While the government changed the law in 2008 to eliminate this loophole, any firm already registered in this manner received a grandfathered exemption from the new law. These "fake FIEs" are significant and therefore skew any measure of state ownership that separately categorizes foreign invested companies and does not trace ultimate ownership.

[24] See Table III-1.

Figure III-3: Gross industrial output value by status of registration, 2009

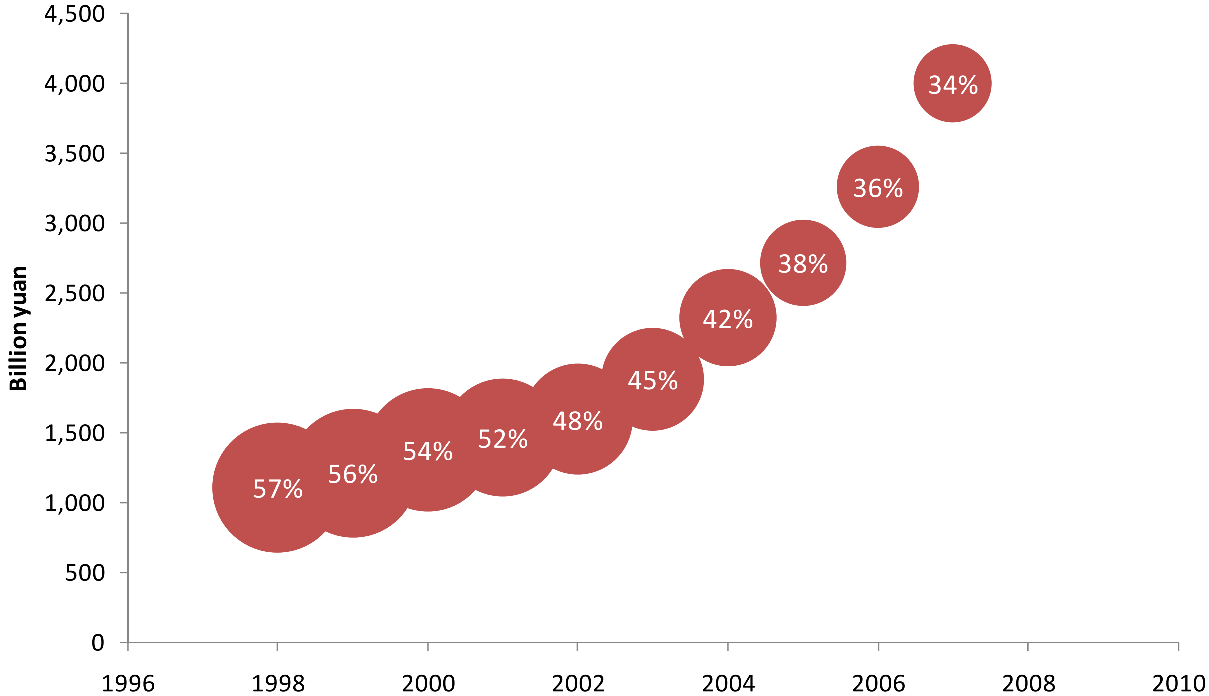


Source: National Bureau of Statistics of China.

However, these data dramatically understate the role of SOEs and the state because they do not take into account the dramatic restructuring of SOEs that has taken place over the past decade. As will be discussed below, the Chinese government has restructured SOEs, particularly in the industrial sphere, to mix state-owned and private capital. Thus, the pure SOE measure exaggerates the role of non-state entities in the Chinese economy.

China's National Bureau of Statistics provides a somewhat better measure of the state's role in China's industry: value added by state-owned enterprises and state-holding enterprises (SHEs). As noted above, SHEs include enterprises for which the Chinese government holds a majority of shares or more shares than any other entity. Figure III-4 shows that while value added of this broader measure of the state sector has continued to expand, its overall share of industrial output has declined from 57 percent to 34 percent over the past decade.

Figure III-4: Value added of industrial SOEs and SHEs as a share of total industrial value added, 2007



Source: National Bureau of Statistics of China.

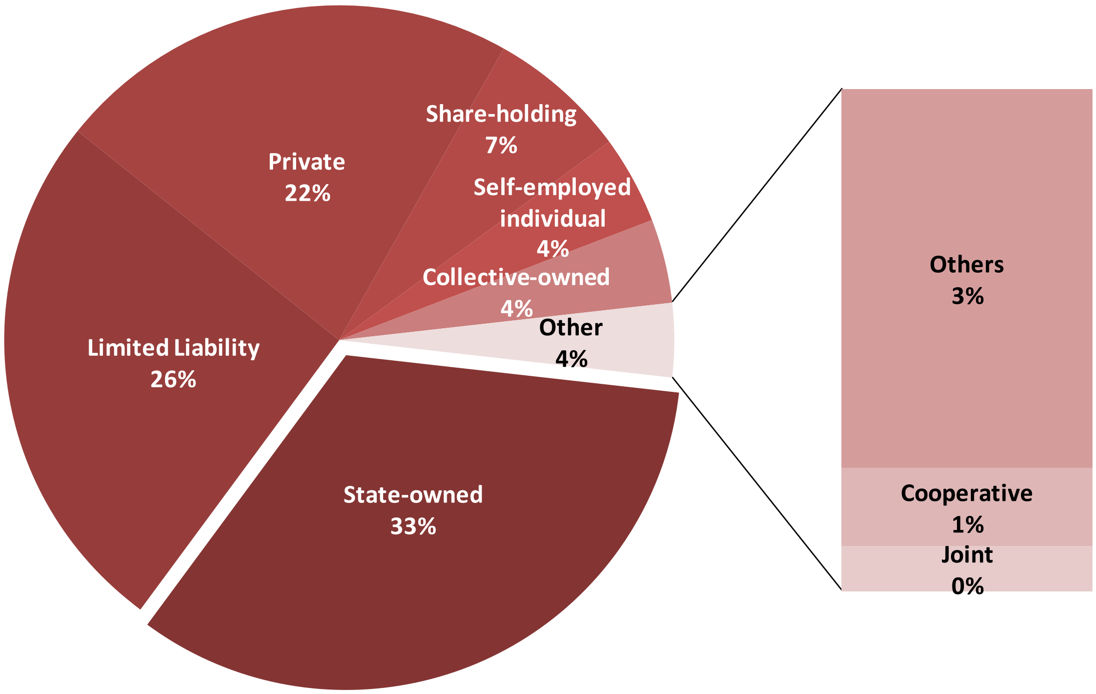
Though better than data that exclude the output of SHEs, this data series is not believed to capture fully the SOE's role in the economy either. In particular, these data would seem to exclude value added by entities of mixed ownership whose primary owners are subsidiaries of SOEs, including "round-tripped" FIEs with state capital.

2. Fixed investment

While statistics on value added are appropriate for comparisons with GDP, it has been argued that Chinese data on fixed asset investments are more important for assessing the policy tilt of the Chinese government.[25] This is because fixed asset investments, whether by state actors or private actors, must generally gain government approval.[26] This point is driven home by Figure IV-1, which shows the share of fixed asset investments managed by local governments. Fixed asset data are also useful because they cover both rural and urban investment, and are not confined to industrial entities; service-producing sectors are also included. The investment data shown in Figure III-5 indicate that the SOEs accounted for one-third of total investment in fixed assets in 2009. The share of fixed asset investment by SOEs and SHEs in rural areas was 45 percent in 2009.

[25] (Huang 2008) 20-22.
[26] (Huang 2008) 20.

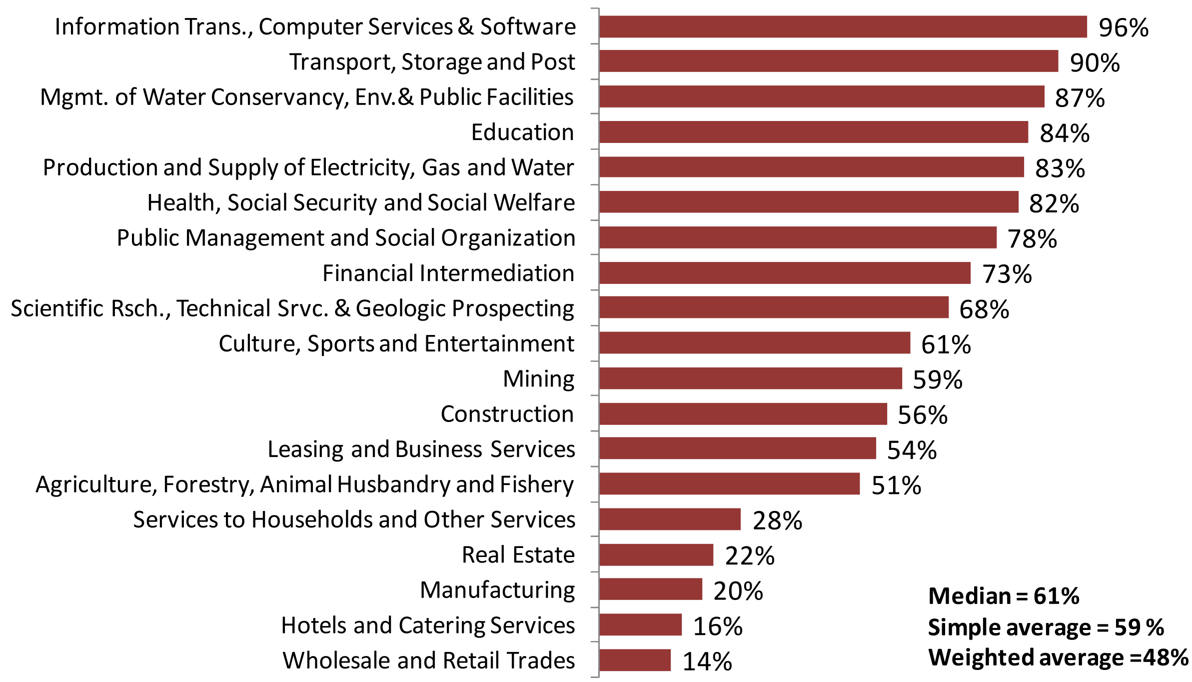
Figure III-5: Domestically funded fixed investment by status of registration, 2009



Source: National Bureau of Statistics of China.

Figure III-6 provides a view of the state's investment shares in urban areas by industry. In the majority of industries, the SOE/SHE share exceeds 50 percent, as does the median share. The weighted average, which incorporates the value of sectoral investments, is 48 percent. The most striking feature of Figure III-6 is that observable state entities (SOEs plus SHEs) accounted for a majority of investment in so many sectors. Another surprising result is that the state share in the manufacturing sector is only 20 percent. In part, this result reflects the failure of the data on registration to capture fully the state's participation in ventures with mixed ownership. On the other hand, this outcome also reflects the state's policy of *zhua da, fang xiao*, "grasp the big and let go of the small," which has led to the divestment of the state from less strategic manufacturing industries, such as textiles and apparel, leather goods, and metal product fabrication. Even despite the downward bias in the data, the state shares in more strategic manufacturing industries, such as petroleum and coal processing, ferrous metals, and transport equipment, are much higher than 20 percent.

Figure III-6: SOE and SHE shares of domestically funded fixed investments in urban areas, by sector, 2009



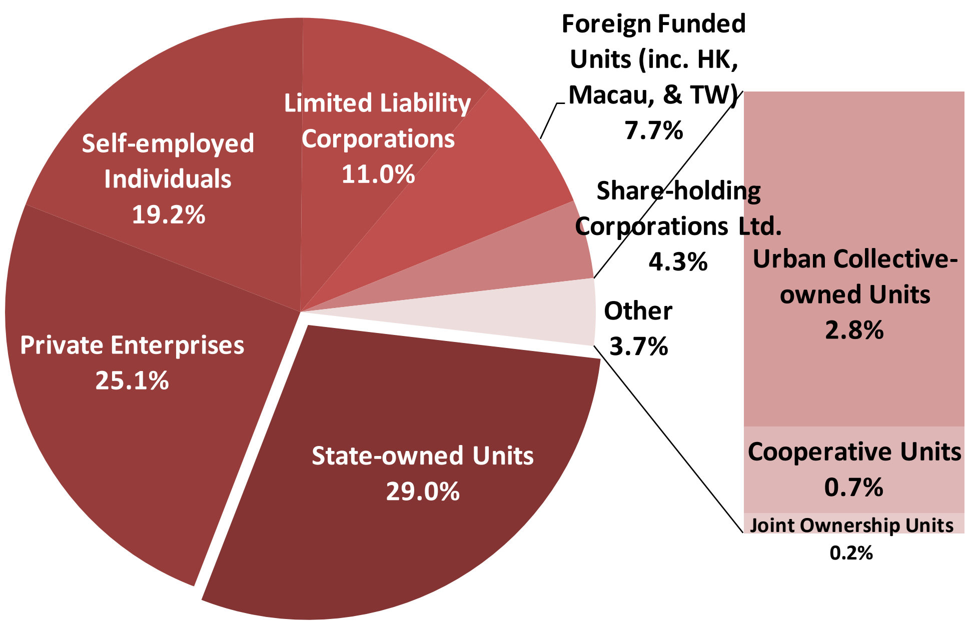
Source: National Bureau of Statistics of China.

In short, China's data on fixed investments show that the state sector remains an important focus of national policy. The SOE share of Chinese investment, an indicator that excludes investments by mixed ownership entities, was 33 percent in 2009. Under the conservative assumption that half of the investment of by share-holding and limited liability enterprises can be attributed to state entities, roughly half of urban fixed investments in 2009 were made by SOEs or entities with significant (direct or indirect) state-ownership levels. When data are analyzed by sector, it becomes clear that SOEs and SHEs account for the majority of investments in most major sectors in the Chinese economy. Ironically, the manufacturing sector–arguably the sector of most concern to the U.S. government—has among the lowest state investment shares according to official data. But this is precisely the sector in which restructuring has produced many entities with mixed ownership, and in which the official data underestimate the true weight of the state.

3. Employment and wages

The NBS publishes employment data by registration status for all of China, disaggregated into urban and rural components. Wage data are also provided. As with output, value added and fixed asset investment, the SOE value understates the role of the state in the Chinese economy. Still, the data dovetail with other indicators in showing that the SOE sector remains a significant component of the Chinese economy. According to Figure III-7, pure SOEs accounts for nearly 30 percent of urban employment identified by NBS. This share excluded SHEs as well as other mixed enterprises where SOEs are controlling.

Figure III-7: Employment of urban workers, by status of registration, 2009



Source: National Bureau of Statistics of China.

Figure III-8 provides a sectoral breakdown of SOE employment in urban areas, which accounted for 40 percent of China's employment in 2009. Manufacturing sectors have the lowest SOE share, for the same reasons mentioned in the discussion regarding investment.

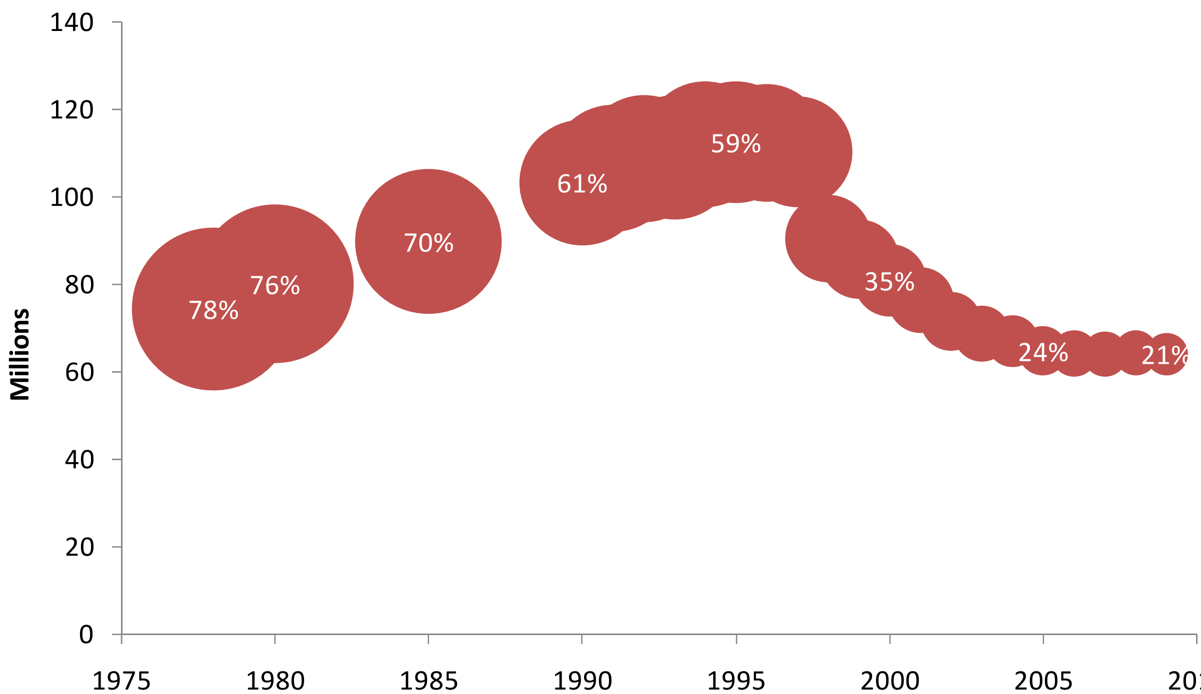
Figure III-9 represents the level and share of SOE employment in urban areas. The SOE share, represented by the diameter of the bubbles, has been declining from 1978 to 2009. However, the number of employees was rising until the mid 1990s but then began to decline. This drop is attributable to the drive to create a modern enterprise system, the state's decision to "let go of the small," and subsequent bankruptcies.

Figure III-8: Urban employment by SOEs by industry, level and percent, 2009

	Employees at state-owned units *Thousands*	SOE share of industry employment *Percent*
Agriculture, Forestry, Animal Husbandry and Fishery	3,561	95%
Mining	2,437	44%
Manufacturing	4,378	13%
Production and Distribution of Electricity, Gas and Water	1,986	65%
Construction	2,627	22%
Traffic, Transport, Storage and Post	4,139	65%
Information Transmission, Computer Services and Software	646	37%
Wholesale and Retail Trades	1,442	28%
Hotels and Catering Services	552	27%
Financial Intermediation	1,460	33%
Real Estate	435	23%
Leasing and Business Services	1,254	43%
Scientific Research, Technical Service, and Geological Prospecting	2,094	77%
Management of Water Conservancy, Environment	1,783	87%
Services to Households and Other Services	283	48%
Education	14,906	96%
Health, Social Security and Social Welfare	5,299	89%
Culture, Sports and Entertainment	1,119	86%
Public Management and Social Organization	13,800	99%

Source: National Bureau of Statistics of China.

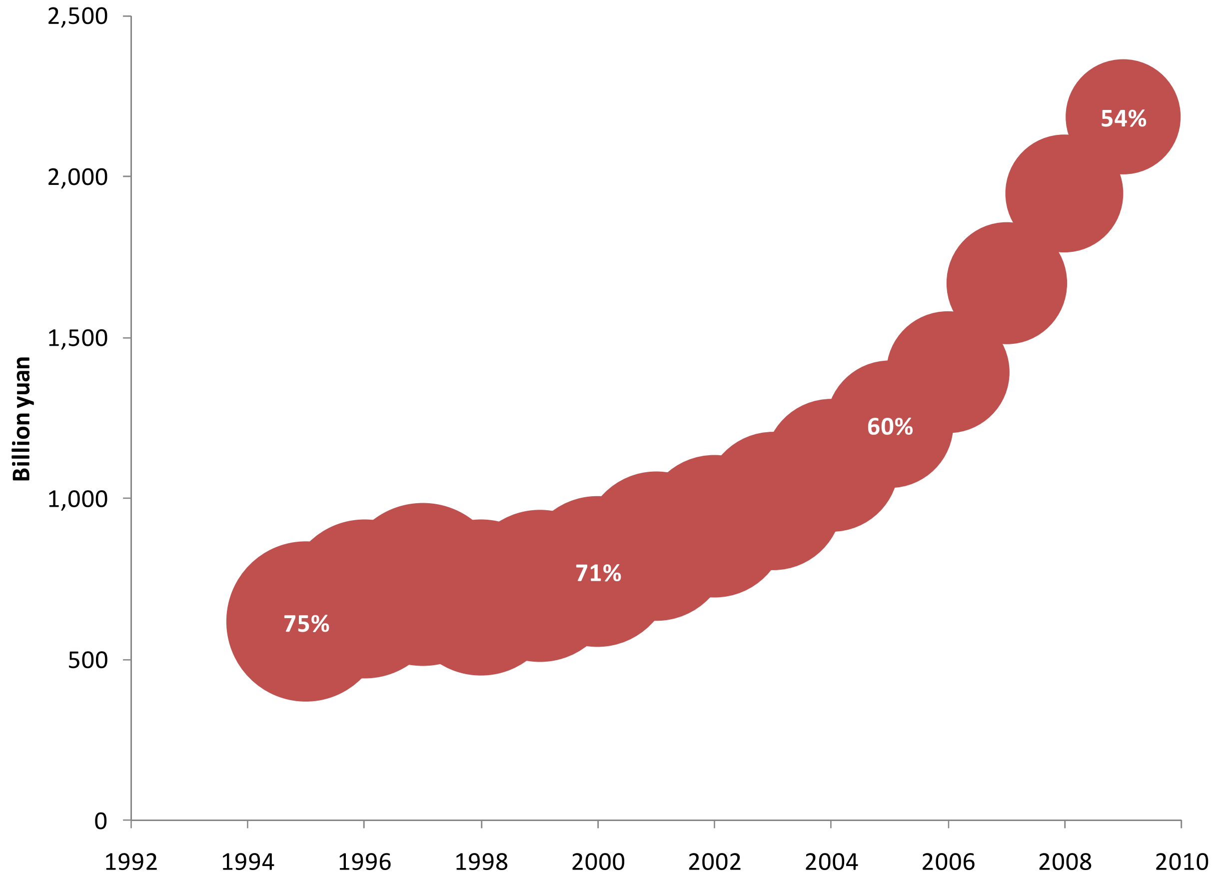
Figure III-9: Urban employment by SOEs, levels and shares, 1978-2009



Source: National Bureau of Statistics of China.

In contrast to the fall in employment by pure SOEs, the wages paid by SOEs have been rising since the late 1990s. In 2009, SOEs accounted for more than half of total wages paid to urban employees.

Figure III-10: Total wages paid by SOEs to urban employees, levels and shares, 1995-2009

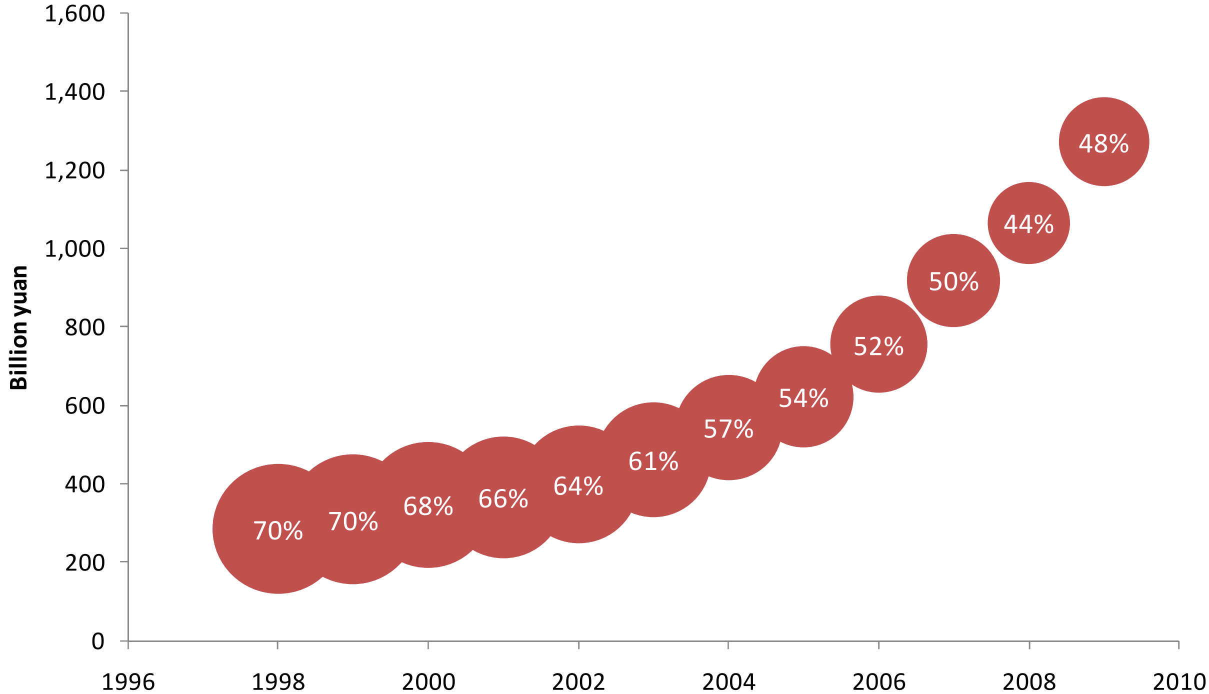


Source: National Bureau of Statistics of China.

4. Taxes/revenues

Tax revenues offer another way to assess the weight of SOEs in the Chinese economy. The China Statistical Yearbook (CSY) presents data on value added taxes payable and other business taxes and charges paid by industrial SOE and SHEs and other industrial businesses "designated by size," both nationally and by region. These data indicate that the state share has been falling, but remains substantial. The data series begins in 1998 and at that time, the SOE share was about 70 percent. In 2009, the share was 48 percent, up from 44 percent in 2008. Although the share trend is down, taxes paid by these state entities have expanded rapidly.

Figure III-11: The SOE and SHE share of value added, business and other taxes and charges



Source: National Bureau of Statistics of China.

5. The observable SOE share of output

Though Chinese data on SOEs and state-holding enterprises are substantial, there is no official announcement of the weight of SOEs in the Chinese economy. The 2010 version of the WTO's *Trade Policy Review* of China dryly makes this point.[27] However, the OECD study of Chinese SOEs suggests a methodology that is adopted here. Specifically, the SOE share of value added (or output, if value added data are not available) for each major sector is multiplied by that sector's share of GDP.[28] The OECD study estimated that SOEs and SHEs accounted for 29.7 percent of GDP in 2006. This estimate is likely too low, for at least two reasons. First, the government's data on construction SOEs do not include the value added of state-holding enterprises. Including SHEs makes a significant difference with manufacturing and would likely increase the construction share as well. A review of the *D&B® Family Tree* for the China State Construction Engineering Corporation (CSCEC) indicates that the firm has 116 subsidiaries in China alone, the majority of which are in construction and construction-related industries.[29] As

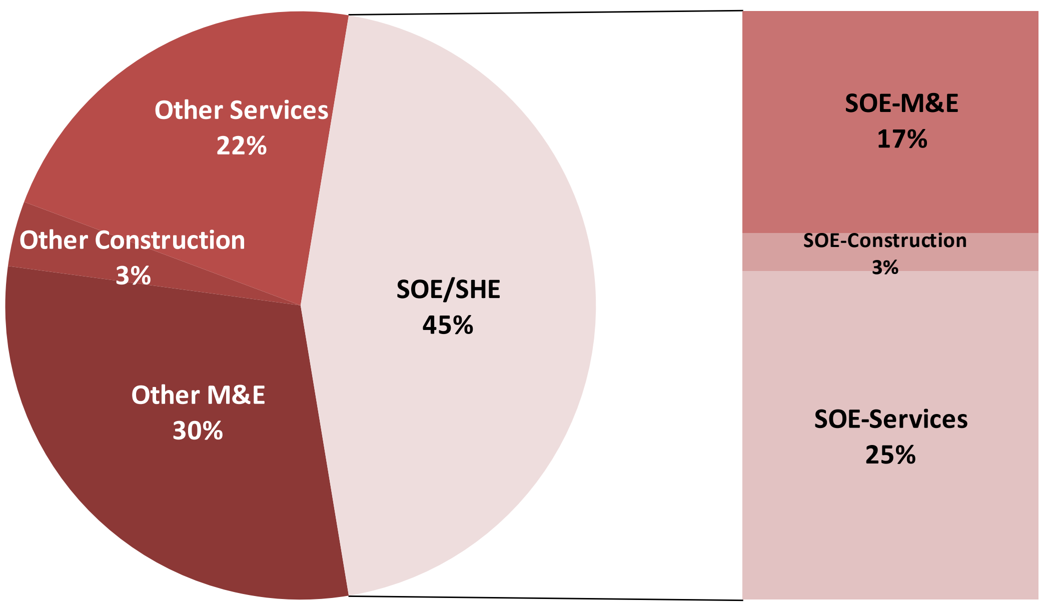
[27] (World Trade Organization 2010) 54 (par. 122). "The share of SOEs' output in GDP is not available to the Secretariat."
[28] (Lee 2009) 6 and *fn.* 10.
[29] (D&B Family Tree for China State Construction Engineering Corporation (Beijing, Beijing China) 2011) 27-29.

such, it seems reasonable to adjust the government's construction data on value added to incorporate state-controlled entities.[30]

Second, the OECD's estimate of tertiary sector value added was based on limited data that understated the SOE contribution in services. An alternative methodology that takes into account existing employment and investment data seems to suggest that SOEs account for about half of services sector value added.

This methodology suggests that SOEs and SHEs were responsible for 40 percent of China's GDP and 45 percent of non-agricultural GDP in 2007, the last year for which data required for this type of analysis are available.

Figure III-12: Estimated SOE and SHE share of China's non-agricultural GDP, 2007



Source: National Bureau of Statistics of China; authors' calculations. See Attachment 2: Calculation of SOE share of China's GDP.

Thus, in 2007, even Chinese data indicate that the state sector remains a significant force in the Chinese economy. But even this accounting does not capture the full role of the state. This estimate only includes the visible state enterprises—those considered SOEs and state controlled entities. It does not account for urban collective enterprises or township and village enterprises, many of which are owned by local governments. Nor does this estimate account

[30] Specifically, it is assumed that including SHEs would raise the state's footprint in the construction industry proportionally to the increase in industry. See Attachment 2: Calculation of SOE share of China's GDP.

for all firms that are indirectly controlled by the state through domestic and foreign affiliates. For example, much foreign investment from Hong Kong, Macau and several well-known tax havens, consists of Chinese funds "round-tripped" in order to garner favorable tax treatment, which was available to FIEs until 2008, and for other reasons.[31] According to one estimate, up to 50 percent of inward FDI in China can be attributed to round tripping.[32]

The amount of this round-tripping that can be attributed to SOEs is not known. What is known is that the foreign subsidiaries of SOEs do invest in China and that FIEs are major contributors to China's GDP. According to Chinese statistics, enterprises funded by Hong Kong, Macau and Taiwanese investments accounted for value added of RMB 3.2 trillion, roughly one fourth of industrial value added in 2007. At least some of this output can reasonably be attributed to round-tripped state funds.

B. Comparison of the observable state sector and the private sector

China's economy has undergone dramatic reforms since the late 1970s. The most dramatic of these changes has been the introduction of private enterprise into what had been a centrally planned economy completely dominated by SOEs. The generally accepted view is that market-oriented reforms began in the late 1970s, after the last leader loyal to Chairman Mao Zedong relinquished power and Deng Xiaoping was elevated to paramount leader.[33] Initial economic reforms were concentrated in the countryside.[34] During the 1990s, the focus shifted to urban areas and to a restructuring of the state-owned sector, which included selective privatizations, the introduction of market pricing, and the move to a "modern enterprise system."

The expansion of the private sector in China since the late 1970s is indisputable. In the CSY, statistics on the activities of the private sector only go back to 1998. As noted in Table III-1 above, the Chinese definition of the private sector is very specific: it includes private limited liability corporations, private share-holding corporations, private partnership enterprises and private sole investment enterprises. There is no official accounting of value added for the private sector across all industries in China, so this report relies on statistics for gross industrial output value, value added by industrial enterprises, investment in fixed assets, employment in urban areas, and taxes paid by industrial enterprises. As shown in the table below, which is based on the strict definition of the private sector applied in the CSY, the private sector shares range from 11 to 30 percent.

[31] (Salidjanova 2011) 19-24.
[32] (Xiao 2004) 23.
[33] (Naughton, The Chinese Economy: Transitions and Growth 2006) 79; and (Huang 2008) 38, 87-88.
[34] (Naughton, The Chinese Economy: Transitions and Growth 2006) 92; and (Huang 2008) chapter 2.

Table III-3: Various indicators of the size of China's private sector

Measure (year)	Private sector share
Gross industrial output value (2009) 1/	29.6%
Industrial value added (2007) 1/	22.5%
Domestically funded investment in fixed assets (2009)	22.4%
Employment of rural and urban workers (2009)	11.0%
VAT and other business taxes and charges (2009) 1/	22.1%

1/ The denominator for these shares covers industrial enterprises "above a designated size."
Source: National Bureau of Statistics of China.

The table above considers the private sector as it is defined by Chinese authorities, but it excludes other enterprises that almost certainly are not state-owned. In testimony before the USCC, Derek Scissors of the Heritage Foundation combined private with sole-foreign-owned enterprises to estimate the private share of fixed urban investment.[35] Table III-4 below applies a similar approach for output, total fixed investment, and employment. These expanded private shares range from 20 to 39 percent. These measures are also imperfect; for example, there are known to be sole-foreign invested firms that are subsidiaries of SOE-invested firms incorporated in the British Virgin Islands—but at least these measures go beyond what the GOC defines as private.

Table III-4: Various indicators of the size of China's private sector, based on an expanded definition, 2009

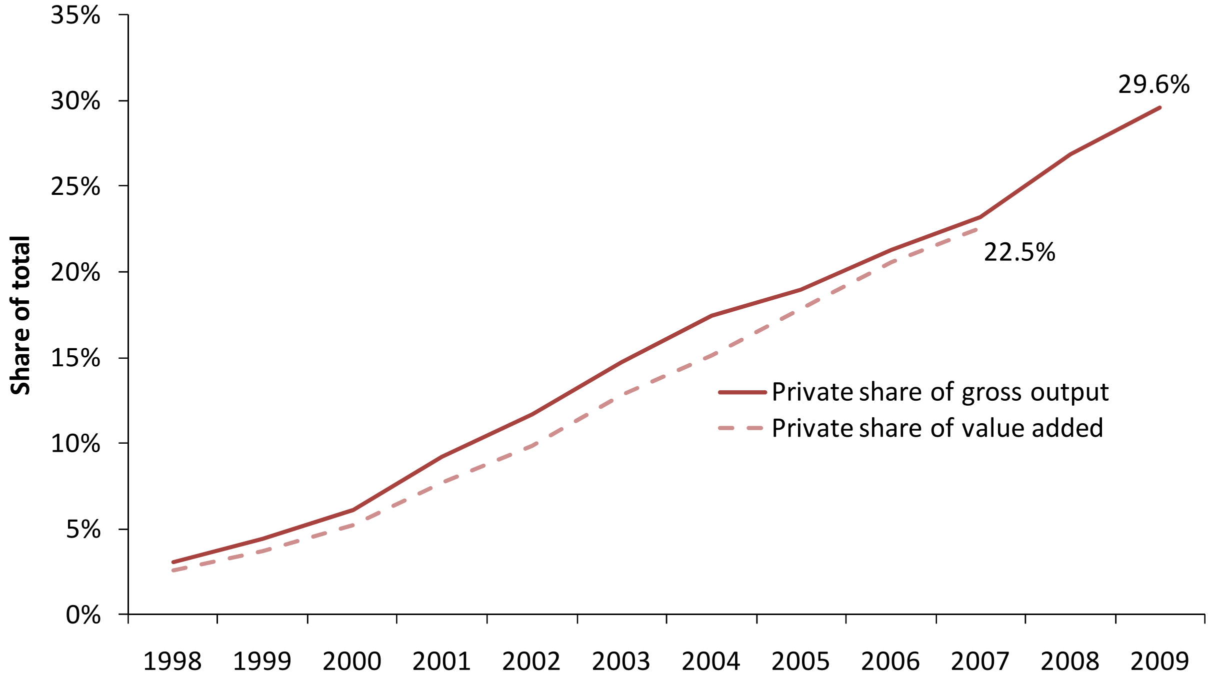
Measure	Included indicators	Private sector share
Gross industrial output value 1/	Private plus sole-invested foreign	38.5%
Domestically funded investment in fixed assets	Private plus self employed individual plus estimated sole -invested foreign 2/	26.7%
Employment of rural and urban workers	Private (rural and urban) plus self employed individual plus estimated sole -invested foreign 2/	20.1%

1/ The denominator for these shares covers industrial enterprises "above a designated size."
2/ Sole-invested foreign is estimated by multiplying the foreign-funded values for investment and employment, respectively, by the sole-invested foreign share of GIOV.
Source: National Bureau of Statistics of China.

The trend of private sector industrial output has been steadily and rapidly rising since 1998, as shown in Figure III-13, though data covered in the earlier years may be understated. Value added is the preferred measure, but the gross output series is presented as well because it is more contemporaneous and because its trend closely matches that of value added. It is reasonable to conclude that the private sector, as defined by in Table III-1, was responsible for nearly one-third of industrial value added in 2009.

[35] (State-owned Enterprises in China: Testimony of Derek L Scissors 2011).

Figure III-13: Private sector value added and gross output, 1998-2007/09



Source: National Bureau of Statistics of China.

The table below compares private sector data with data for state-owned and controlled enterprises. This representation of the state sector does not include all entities for which the state has a major share (directly or indirectly), but it does incorporate many more enterprises than data for SOEs alone. The table shows that the output, value added, and tax payments of SOEs and SHEs expanded substantially, though not as rapidly as the private sector did. The exception is employment, which reflects not only the growth of the private sector, but also the restructuring of bloated SOEs since the late 1990s. However, the employment data cover only SOEs, not SHEs, and thus understate employment attributable to the state sector.

Table III-5: Comparison of the private sector and the observable state sector

	1998-2001		2002-2004		2005-2009 1/	
	Private	SCE	Private	SCE	Private	SCE
Gross industrial output value (RMB bil.)	483	3,804	2,921	6,314	11,491	12,729
Industrial value added (RMB bil.)	120	1,291	745	2,129	2,256	3,628
Total employment (urban + rural, mil.) 2/	18	83	46	68	76	64
Industrial taxes (RMB bil.)	17	326	103	506	427	1,002

1/ Value added average is based on 2006-2007, the most recent data available when this study was prepared.
2/ Employment data for state-holding enterprises are not included.
Source: National Bureau of Statistics of China.

In short, the expansion of the private sector has been robust, and in the area of industry, the private sector in China is approaching the size of the measureable state sector in many respects. At the same time, it would be a mistake to view these incomplete data and conclude that the pure private sector accounts for the majority of China's economy. The observable SOE sector under reasonable assumptions accounts for nearly 40 percent of China's economy. Given additional information on the prevalence of SOE ownership in China's capital markets, anecdotal and observed data on the prevalence of SOE ownership among LLCs and other ownership categories, and the SOE role in round-tripped FDI, it is reasonable to conclude that by 2009 nearly half of China's economic output could be attributable to either SOEs, SHEs, and other types of enterprises controlled by the SOEs indirectly. If the output of urban collective enterprises and the government-run proportion of TVEs are considered, the broadly defined state sector likely surpasses 50 percent.

This conclusion goes beyond all the published estimates we have reviewed, but is consistent with the opinions of knowledgeable individuals currently dealing with Chinese enterprises in policy and business settings. This conclusion is likely startling in view of prior estimates that the private sector in China accounts for 70 percent of GDP. But such a dominant private role is inconsistent with *socialism with Chinese characteristics* as articulated by the CCP. For example, the government-run *People's Daily* provides this definition of *socialism with Chinese characteristics* as used in 17th People's Congress: "On its economic fronts, China sticks to a multi-ownership-oriented basic market economic system, with the public ownership in the dominance."[36] This thinking is also memorialized in China's five year plans.[37] Through 2009, at least, the size of the public sector dovetails with the CCP's vision.

Still, a singular focus on calculating the true SOE share of GDP misses the forest for the trees. The growth of the private sector in China has been due to reforms that were required to reinvigorate China's rural economy in the 1980s and restructure the state-owned sector thereafter to make it more efficient and less expensive for the state to maintain. While this process undeniably has led to an expansion of the private sector and an increased role for market mechanisms in China, the Party and state continue to maintain significant control over state and non-state sectors alike. The dynamics of this control, and its effectiveness, are more relevant for understanding China's economy, and its impact on the U.S. economy, than is the output share of China's SOEs.

[36] (Socialism with Chinese Characteristics 2007).
[37] (National Development and Reform Commission 2006); and (National Development and Reform Commission 2011).

IV. Sub-national SOEs

There are as of this writing 120 central SOEs. Yet Chinese statistics indicate that state-owned entities exceed 100,000.[38] How is this possible? The answer is twofold. First, central SOEs frequently contain numerous subsidiaries. Second, sub-national governments in China also directly own SOEs, and those SOEs in turn have numerous subsidiaries.

This section responds to question 2 of the Commission's RFP. The Commission is interested in differentiating the economic footprint of SOEs between the 120 central SOEs and the sub-national SOEs, whether there are any broad distinctions between the business and investment activities of these SOEs, and any differences in the responsiveness of national and sub-national SOEs to central government planning and direction.

A reasonable estimate of these sub-national SOEs is that they approach 100,000. As discussed below, a review of the *D&B® Family Tree* for a single central SOE found 116 subsidiaries in China alone. This is a very high number and may overstate the number of subsidiaries held by each SOE. Still if each central SOE has 100 subsidiaries, the number of entities associated with all central SOEs would total 12,000. This is a long way from the 100,000-120,000 SOEs that currently exist in China. Thus, it appears that the vast majority of SOEs in China are owned by sub-national governments. On the other hand, the central SOEs tend to be much larger, on average, than sub-national SOEs.

Though NBS statistics do not provide the necessary details to precisely answer the Commission's questions, they do provide SOE data by urban area and by industry that indicate that the SOE presence varies significantly by region. Table IV-1, Table IV-2, and Table IV-3 present the level and share of urban employment, fixed asset investment, and taxes in China. There is a wide disparity across the various areas. This variation exists because some regions embraced market oriented reforms in the 1980s more quickly than others. For example, the SOE share of employment and taxation in the Guangdong and Zhejiang areas are relatively low. This pattern reflects the important roles played by FIEs in Guangdong and the private sector in Zhejiang, respectively. In contrast, Shanghai is a bastion of the state sector. Many SOEs have headquarters in Shanghai, and CCP leaders from Shanghai in the past have been predisposed toward urban-centered, SOE development.[39] This SOE focus is manifest in relatively high SOE shares for tax payments and investments in Shanghai.

[38] (Mattlin, Chinese State-owned Enterprises and Ownership Control 2010) 9.
[39] (Huang 2008) 159.

An industry and regional breakdown for SOEs in the construction and manufacturing industries is shown in Table IV-4. There were more than 25,000 of these SOEs in 2009, 20,000 of which operated in manufacturing industries.

Table IV-1: SOE employment by urban area, levels and shares, 2009

	Employees at state-owned units *Thousands*	SOE share of urban employment *Percent*
Shandong	4,281	29%
Guangdong	3,892	17%
Henan	3,806	36%
Heilongjiang	3,344	47%
Hebei	3,288	34%
Sichuan	3,288	33%
Hubei	2,838	31%
Liaoning	2,817	28%
Jiangsu	2,788	15%
Hunan	2,645	32%
Shanxi	2,467	48%
Shaanxi	2,439	53%
Zhejiang	2,073	14%
Anhui	2,021	32%
Jiangxi	1,991	38%
Guangxi	1,970	38%
Yunnan	1,878	32%
Beijing	1,857	20%
Xinjiang	1,813	48%
Inner Mongolia	1,667	38%
Jilin	1,646	36%
Fujian	1,515	19%
Guizhou	1,508	49%
Gansu	1,472	49%
Shanghai	1,418	20%
Chongqing	1,198	24%
Tianjin	812	26%
Hainan	545	36%
Qinghai	368	41%
Ningxia	360	33%
Tibet	197	40%

Source: National Bureau of Statistics of China.

Table IV-2: SOE fixed investment by urban area, levels and shares, 2009

	Fixed investment at state-owned units *Billion Yuan*	SOE share of urban fixed investment *Percent*
Sichuan	436	40%
Guangdong	355	33%
Jiangsu	338	21%
Shaanxi	293	48%
Shandong	288	16%
Inner Mongolia	283	40%
Hunan	276	37%
Hebei	263	22%
Hubei	262	35%
Liaoning	255	23%
Zhejiang	255	26%
Henan	246	18%
Anhui	242	28%
Shanghai	237	54%
Shanxi	227	47%
Yunnan	208	47%
Fujian	207	38%
Heilongjiang	206	42%
Jilin	177	29%
Tianjin	176	40%
Chongqing	174	35%
Jiangxi	171	28%
Guangxi	165	33%
Beijing	155	37%
Gansu	126	54%
Xinjiang	125	47%
Guizhou	109	47%
Qinghai	40	50%
Ningxia	37	35%
Hainan	32	37%
Tibet	27	71%

Source: National Bureau of Statistics of China.

Table IV-3: The SOE and SHE share of value added, business and other taxes and charges by region, 2009

	VAT and other business taxes/charges *Billion Yuan*	SOE and SHE share of VAT and other business taxes/charges *Percent*
Shandong	1,000	34%
Guangdong	886	34%
Shanghai	765	69%
Liaoning	726	54%
Jiangsu	654	24%
Yunnan	630	86%
Hunan	548	52%
Hubei	533	60%
Shaanxi	515	74%
Zhejiang	513	34%
Henan	513	37%
Heilongjiang	464	77%
Hebei	451	45%
Anhui	439	58%
Shanxi	428	65%
Jilin	425	68%
Tianjin	423	69%
Sichuan	408	42%
Beijing	340	66%
Xinjiang	327	88%
Gansu	294	91%
Inner Mongolia	280	44%
Guangxi	208	56%
Fujian	205	32%
Guizhou	204	73%
Jiangxi	202	40%
Chongqing	199	56%
Ningxia	56	70%
Qinghai	51	63%
Hainan	19	16%
Tibet	2	45%

Source: National Bureau of Statistics of China.

Table IV-4: Number of industrial SOEs and SHEs and the number construction SOEs, by region

	Industrial	Construction	Total
	Number of enterprises		
Shandong	1,287	434	1,721
Guangdong	1,264	410	1,674
Shanghai	1,116	147	1,263
Beijing	1,058	175	1,233
Sichuan	972	245	1,217
Liaoning	883	289	1,172
Hubei	864	306	1,170
Jiangsu	839	279	1,118
Tianjin	974	126	1,100
Hunan	823	248	1,071
Henan	804	211	1,015
Hebei	794	172	966
Anhui	729	172	901
Zhejiang	728	117	845
Shanxi	647	178	825
Shaanxi	695	128	823
Guangxi	615	144	759
Jiangxi	538	177	715
Heilongjiang	505	181	686
Chongqing	518	134	652
Yunnan	551	94	645
Guizhou	523	107	630
Fujian	532	89	621
Xinjiang	495	83	578
Gansu	452	100	552
Inner Mongolia	515	17	532
Jilin	407	70	477
Qinghai	137	59	196
Ningxia	110	61	171
Hainan	102	33	135
Tibet	33	23	56
TOTAL	20,510	5,009	25,519

Source: National Bureau of Statistics of China.

The sub-national governments in China do not always move in lock-step with the aims of the central government. From the days of reform, decentralization and autonomy helped encourage local development by providing incentives for local management who had the best on-the-ground information in order to improve performance of their SOEs. However, these policies also caused a divergence of local and central interests. Local governments protected their primary revenue sources, the SOEs under their control, through administrative measures (such as barriers to interprovincial investment and merger and acquisitions) and through their control over bank lending. As one scholar notes, "{l}ocal governments promoted the development of local firms both when it was appropriate and when it was not."[40]

U.S. government officials have come across this issue in trade remedy cases and other interactions with China, finding instances in which local officials closely followed central policies, and others in which local officials worked at cross-purposes with the central government. For example, the central government's industrial policy supported development of certain kinds of corn-based chemicals, such as citric acid.[41] During the 1990s, China experienced a boom in the construction of citric acid production, as various provincial SOEs set up or expanded production facilities.[42] By the time this boom subsided, China had enough capacity to supply two-thirds of the global market for citric acid.[43] Chinese citric acid flooded world markets at low prices, and several non-Chinese foreign firms subsequently ceased production of citric acid.[44] The central government began to modify its policies during the 2000s under the auspices of environmental reforms, but capacity continued to expand on a net basis,[45] reflecting local prerogatives.

Local governments tend to oppose the center when the central government, upon finding its policies were all too successful, reverses course and calls for consolidation and capacity reductions. In such cases, local governments are prone to resist the central government's prescriptions, or follow polices that preserve local capacity as much as possible. This is an all-too-familiar occurrence in China. According to one U.S. official knowledgeable of the situation in China, this dynamic is playing out in certain segments of China's power sector.[46] Local officials, SOEs, and local bank branches also conspire to modify local SOE financial statements to meet lending requirements emanating from Beijing.

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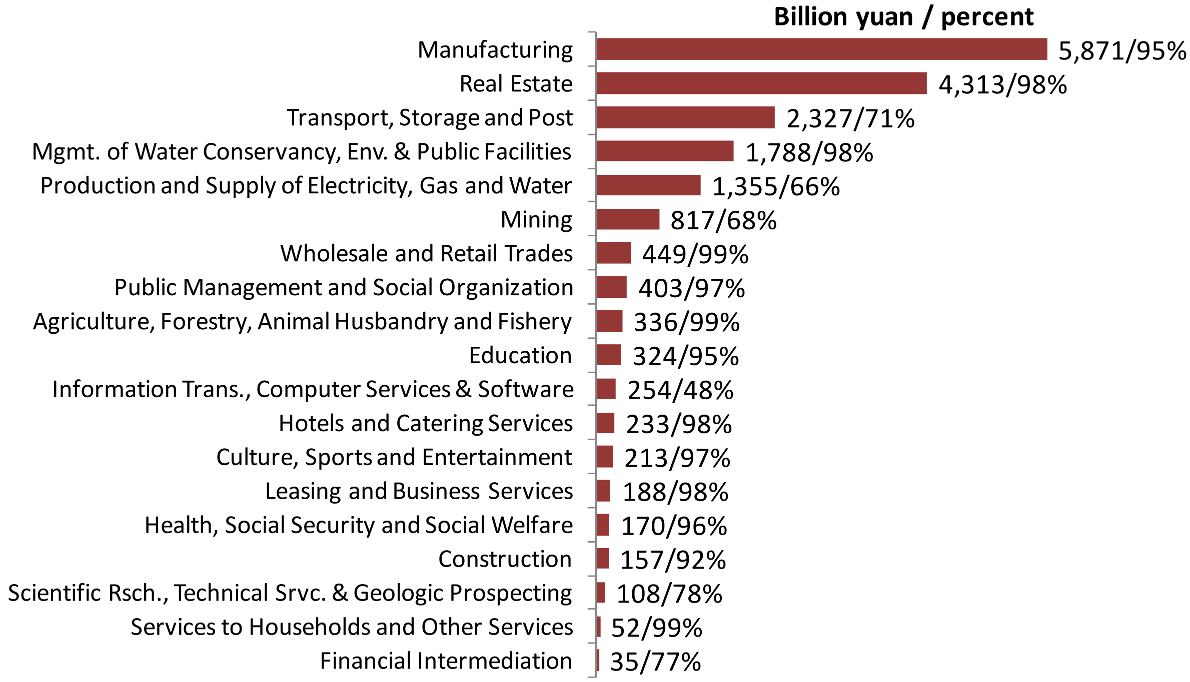
[40] (Yang 2004) 182.
[41] (Gale, et al. 2009) 3-4.
[42] (SRI Consulting International 2007) Organics-4 to Organics-8.
[43] (Malveda, Janshekar and Inoguchi 2009) 6.
[44] (Malveda, Janshekar and Inoguchi 2009) 62, 80, and 85.
[45] (United States International Trade Commission 2009) VII-3, including *fn.* 6.
[46] (Interview with U.S. government official 2011).

The steel industry provides a telling recent example of local officials' interactions with central government policy guidance. The central government considers steel a pillar industry. Current policy aims to rationalize the steel industry and produce "national champions" with higher levels of capacity and, in theory, greater responsiveness to the central government's efforts to reduce various emissions. As noted below, there are currently three central SOEs among the world's top steel producers. But aside from these giants, production of steel in China is quite dispersed and areas of China with many steel enterprises also consider the steel industry to be of special importance. Baosteel, one of the three steelmakers currently owned by the central SASAC, has explored mergers with a number of SOEs owned by sub-national SASACs, but has frequently met with resistance.[47] In 2009, the government of Hebei province and its SASAC pursued a major consolidation of SOEs in the region that suddenly vaulted the resulting producer, Hebei Iron and Steel, to be among the world's top producers.[48] Since that consolidation, the newly enlarged firm has taken ownership stakes in a dozen private local steel producers.[49] These actions are consistent with the central government's consolidation aims but they also are geared toward expanding the profile of the local SOE and preventing encroachment by Baosteel.

The autonomy exhibited by sub-national officials is extremely important because in most instances, it is the local officials who approve the vast majority of investments in China.[50] Figure IV-1 contains CSY data on investment in fixed assets managed by local governments. Local governments are responsible for undertaking, through SOEs, or overseeing and permitting, 95 percent of fixed investments in manufacturing industries and a majority of investment in most other industries. Notably, the lower local shares tend to parallel the strategic industries that will be discussed below.

[47] (Baosteel merger talks with Baotou collapse 2010); (BaoSteel Stymied by Provincial Government from Acquiring Ma Steel 2009); and (Li and Li 2006).
[48] (Hebei Iron arms merger to challenge Baosteel 2009).
[49] (Hebei Iron inks agreement with 5 private steel enterprises 2010); and (China's Hebei Steel to Take 10% Stakes in 7 Private Mills 2011).
[50] (National Bureau of Statistics of China 2010). Local investment refers to the investment in projects or by enterprises, institutions or administrative units which are under the direct leadership and management of departments under the provincial, prefecture and county governments. Also included are projects by foreign-invested enterprises and enterprises without competent managing authorities.

Figure IV-1: Fixed investment by industry and share managed by local government, 2009



Source: National Bureau of Statistics of China.

In sum, there appears to be significant heterogeneity in SOE reliance among China's major regions. Simply put, some areas are more reliant on SOEs than others. SOEs tend to be less prevalent and important in areas that relied on the private sector and/or FIEs to drive economic growth since 1978. Sub-national governments are bound to follow central government policies, but they do exercise autonomy when local interests and central policies diverge. Interests tend to diverge when the central government decides to rein in previously promoted industries.

V. China's strategic and pillar SOEs

On December 5, 2006, the State-owned Assets Supervision and Administration Commission (SASAC) of the State Council announced the "Guiding Opinion on Promoting the Adjustment of State-Owned Capital and the Reorganization of State-Owned Enterprises."[51] This guiding opinion received a significant amount of attention from the press and was publically discussed by SASAC officials. But the State Council never ratified the document.[52] Still, this episode provides a good indication of the state's views of key sectors over which it plans to maintain a major presence. The SASAC chairman designated defense, electric power and grid, petroleum and petrochemical, telecommunications, coal, civil aviation, and shipping to be strategic

[51] (Guiding Opinion on Promoting the Adjustment of State-Owned Capital and the Reorganization of State-Owned Enterprises 2006).
[52] (State-owned Enterprises in China: Testimony of Barry Naughton 2011).

industries, and equipment manufacturing, auto, information technology, construction, iron and steel, non-ferrous metals, chemicals, and surveying and design to be pillar industries.[53] The state would maintain sole ownership or absolute control over the strategic industries and a strong control position over the pillar industries.[54]

The Commission requested market share information for strategic and heavyweight SOEs by sector. There is no single source of data on SOE market shares by sector for central or local SOEs that precisely aligns with all the strategic and pillar industries identified by SASAC. As an alternative, this study provides revenue shares.[55] Revenue was generally obtained from auditing reports and financial statements of key SOEs available on their Chinese web sites. In most cases, the data cover 2010, though in some cases earlier data were required. The revenue shares are augmented by referring to CSY data on fixed assets and other information from NBS or industry associations obtained from data provider Haver Analytics. This section also considers the banking sector, which was not included in SASAC's pronouncement.

A. Strategic industries

According to the December 5, 2006 SASAC Guiding Opinion, the state must maintain at least a fifty percent ownership stake in each firm in this industry grouping.[56]

Table V-1 contains revenues for defense oriented firms. Data on revenues for the entire industry were not available. [57]

[53] (China's Industrial Policy and Its Impact on U.S. Companies, Workers, and the American Economy: Testimony of Terrence P. Stewart 2009).

[54] Absolute control is generally understood to be majority ownership while strong control reflects an ownership share of 30-to-50 percent. See (China's Industrial Policy and Its Impact on U.S. Companies, Workers, and the American Economy: Testimony of Terrence P. Stewart 2009).

[55] Because the CSY published by NBS contained data through 2009 at the time of this writing, year-to-data data published by NBS or industry associations in China were used for 2010. In some cases, YTD data for December were not yet published. In those cases, percent changes of YTD figures from 2009 to 2010 through November were used to estimate full-year revenues.

[56] (Guiding Opinion on Promoting the Adjustment of State-Owned Capital and the Reorganization of State-Owned Enterprises 2006).

[57] One area where official information is lacking is in the armaments industry. There is information about the revenues of individual SOEs but the NBS does not publish any data for the armaments industry. However, given the importance of this industry to China's national security, one can assume that that the state's share in this sector is likely very high.

Table V-1: Revenues of key defense-oriented SOEs, 2010

	Sales Revenue Bil. RMB
Aviation Industry Corporation of China	210
China South Industries Group Corporation	200
China Shipbuilding Industry Corporation	143
China Aerospace Science & Industry Co.	90
China State Shipbuilding Corporation	90
China Aerospace Science & Technology Co.	84
Top SOE total	817

Sources: Financial statements and/or auditing reports of named SOEs.

Table V-2 contains data on revenues of major SOEs involved in the coal industry. These data account for only 13 percent of industry gross output in 2010. However, based on NBS data, the total SOE and SHE share of output is nearly 60 percent.

Table V-2: Top SOE share of revenues in China's coal industry, 2010

	Sales revenue Bil. RMB	Share of Revenue
Shenhua Group Corporation	220	9.2%
China National Coal Group Co.	69	2.9%
China Coal Technology & Engineering Group Co.	18	0.8%
Top SOE subtotal	307	12.9%
Other SCE (est.) 1/	1,104	46.3%
Total SCE	1,411	59.2%
Others	974	40.8%
Total Industry	2,384	100.0%

1/ Estimated using SCE share of GIOV for 2009.
Sources: Financial statements and/or auditing reports of named SOEs; and National Bureau of Statistics (2010 total via Haver Analytics).

The airline industry is one for which market shares are available. According to a Chinese source, during the first three quarters of 2009, China Southern had a market share of 30 percent, compared to 19 percent for China Eastern and 17 percent for Air China. Shanghai Air, owned by China Eastern, held 5 percent of the market. Thus, these state-owned firms accounted for 71 percent of the Chinese airline services market. The revenue shares for these SOEs, as well as smaller general aviation firms, are shown below. They indicate that the top SOEs account for three quarters of industry revenues. Data on investment are, if anything, more dramatic. In full-year 2009, the state sector accounted for 87 percent of urban fixed asset investment in air transport services, a further indication of the state's dominance in this sector.

Table V-3: Top SOE share of revenues in China's air transportation sector, 2009

	Sales revenue Bil. RMB	Share of revenue
China Southern Air Holding Company	57	27.7%
China National Aviation Holding Group	52	25.4%
China Eastern Air Holding Company	42	20.6%
China TravelSky Holding Company	3	1.5%
China Aviation Supplies Holding Company	2	1.0%
Top SOE subtotal	156	76.2%
Others	49	23.8%
Total Industry 1/	205	100.0%

1/ General aviation plus transport segments.
Sources: Financial statements and/or auditing reports of named SOEs; and China Ministry of Communications via Haver Analytics.

Table V-4 below indicates that eight SOEs account for approximately 70 percent of revenue in the power sector. The NBS data on the power sector confirms the state's very prominent role. Data on GIOV suggest that state-owned and controlled firms account for more than 90 percent of output in 2009. Data on urban investment for that year indicate a state share of 80 percent.

Table V-4: Top SOE share of revenues in China's power sector, 2010

	Sales revenue Bil. RMB	Share of revenue
State Grid Corporation of China	1,532	38.6%
China Southern Power Grid Corporation	369	9.3%
China Huaneng Group	228	5.7%
China Datang Corporation	175	4.4%
China Guodian Group	163	4.1%
China Huadian Corporation	130	3.3%
China Power Investment Corporation	127	3.2%
Sinohydro Corporation	76	1.9%
Top SOE subtotal	2,800	70.6%
Other SCE (est.)	833	21.0%
Total SCE (est.)	3,633	91.6%
Others	333	8.4%
Total Industry (est.)	3,966	100.0%

Sources: Financial statements and/or auditing reports of named SOEs; and National Bureau of Statistics via Haver Analytics.

In the petroleum and petrochemical sector, the top SOEs accounted for 45 percent of revenue in 2010. Based on data from the China Petroleum and Chemical Industry Association, state ownership accounts for approximately three-quarters of output in this strategic sector. Data on fixed investment are broadly consistent with these calculations, with the state accounting for 78 percent of fixed asset investment in 2009.

Table V-5: Top SOE share of revenues in China's petroleum and petrochemical industry, 2010

	Sales revenue Bil. RMB	Share of Revenue
China Petrochemical Corporation	1,913	21.4%
China National Petroleum Corporation	1,721	19.3%
China National Offshore Oil Corp	355	4.0%
Zhu Hai Zhen Rong Company	61	0.7%
Top SOE subtotal	4,050	45.3%
Other SCE revenue (est.)	2,794	31.3%
Total SCE (est.)	6,844	76.6%
Others	2,087	23.4%
Total Industry (est.)	8,931	100.0%

Source: Financial statements and/or auditing reports of named SOEs; National Bureau of Statistics; and China Petroleum and Chemical Industry Association via Haver Analytics.

Based on the data in Table V-6, the shipping industry is also largely controlled by the state. Revenue data for individual enterprises and industry-wide data from the firm *Datamonitor* suggest that the top three SOEs accounted for 61 percent of revenue in the sector. Investment data indicate the state sector accounted for approximately three-quarters of urban fixed investment in 2009.

Table V-6: Top SOE share of revenues in China's shipping industry, 2010

	Sales revenue Bil. RMB	Share of revenue
China Ocean Shipping (Group) Company (COSCO)	164	30.7%
Sinotrans & China Changjiang National Shipping (Group) Corporation (CSC) 1/	95	17.8%
China Shipping (Group) Company	65	12.2%
SOE subtotal	324	60.7%
Others	210	39.3%
Total Industry	534	100.0%

1/ Sinotrans and CSC merged in 2009.
Sources: Financial statements and/or auditing reports of named SOEs; and Datamonitor.

The information in Table V-7 suggests that the state dominates the telecommunications services industry. The three top firms account for more than 95 percent of industry revenues. The state-owned-or-controlled share of urban fixed investment was 78 percent-- still high but significantly lower than the revenue share.

Table V-7: Top SOE share of revenues in China's telecom services industry, 2010

	Sales revenue Bil. RMB	Share of revenue
China Mobile Communication Group Co.	485	50.6%
China Telecommunications Corporation	260	27.1%
China United Network Communications Group Co.	177	18.5%
Top SOE subtotal	922	96.2%
Others	36	3.8%
Total Industry	958	100.0%

Sources: Financial statements and/or auditing reports of named SOEs; and National Bureau of Statistics.

In sum, a variety of data from SOEs, the NBS, and industry associations demonstrate that firms owned or controlled by the state in China are dominant in industries that the SASAC indicates are considered strategic. Shares of revenue, output, investments and markets all suggest that the visible share of the state in these industries exceeds 60 percent. Because the state may indirectly control other firms, the true level of state control is likely higher, but this could not be documented.

B. Pillar industries

According to the December 5, 2006 SASAC Guiding Opinion, the state must maintain a controlling stake in key enterprises in this industry grouping. However, the state may take a minority share, or no share at all, in some firms.[58] This makes the assessment of pillar industry market shares less straightforward when compared to strategic industries.

The identified sectors, such as machinery and equipment, are less precisely defined than the strategic sectors and can overlap. For example, the machinery and equipment industry also includes automobiles, which is separately enumerated as a pillar industry. There are, frankly, also machinery industries that are generally not considered strategic or pillar, such as the "general machinery basic components" and "food-processing and packaging machinery" industries, two of the subsectors enumerated by the China Machinery Industry Federation. Part of this confusion is that the inclusion of pillar industries appears to have been *ad hoc*.[59]

In general, the state's role in pillar industries is notably smaller than its role in strategic industries, as the SASAC directive dictates. The automotive, steel, and railway sectors are notable exceptions. The top SOEs accounted for approximately three quarters of China's automotive production in 2010 according to data from the China Association of Automobile Manufacturers. Privately owned firms and imports also compete in the Chinese vehicle market,

[58] (Guiding Opinion on Promoting the Adjustment of State-Owned Capital and the Reorganization of State-Owned Enterprises 2006).
[59] (State-owned Enterprises in China: Testimony of Barry Naughton 2011).

but the share of imported vehicles is believed to account for less than five percent of Chinese demand.[60]

Table V-8: Top SOE market share in China's automobile industry, 2010

	Mil. units	Market share
Shanghai Auto Industry Group	3.6	19.7%
Dongfeng Automobile Co., Ltd	2.6	14.7%
China FAW Group Corporation	2.6	14.2%
Changan Automobile (Group) Co. Ltd	2.4	13.2%
Beijing Auto Industry Group	1.5	8.3%
Guangzhou Auto Industry Group	0.7	4.0%
Top SOE subtotal	13.4	74.0%
Others	4.7	26.0%
Total market	18.0	100.0%

Source: China Association of Automobile Manufacturers via Haver Analytics.

There are many steel producers in China and some relatively large ones are known to be private. However, the state does have some important assets in this sector. The top SOE share of China's crude steel was nearly 18 percent in 2010, as shown in Table V-9. However, there are numerous state-owned and state controlled steel producers in China. For example, the CSY indicates that state-owned-or-controlled entities were responsible for 64 percent of gross output in the "smelting and pressing of ferrous metals" industry during 2009 and 50 percent of urban fixed asset investments. Thus, given the gaps in coverage, it is reasonable to conclude that steel production, like auto production, is predominantly state owned or controlled.

Table V-9: Top SOE share of crude steel production in China, 2010

	Mil. metric tons	Share of output
Baosteel Group	37.0	5.9%
Anshan Steel Group	22.1	3.5%
Hebei Iron & Steel 1/	20.0	3.2%
Wuhan Steel Product Group	16.6	2.6%
Shougang	14.9	2.4%
Top SOE subtotal	110.6	17.6%
Others	516.1	82.4%
Total industry	626.7	100.0%

1/ Estimated—Hebei has been growing due to restructuring, mergers, and acquisitions.
Source: World Steel Association.

[60] (China to promote auto imports in next five years: official 2010).

China's SOEs play an important role in the country's construction industry but the three enterprises identified account for only 7.1 percent of the market, as shown in the table below. Based on quarterly data from NBS, as well as 2009 data from the CSY, the total SOE share of revenue is approximately 20 percent. However, other data suggest that the state's footprint is even larger. As noted earlier, the SOEs in construction have numerous subsidiaries that are not counted in the SOE data provided for the construction industry. Data on fixed investments indicate that that SOEs and SHEs in the construction industry accounted for 55 percent of the industry's fixed asset investment in the urban areas during 2009, a strong indication that the state's share of the construction industry is close to 50 percent.

Table V-10: Top SOE revenue share in China's construction industry, 2010

	Sales revenue Bil. RMB	Share of revenue
China Communications Construction Company Ltd.	274	2.9%
China State Construction Engineering Corporation	262	2.8%
China National Building Materials Group Corporation	135	1.4%
China International Engineering Consulting Corporation	N/A	-
Top SOE subtotal	671	7.2%
Other SCEs (est.)	1,217	13.0%
Total SOE (est.)	1,888	20.1%
Others (est.)	7,491	79.9%
Total industry	9,379	100.0%

Source: Financial statements and/or auditing reports of named SOEs; and National Bureau of Statistics via Haver Analytics.

The non-ferrous metals sector also has a meaningful state presence. The top SOE's revenues accounted for approximately 20 percent of non-ferrous gross output in 2010. Based on data in CSY, the state sector accounted for 45 percent of gross output in 2009 and 32 percent of fixed urban investment. Chalco alone is said to hold a 25 percent market share in the domestic aluminum market, plus an additional six percent gained from selling aluminum produced by other companies.[61] Other major SOEs, such as Minmetals, play a role in the aluminum sector as well.

[61] (Lim 2011).

Table V-11: Top SOE revenue shares in China's non-ferrous metals industry, 2010

	Revenue Bil. RMB	Share of revenue
China Minmetals Corporation	254	8.7%
Aluminum Corporation of China	195	6.7%
China National Gold Group Corporation	51	1.8%
China Nonferrous Metal Mining (Group) Co. Ltd.	45	1.6%
China Metallurgical Group Corporation	22	0.8%
Top SOE subtotal	567	19.5%
Other producers	2,343	80.5%
Total non-ferrous industry (GIOV)	2,910	100.0%

Sources: Financial statements and/or auditing reports of named SOEs; and China Non Ferrous Metal Industry Association.

In the overall machinery and equipment sector, [62] the visible role of the state is relatively small in comparison with other strategic and pillar industries. Based on CSY, the state share of gross output in the various machinery industries was a combined 21 percent in 2009. But absent the transport sector, where the state's share was 46 percent, the share was much lower, ranging from nine to 24 percent. Urban investment data are generally consistent with this picture. In 2009, state-owned-and-controlled entities accounted for 17 percent of urban investment in fixed assets, though for transport equipment the state's share was 30 percent. Some of the major SOEs in this sector (excluding automakers) and their revenue data are shown in the table below. Clearly, there are some large state-owned equipment producers in China, most prominently in the railway sector.

[62] The CSY includes data for the following industries: general purpose machinery; special purpose machinery; transport equipment; electrical machinery and equipment; communication equipment, computers, and other electronic equipment; and measuring instruments and machinery for cultural activity and office work.

Table V-12: Top SOE revenues in the machinery and equipment industries, 2010

	Revenue Bil. RMB
China Railway Engineering Group Corporation	473
China Railway Construction Corporation Group	470
China National Machinery Industry Corporation	152
China Railway Materials Commercial Corporation	105
Shanghai Electric Group Co. Ltd	85
China Southern Locomotive & Rolling Stock Industry (Group) Corporation	46
Dongfang Electric Corporation	43
China Northern Locomotive & Rolling Stock Industry (Group) Corporation	41
Harbin Electric Corporation	33
China Hi-tech Group Corporation	24
China XD Group	16
China First Heavy Industries Group Corporation	9
China Railway Signal & Communication Corporation Group	8
China National Erzhong Group Co.	7
Top SOE revenue	1,512

Sources: Financial statements and/or auditing reports of named SOEs.

The information technology sector in China is not specified in Chinese statistics, but is generally considered to include both high technology goods, as well as services. The table below presents data on SOEs in the information technology industry, as well as SOEs that are focused on science and technology. Much information technology production occurs within the electronics industry, which includes communication equipment, computers and other electronic equipment. Information in CSY indicates that the state's role in this sector is not very large. For example, SOEs and SHEs accounted for only nine percent of gross output and 11 percent of fixed investment in this industry segment during 2009.

However, the firm Huawei is a major player in this sector, both inside and outside of China. Huawei claims to be a private firm, but observers have long believed the firm to have military ties.[63] Experts believe that the firm is, at a minimum, dominated by the state or a privately owned firm that behaves like a state-owned one.[64] Either way, it is well known that the firm is receiving significant levels of assistance from the Chinese government to penetrate international markets in recent years.[65] The firm is also believed to have advanced Chinese foreign policy interests in Iraq, Iran, and Afghanistan.[66] The case of Huawei vividly illustrates

[63] (Hille 2011).
[64] See (State-owned Enterprises in China: Testimony of Derek L Scissors 2011) and (State-owned Enterprises in China: Testimony of Barry Naughton 2011), respectively.
[65] (Raice 2010).
[66] (Kyl, et al. 2011).

that the state's ownership share alone does not always dictate the extent to which a firm in China is sensitive to the state's policy directives.

Table V-13: Top SOE revenues in the information technology and science and technology fields, 2010

	Revenue Bil. RMB
China Electronics Corporation	160
Legend Holdings Limited	147
China General Technology (Group) Holding, Limited	94
Hisense Corporation	64
Founder Group	53
Potevio Corporation	26
China Energy Conservation and Environmental Protection Group	25
China International Intellectech Corporation	17
IRICO Corporation Group	4
China National Biotech Group	4
China Hualu Group Co. Ltd	N/A
Top SOE total	594.4

Sources: Financial statements and/or auditing reports of named SOEs.

In sum, the visible state role in the pillar industries is in most cases much lower than it is in the strategic industries. With the exception of autos and steel, the visible state revenue shares in the pillar industries are well below 50 percent. This is likely the case even if firms indirectly controlled by SOEs are included. Still, there continue to be prominent SOEs in the pillar industry sectors and, as the Huawei case demonstrates, large private firms in China can behave like SOEs.

C. Is the banking sector strategic?

The banking industry was not explicitly included in SASACs' announcement but, as described below, the banking sector is owned and controlled through a different regulatory structure.

The level of state ownership in the banking sector is comparable to that of China's strategic industries. As of yearend 2009, nearly three-quarters of China's bank assets were controlled by banks in which the state, at a minimum, was the largest shareholder. The China Development Bank, Export-Import Bank of China, and Agriculture Development Bank of China are considered policy banks. They are fully state-owned and are tools for state intervention.[67] The Industrial and Commercial Bank of China, China Construction Bank, Agricultural Bank of China, and Bank of China are considered state-owned commercial banks. Long controlled the by state, these

[67] (Deng, et al. 2011) 23.

four banks have been corporatized and listed, but state ownership is ensured through shares held by the Ministry of Finance and Central Huijin Investment Ltd. There are 13 major joint stock commercial banks but a government entity is the largest shareholder in eleven of them.[68] The asset share data are reaffirmed by CSY data showing that SOEs and SHEs were responsible for 76 percent of urban fixed asset investment in 2009. In short, the state is firmly in control of the country's banking sector.

Table V-14: Assets held by state-controlled banks and other banks in China, 2009

	Assets Tril. RMB	Share
Policy banks	6.95	8.6%
State-owned commercial banks	39.04	48.5%
Joint stock commercial banks with state as largest shareholder	12.59	15.6%
State-owned or controlled banks	58.58	72.7%
Other commercial banks and credit unions	16.36	20.3%
Postal savings bank	2.70	3.4%
Non-bank institutions	1.55	1.9%
Foreign banks	1.35	1.7%
Others	21.96	27.3%
Total	80.53	100.0%

Source: Deng, Morck and Wu.

VI. State support for SOEs: evidence from U.S. regulatory filings

Numerous firms controlled by SOEs raise money on international capital markets. Firms that list on stock exchanges have specific reporting requirements, and submissions to market authorities typically contain information about the controlling shareholders, grants received from the government, official capital injections, amounts borrowed from state-owned banks, financial guarantees received and offered, preferential tax rates, etc. Other studies have used such data from the Hong Kong Stock Exchange to assess the benefits received by the listed subsidiaries of SOEs.[69]

This section responds to the seventh question posed in the Commission's RFP, which requests information on the support provided by the Chinese government to SOEs based on an analysis of U.S. public disclosure forms.

A review of documents submitted to the U.S. Securities and Exchange Commission (SEC) confirms that SOE-owned firms that raise capital in international capital markets continue to benefit from a number of subsidies and other forms of preferential treatment. Foreign-owned

[68] (Deng, et al. 2011) 24.

[69] (Szamosszegi, Anderson and Kyle, An Assessment of China's Subsidies to Strategic and Heavyweight Industries 2009) 33-84.

firms that raise capital in the United States are required to submit form 20-F annually. This form is analogous to the form 10-K submitted to the SEC by domestic corporations. For this study, 20-F forms were reviewed for the firms listed in Table VI-1 below.

Table VI-1: Central SOEs and ownership shares of selected companies raising capital in U.S. financial markets, 2010

U.S. listed entity	State-owned owner	Percentage of shares owned by SOE and its controlled entities
Aluminum Corporation of China Limited (Chalco)	Aluminum Corporation of China	41.82
China Petroleum & Chemical Corporation (Sinopec Corp.)	Sinopec Group Company	75.82
China Southern Airlines Company Limited	China Southern Airline Holding Corporation	50.37
China Telecom Corp. Limited	China Telecom Group	70.89
CNOOC Limited	China National Offshore Oil Corporation	64.41

Sources: Form 20-F (2010) for the listed U.S. entities.

The Chinese government has long used lower tax rates to reward firms for undertaking investments, procuring goods and services, and performing other activities that market incentives alone would not support. For a number of years, the GOC encouraged inward investments by foreign companies with favorable tax rates.[70] The government also applied favorable tax rates to encourage investments in certain regions of China. As of 2008, tax reforms, in part motivated by filings at the WTO, created a unified corporate income tax rate of 25 percent in China. Many SOEs and subsidiaries were beneficiaries of preferential tax rates, and a review of the SEC filings of the five firms above indicates that they continued to benefit from these tax preferences in 2010, though the benefit is being phased out. Chalco's balance sheet, for example, indicates that the firm saved RMB 37 million in 2010.[71] In 2008, Chalco also benefitted from a RMB 92.4 million tax credit for purchasing certain domestic equipment, though this program was discontinued in response to a WTO investigation into China's tax regime.[72] Tax savings for Sinopec Corp. and China Telecom in 2010 were RMB 1.5 billion and RMB 47 million, respectively.[73]

[70] (Naughton, The Chinese Economy: Transitions and Growth 2006) 411.
[71] (Aluminum Corporation of China Limited 2011) note 31.
[72] (Aluminum Corporation of China Limited 2011) note 31; and (United States Trade Representative 2007).
[73] (China Petroelum & Chemical Corporation 2011) note 10; and (China Telecom Corporation Limited 2011) note 24.

Another form of benefit conferred upon SOE subsidiaries is the direct transfer of funds through grants or capital injections.[74] Government grants, typically treated as “other revenue” in the income statements, are not always large. One exception is Sinopec Corp, which received a subsidy of RMB 50.9 billion in 2008 to cover losses caused by the GOC’s price controls on fuels, which prevented Sinopec from raising retail prices to reflect rising global crude oil prices.[75] Although this is technically a grant, this subsidy was the direct result of the Government’s decision to keep domestic fuel prices from increasing in lock step with global prices. A much larger inflow was received by China Southern, though in the form of a capital injection by its SOE parent. China Southern, as well as China Eastern, has been increasing debt as part of its rapid expansion. Debt levels were exacerbated by the financial crisis and subsequent global (though not Chinese) recession. In early 2010, China Southern announced that it was going to receive a $1.5 billion capital injection from its parent SOE, the China Southern Airlines Holding Corporation.[76] According to China Southern’s 20-F form, the transactions took place during the autumn of 2010, with share purchases made by the SOE parent and by another fully-owned subsidiary of the SOE parent.[77]

The SEC submissions point to several other ways in which the GOC assists SOEs and their subsidiaries. For example, the GOC limits competition to favor national champions. This is most clearly evident in the 20-F forms of China Telecom and Sinopec Corporation. China Telecom notes that although foreign operators have gradually increased their investments since China’s WTO accession, their investments are legally limited, including a 49 percent limitation on foreign ownership in basic telecommunications.[78] Sinopec’s 20-F indicates that decisions about licensing of petroleum exploration and production in China are made by the State Council itself, and that only four companies in China, including Sinopec and CNOOC, have such licenses.[79]

The government also provides certain SOEs with preferential access to production inputs and capital. Chalco claims that the GOC is currently pushing a policy that favors large smelters over smaller ones, which benefits Chalco by granting “preferential treatment, including priority in the allocation of raw materials and electricity supplies.”[80] Chalco believes that these preferences will help it to compete with foreign producers that may export to China or invest in China by partnering with other domestic producers. Chalco acknowledges that the government

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[74] The SOEs themselves are part of the government, so information about the transfers they receive is not readily available.
[75] (China Petroelum & Chemical Corporation 2011) 37.
[76] (China Southern Airlines likely to receive 1.5 bln yuan capital injection 2010).
[77] (China Southern Airline Corporation Limited 2011) 10.
[78] (China Telecom Corporation Limited 2011) 27.
[79] (China Petroelum & Chemical Corporation 2011) 26.
[80] (Aluminum Corporation of China Limited 2011) 34.

has been providing aluminum producers with access to cheap electricity, but notes that these price preferences are being eliminated.[81] To replace these price benefits, the GOC has selected certain domestic producers, including Chalco, to purchase directly from electricity producers at reduced prices.

The SEC submissions also confirm the role played by state-owned banks and the SOE parents in providing access to low-cost capital. According to the China Information Center, the average of monthly prime lending rates in China from December 2009 to December 2010 was 5.36 percent. Sinopec's weighted average interest rate on short term loans (i.e., loans with duration of one year or less) was 2.7 percent in 2010.[82] China Southern, a firm with debt levels high enough to warrant a premium over the prime rate, reported an effective interest rate of 1.13 to 1.97 percent in 2010.[83] Though not mentioned in its 20-F in 2010, China Southern has a credit line with the government-owned Agricultural Bank of China.[84] China Telecom Limited obtains nearly all of its RMB 20.7 billion short-term borrowings in 2010 from state-controlled banks or from its state-controlled parent. China Telecom's short-term borrowing rates from state controlled banks ranged from 3.5 percent to 5.8 percent, while the borrowing rate from its SOE parent was as low as 3.9 percent.[85] CNOOC's weighted average interest rate for 2010 was 3.4 percent.[86]

Another point that stands out from an examination of SEC submissions is that SOE subsidiaries frequently make significant purchases from, and sales to, related entities. This varies by industry, but tends to be larger in the energy sector and in vertically integrated operations, such as Chalco. For instance, 12 percent of Sinopec Corp.'s sales and 7 percent of its purchases in 2010 involved related parties.[87]

So, although the subsidiaries of Chinese SOEs raise capital in the United States and other market economy capital markets, those same companies continue to receive support from the GOC. The official submissions do contain some evidence that China's government is reducing distortions in certain areas (e.g., electricity prices to the aluminum sector), but the overwhelming impression one gets from reviewing these documents is that these firms continue to benefit from subsidies and other preferences, and that control of these enterprises continues to rest with the state. In other words, while the act of raising capital in stock markets in China and beyond is a dramatic break from China's communist past, control of these

[81] (Aluminum Corporation of China Limited 2011) 37.
[82] (China Petroelum & Chemical Corporation 2011) F-38.
[83] (China Southern Airline Corporation Limited 2011) 41.
[84] (Agricultural Bank of China 2011).
[85] (China Telecom Corporation Limited 2011) F-23.
[86] (CNOOC Limited 2011) F-54.
[87] (China Petroelum & Chemical Corporation 2011) 7 and note 31.

enterprises continues to reside in Shanghai, where many SOEs are headquartered; and in Beijing, where enterprises are managed by CCP members incentivized to carry out the policy goals of the State Council. This does not mean that the interests of the state-controlled listed firm, the SOE, and the state completely align all the time. However, when the listed firms' financial interests clash with those of the SOE and/or the state, the ownership structure and incentives facing corporate leaders suggest that market-oriented financial interests of the listed firms' non-government shareholders are unlikely to prevail.

VII. Support from state-owned banks

In *Good Capitalism, Bad Capitalism*, Baumol, Litan, and Schramm describe four types of capitalism, which they refer to as the "four faces of capitalism": state-guided capitalism, oligarchic capitalism, big-firm capitalism, and entrepreneurial capitalism.[88] In the 1980s, the Chinese countryside was an example of entrepreneurial capitalism.[89] Today, with its present mix of state-controlled and private enterprises and overt government guidance, China is arguably most similar to state-guided capitalism, "in which the government tries to guide the market most often by supporting particular industries that it expects to become winners."[90] Traditionally, bank financing has played a major role in such economies (e.g., in Japan and Korea) and that remains the case with China today. As elaborated in Table V-14, state-owned and controlled banks remain the dominant force in China.

This section responds to the eighth question posed by the Commission by analyzing the relationship between the state-owned banks and China's SOEs, and whether private enterprises face disadvantages when trying to obtain loans.

A. Regulatory and legal framework

Figure VII-1 presents the regulatory apparatus and ownership linkages for state-owned banks. China's state-owned banks are technically owned the Ministry of Finance and an SOE holding company, Central Huijin Investment Ltd., which was created in 2003 to invest capital in state-owned banks.[91] Central Huijin Investment Ltd. initially was a branch of the State Association for Foreign Exchange of the People's Bank of China, but reforms in 2007 placed it under the ownership of the China Investment Corporation (CIC), a sovereign wealth fund under the control of the State Council.[92] The China Banking Regulatory Commission (CBRC), also created

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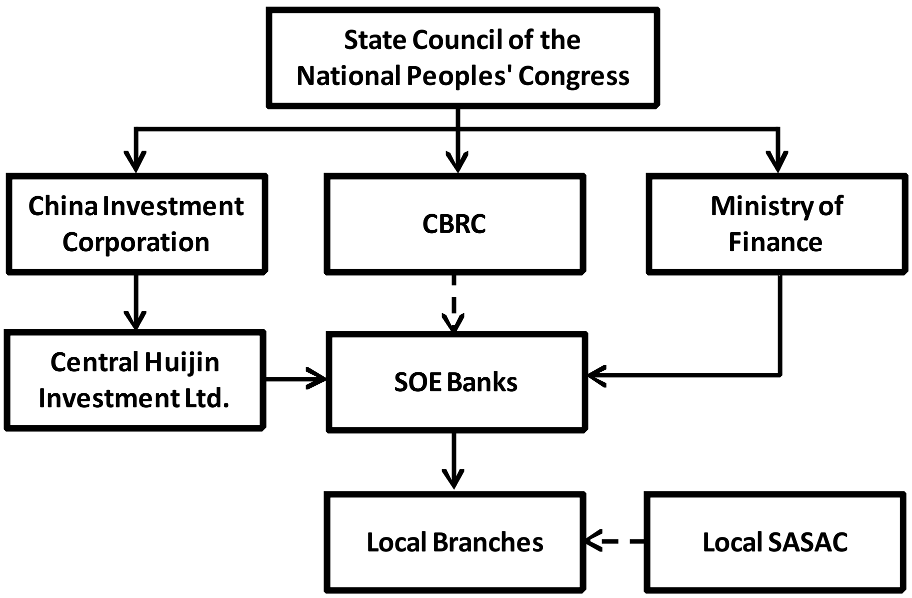
[88] (Baumol, Litan and Schramm 2007) 58-61.
[89] (Huang 2008) 97.
[90] (Baumol, Litan and Schramm 2007) 60.
[91] (Deng, et al. 2011) 21-22.
[92] (Martin 2010) 2. Apparently, both the Ministry of Finance and the People's Bank of China were vying for control over CIC.

in 2003, directs and supervises the operations of China's state-owned banks but does not have any ownership stake in the banks. The CBRC and the Ministry of Finance are responsible for governance and performance of the state-owned banking entities. The relationship between local SASACs and local branches is not necessarily a formal one, but is shown because the SASACs are known to influence the lending decisions of the state-owned banks.

Figure VII-1: Relationships between China's SOE banks and their owners and regulators



Sources Based on Deng, Morck and Wu; and Martin.

Bank management must be responsive to the Ministry of Finance, which tends to value institutional performance, and the CCP, which values obedience to the needs of the state. Ultimately it is the Organization Department of the CCP that determines the career path of the core bank executives. [93]

The banking sector has been the subject of reform since the late 1970s. Until 1979, the People's Bank of China (PBOC) functioned as China's sole bank, dispersing funds to SOEs solely on the basis of government plans and directives.[94] Following the initiation of market reforms in 1979, the government separated four of PBOC's divisions and set up four commercial banks: the Bank of China (BOC), the China Construction Bank (CCB), the Agricultural Bank of China (ABC), and the Industrial and Commercial Bank of China (ICBC), (collectively, the "Big Four"). In the early 1980s, the government formally established a two-tiered commercial banking system, with the PBOC as the central bank and the Big Four as commercial banks.

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[93] (Deng, et al. 2011) 22-23.
[94] (Barth 2004) 7-8.

As a result of country-wide economic reforms and government budgetary considerations, SOEs became increasingly reliant on bank loans to finance their operational and investment needs. As bank lending grew, the Big Four enjoyed significant dominance in terms of both deposits and assets.[95] At the same time, however, neither the Big Four nor SOEs operated on a truly commercial basis.[96]

These problems prompted a new round of banking reforms in 1994. The government created three policy banks, the State Development Bank, the Agricultural Development Bank, and the Import Export Bank, to separate policy lending from the commercial lending functions of the Big Four.[97] At the same time, the Big Four were encouraged to lend strictly on a commercial basis. The 1995 Commercial Bank Law formalized the 1994 government policy to make the banking system more market-based, and the *1996 General Rules on Lending* reinforced the *Commercial Bank Law* objective of making banks lend strictly on a commercial basis.

At the end of 1997, the government took a number of steps to increase the commercial orientation of its banks. Despite these efforts, credit continued to be allocated on a non-commercial basis. Non-performing loans (NPLs) accumulated, and the Big Four essentially became insolvent. As a result, in 1998, the government injected $33 billion into the Big Four, and in 1999-2000, four state-owned asset management companies (AMCs) purchased $169 billion in NPLs at face value.[98] The government began another wave of bailouts in 2003-2004 when it injected $22.5 billion into CCB and BOC and sold off $33 billion of their NPLs to AMCs. In 2005, the government injected $15 billion into ICBC and sold off another $85.5 billion of bank debt.[99]

Today, five basic laws govern the banking sector in China: the 1995 Commercial Bank Law, the 1995 Law on PBOC, the 2002 Foreign-Funded Financial Institutions Regulations (FFIs), the 2002 Procedures for the Administration of Representative Offices of FFIs, and the 1996 General Rules on Lending.[100]

The 1995 *Commercial Bank Law,* which introduced prudent regulation standards, defines a commercial bank as an autonomous entity with legal person status that is sufficiently capitalized to engage in banking services.[101] Under this law, commercial banks are responsible for their own profits and losses, must protect the interests of their depositors, and are

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[95] (Barth 2004) 7.
[96] (Bhattasali 2002) 7; (Yusuf 2006) 62, 73-74.
[97] (Barth 2004) 10.
[98] (Daneil 2005) 16; (Barth 2004) 10-11.
[99] (Garcia-Herrero 2005) 16-17.
[100] (General Rules on Loans 1996).
[101] (The Commercial Banking Law of the People's Republic of China 1995).

prohibited from being influenced by any level of government. However, the *Commercial Bank Law* paradoxically states that banks are require to adhere to China's "national industrial policies." In effect, the law requires that state-owned commercial banks act as policy banks, at least in some instances.

B. Favorable treatment towards SOEs

China has the highest level of state ownership of banks of any major economy in the world.[102] The sector's assets are extremely large relative to the size of the economy.[103] As of 2008, the Big Four were among the world's largest banks in terms of assets.[104] According to 2009 figures, they represented approximately 50 percent of the formal sector's assets and deposits.[105] As noted above, foreign banks account for only about two percent of total assets.[106] Because China's equity and bond markets remain underdeveloped,[107] the Big Four carry out the majority of financial intermediation and play a critical role in the allocation of resources.

Despite changes in the legal framework ostensibly aimed at pushing the state-owned commercial banks (SOCB) toward more commercially oriented lending patterns, they continue to favor state-owned firms. This preference for SOEs has persisted despite generally low levels of profitability and more rapid growth in other segments of the Chinese economy.[108] As one commentator notes, China's banking sector has "fallen short in its task of allocating credit to the most productive players in the economy."[109]

A number of observers attribute this pattern to continued government intervention in bank operations, particularly by local governments.[110] China's large banks have thousands of branch offices.[111] Traditionally, local governments have utilized SOCB branch offices as the main source of capital to fund investment projects and support local SOEs, which in turn provided

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[102] (McKinsey Global Institute 2006) 35.
[103] (Economic Survey of China 2005) 139. This is in part an outcome of China's capital controls and China's high savings rate. (China's Growth and Integration into the World Economy, Prospects and Challenges 2004) 44; (China and the WTO 2003) 182; (McKinsey Global Institute 2006) 27.
[104] (Walter and Howe 2011) 42.
[105] (Economic Survey of China 2005) 139; and Table V-14.
[106] (Economic Survey of China 2005) 139, 151 and Table V-14.
[107] (McKinsey Global Institute 2006) 29.
[108] (Economic Survey of China 2005) 19 and 40.
[109] (McKinsey Global Institute 2006) 9.
[110] See, for example, (Tsai, Back-Alley Banking: Private Entrepreneurs in China 2002) 8. {A}uthorities pressure banks to subsidize politically important enterprises."
[111] (Progress in China's Banking Sector Reforms: Has Bank Behavior Changed? 2006) 35.

local employment and government revenue.[112] Local staff of commercial bank branches continue to be influenced by local government officials. According to the OECD:

> The chief executives of the head offices of the SOCBs are government appointed and the Party retains significant influence in their choice. Moreover, the traditionally close ties between government and bank officials at the local level have created a culture that has given local government officials substantial influence over bank lending decisions.[113]

Over the years, the state-owned banks have provided significant benefits to central and sub-national SOEs. The three main benefits are:

- *Access to borrowed funds at favorable interest rates*--As demonstrated above above in section VI, centrally-owned SOEs in strategic industries borrow from state-owned banks at below-market rates. Since the U.S. Department of Commerce has begun investigating Chinese subsidies, preferential loans frequently have been found to confer a financial contribution in the form of low interest rates to Chinese enterprises operating in favored industries.[114]
- Debt forgiveness—The SOCBs have forgiven debts to SOEs unable to pay their loans.[115] The state bank simply writes off the loans or continuously rolls over the principal. In some cases, the loans are simply forgotten.
- *Loans to uncreditworthy enterprises*— The northeastern revitalization program was meant to enhance the competitiveness of ailing SOEs, which dominate industry in the region.[116] In addition to other benefits, firms in the region have enjoyed a disproportionate share of access to financial resources, despite having the highest share of NPLs in the nation.

C. Less favorable access for the private sector

In contrast to SOEs, private firms have generally found it very difficult to access cash from China's largest banks. In the early days of reform, many small private enterprises either registered as collective enterprises or became affiliated with SOEs in order to access capital.[117] The registering as a collective was frequently preferred by entrepreneurial members of the

[112] (A Great Big Banking Gamble: China's Banking Industry 2005).
[113] (Economic Survey of China 2005) 141.
[114] (Szamosszegi, Anderson and Kyle, An Assessment of China's Subsidies to Strategic and Heavyweight Industries 2009) 16 and Appendix 4.
[115] (Price, Lighthizer and Schagrin 2009) 51.
[116] (China Economy: Development Still Lags in Northeast 2005).
[117] (Tsai, Back-Alley Banking: Private Entrepreneurs in China 2002) 130.

Communist Party and their families.[118] As a result of the bias toward SOEs in bank lending, the private sector received a relatively small share of credit from the formal financial sector in China and came to rely on private financing mechanisms residing "beyond the scope of permissible economic activity."[119]

The irony of this situation is that the private sector in China has been more productive than the state-owned sector and has been growing more rapidly. For example, private enterprises are more than twice as productive as wholly owned SOEs. Indeed, productivity increases with each form of ownership that moves progressively away from direct state-ownership.[120] Private companies, whether foreign-owned, domestic-owned, or joint ventures, have grown faster than SOEs (and GDP) in the last ten years but account for a disproportionately low share of outstanding loans.[121] An OECD study noted that total factor productivity of privately controlled enterprises is approximately twice that of SOEs.[122] Nevertheless, wholly- and partially-owned SOEs continue to receive a disproportional share of credit.[123]

D. Near-term prospects

Analyses of China's banking sector in 2005 were largely critical. The CBRC concluded after inspecting eleven banks in 2005 that "it is 'common practice' for banks to ignore regulation and fail to monitor loans and that bad loan levels are not accurately revealed."[124] An IMF working paper found that after a decade of reform, "it is difficult to find solid empirical evidence of a strong shift to commercial orientation by SOCBs."[125] According to another report: "When one bank reviewed the loan portfolio of a particular region, it found that for 60 percent of loans

[118] (Tsai, Back-Alley Banking: Private Entrepreneurs in China 2002) 131.
[119] (Tsai, Back-Alley Banking: Private Entrepreneurs in China 2002) 10.
[120] (McKinsey Global Institute 2006) 61; (Economic Survey of China 2005). Corporatized enterprises with majority state ownership are 46 percent more productive than wholly state-owned enterprises; corporatized enterprises with minority state ownership are 70 percent more productive; and, collective enterprises are nearly as productive as private enterprises.
[121] (McKinsey Global Institute 2006) 11. In contrast, according to one estimate, SOEs wholly owned by the government account for 23 percent of GDP but 35 percent of corporate loans outstanding, corporatized SOEs account for 19 percent of GDP but 27 percent of loans, and collective enterprises account for 6 percent of GDP but 11 percent of loans.
[122] (Economic Survey of China 2005) 86.
[123] (McKinsey Global Institute 2006) 11; (China in the Global Economy: Governance in China 2005) 140.
[124] (A Great Big Banking Gamble: China's Banking Industry 2005).
[125] (Progress in China's Banking Sector Reforms: Has Bank Behavior Changed? 2006) 4, 13, and 18. The study found that loan pricing remained undifferentiated, despite liberalization of lending caps, that most new loans were granted at or below the government-set benchmark interested rate, and that lending failed to take into account enterprise profitability.

made, it could not identify the industry of the borrower, the type of collateral posted, or even who made the lending decision."[126]

The government has no intention of releasing the banks from its control. The CBRC has affirmatively stated that the government will maintain a majority interest in the Big Four for at least the next decade.[127] In 2006, when Citigroup attempted to acquire majority interest in failing Guangdong Development Bank, the government initially considered allowing the transactions but later backtracked and reiterated its negative stance on foreign investment in even small- and medium-sized banks.[128]

Given this policy environment, it is not surprising that market reforms have progressed slowly in China's banking sector. While profitability of the SOCBs is increasing and NPLs have been falling,[129] these improvements do not necessarily reflect a fundamental reorientation of bank operations but rather are to a great extent attributable to transfers of bad assets to AMCs, loan growth, recapitalization, write-offs, and China's strong economy.

Evidence strongly suggests that banks remain little more than basic utilities that the CCP uses to "provide unlimited capital to the cherished state-owned enterprises."[130] Indeed, following the government's announcement of stimulus measures in late 2008, state-owned banks dramatically increased lending almost immediately, an unusual pattern given that new lending based on commercial considerations requires banks to perform time consuming financial analyses and due diligence.[131] In March 2011, the WTO appellate body affirmed a finding by the U.S. Department of Commerce that was based on evidence that SOCBs are meaningfully controlled by the Chinese government and exercise government functions on the government's behalf.[132] Similarly, the WTO's 2010 Trade Policy Review of China concluded that state directed lending to favored sectors holds true not only for the so-called policy banks but also for commercial banks.[133]

[126] (McKinsey Global Institute 2006) 37-39.
[127] (China Industry: Government Vows to Retain Stakes in Largest Banks 2006).
[128] (China Regulations: Foreign Stake Limits May Not Be Abolished 2006); and (China Regulations: Regulator Maintains Stance on Small/Mid-size Banks 2006).
[129] (Walter and Howe 2011) 43.
[130] (Walter and Howe 2011) 25.
[131] (Deng, et al. 2011) 6 and 124-5.
[132] (World Trade Organization 2011) par. 354-355.
[133] (World Trade Organization 2010) 82 (par. 59). "{T}he PBC and other administrative authorities encourage commercial banks to adapt their lending to specific borrowers in light of relevant government policies; loan growth may be restricted administratively."

In short, state-owned banks continue to favor SOEs and give short shrift to the private sector. They are likely to continue this behavior as long as the CCP maintains the ability to appoint key managers and local SASACs attempt to influence the lending behavior of local branches.

VIII. The role of SOEs in Chinese government procurement

As a result of China's rapid economic growth, China's government procurement market has been growing as well. As many areas of China are improving infrastructure, government procurement in China is of great interest to businesses inside and outside of China.

This section responds to the Commission's ninth question, which requests information on SOEs share of government procurement in the United States and in China. The discussion below reviews important issues regarding government procurement, and then provides estimates of the share of Chinese procurement accounted for by SOEs in China using the NBS data on gross output, fixed investments, and input-output accounts. The SOE share of the U.S. procurement market is difficult to ascertain. Instead, the focus is on some well known procurement wins for China's SOEs.

A. Issues in China's procurement market

By almost any independent measure, China's government operates a substantial procurement market. Measuring the size of the procurement market is difficult due to a lack of transparency. The Chinese government, and more specifically, the Ministry of Finance, recognizes only goods and services under the Government Procurement Law (GPL) as constituting government procurement. Many observers, on the other hand, define the Chinese government procurement market as the totality of goods, services, projects and works regulated by China's Government Procurement Law and the National Development and Reform Commission's China Bidding Law (BL).[134] While the Chinese government claims that the market is only about two percent of GDP, based on just GPL, a recent study by the European Chamber of Commerce, based on both GPL and BL, estimates that the public procurement market at more than twenty percent of GDP (i.e., $1.07 trillion).[135] However, measuring the SOE share of the procurement market is difficult because of the lack of data.

The definition of the procurement market is a major sticking point with China's trading partners. China committed to joining the WTO Government Procurement Agreement (GPA) as

[134] Broadly speaking, the GPL covers central and sub-central government purchases of goods such as computers, medical equipment, etc., while the BL regulates all SOE tenders, in particular, large-scale infrastructure projects such as construction of highways, railway networks, airports, ports, dams, power projects and the like.
[135] (Public Procurement in China: European Business Experiences Competing for Public Contracts in China April, 2011) 15.

part of its WTO accession in 2001, but the terms of its GPA membership are still under negotiation. In December 2007, China submitted an initial offer to join the GPA. The offer, however, included high domestic content thresholds and neglected to cover procurement by sub-central government entities or in the services sector. The 2007 proposal was rejected as inadequate by other member countries.[136] Last year, China pledged to make an offer to join the GPA at a Sino-U.S. summit. Observers who have seen China's revised offer, submitted in July 2010, say a space has been left blank under the heading "sub-central government entities," which is supposed to outline the levels of government that must abide by the agreement.[137] As China's July 2010 GPA offer was summarily rejected, China, under pressure from the United States and the EU, has committed to submit a revised offer to join the WTO Agreement on Government Procurement that will include sub-central entities by the end of 2011.[138]

China has been slow to put forth an acceptable GPA, in part, because it would open its market to foreign invested companies. China uses its government procurement market to support SOEs and to create national champions in key industries and incubate "indigenous innovation" (*zizhu chuangxin*). On February 9, 2006, the State Council issued the *The National Medium- and Long-Term Plan for the Development of Science and Technology (2006-2020),* which is now known in policy circles as the *MLP*.[139] The MLP explicitly states that China wishes to lessen its reliance on foreign intellectual property and to create indigenous innovation through "enhancing original innovation through co-innovation and re-innovation based on the assimilation of imported technologies."[140]

The most ambitious components of the MLP are 16 mega projects. According to the MLP, as the "major carriers of uplifting indigenous innovation capacity," the mega projects are aimed at "assimilating and absorbing" advanced technologies imported from outside China so that the country can "develop a range of major equipment and key products that possess proprietary intellectual property rights." The government procurement market is assigned to be a key driver for these projects. The plan calls for creating a buy-China policy for government procurement and expanding the creation of China's own technology standards to get out from under the burden of paying license fees and royalties to foreign companies.[141]

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[136] (Hornby, Reuters 2010).
[137] (Hornby, Provinces become battleground in China's WTO offer 2010).
[138] (Remarks by Undersecretary Lael Brainard at U.S.-China Business Council's "Forecast America" Conference 2011).
[139] (Outline of the National Medium-and Long-Term Plan for the Development of Science and Technology 2006)
[140] (J. McGregor July, 2010) 3.
[141] (J. McGregor July, 2010) 15.

De facto and *de jure* barriers also serve to favor SOEs over competition. Chinese law requires the government to procure domestic goods, projects, and services.[142] Given that many government-funded projects are large in nature, in many cases only SOEs are large enough to participate. In addition, fragmentation of the market, lack of transparency, lack of communication, decentralization, inconsistent implementation, and virtually no appeals process have been cited as major problems in the procurement process.[143] Further, other technical barriers and non-competitive practices, in particular technical regulations (indigenous innovation legislation), the catalogue system, domestic content requirements and onerous certification systems, unfairly restrain competition in the procurement market.[144]

Most procurement, according to the GOC, is conducted by local governments,[145] which may be predisposed to favor local SOEs who contribute revenues to local coffers. But beyond taxes, local SOEs have a huge advantage over outside competitors from other countries, and even other provinces, because of the close relationships between local SOE management and local governments.[146]

Many procurement opportunities are in industries dominated by SOEs, such as power. Although such projects are in theory open to all comers, SOEs have a natural advantage because the national and/or provincial governments have a vested interest in the success of SOEs. Once an SOE obtains such a project, its purchases of goods and services should be based purely on market considerations.[147] However, in practice, the SOEs are faced with a number of countervailing forces that are may prevent them from choosing a competing foreign producer. For example, if the purchase involves a product or technology from the government's innovation catalogue, the SOE will face pressure to purchase the good or service from a domestic producer. If the provincial government overseeing the purchase is seeking to enhance the economic prospects of a local SOE, or to enhance local economic activity, there also will be pressure to make procurement decisions on non-market considerations. Finally,

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[142] (World Trade Organization 2010) 40 (par. 65). However, international purchases are allowed when the needed procurement is unavailable in China or unavailable on reasonable commercial terms. International purchases are also allowed for use outside of China. There are no provisions on rules of origin or local content defining what constitutes domestic production. Nor are there data on the value of foreign procurement by the GOC, but foreign procurement is known to occur.

[143] (Public Procurement in China: European Business Experiences Competing for Public Contracts in China April, 2011) 15.

[144] (Public Procurement in China: European Business Experiences Competing for Public Contracts in China April, 2011) 15.

[145] (World Trade Organization 2010) 40 (par. 66) and 41 (par. 69).

[146] (Interview with U.S. government official 2011).

[147] (Report of the Working Party on the Accession of China October 1, 2001) 9 (par. 46).

guanxi (i.e., interpersonal relationships through which influence can be exerted) can also play a role due to the close relationships between government/Party officials and SOE management.

Although these factors result in a preference for SOEs both in procurement and in the subcontracting process, foreign and private Chinese firms are not completely shut out from the procurement market.[148] U.S. and other foreign firms have had some notable successes in tapping the Chinese government procurement market, directly and indirectly. Nevertheless, the dynamics that favor procurement from SOEs can influence purchasing decisions at the expense of U.S. firms and can lead to investments in China by U.S. firms in order to improve access to China's market.

As a result of the global recession in 2008-2009, the Chinese government enacted stimulus measures valued at RMB 4 trillion, 13 percent of GDP, though it was spread over 2-3 years.[149] SOEs have benefitted disproportionately from this spending.[150] On the other hand, SOEs were also called upon by the government to make large investments, which may have harmed their financial performance.

B. Measuring the SOE share of government procurement in China

There are two methodologies for estimating the role of SOEs in China's procurement market. A "bottom-up" approach would review information on contractor data to determine whether an award or sub-award went to an SOE. This information is not available in China and, even if it were, it would not necessarily include information about the ultimate source of the good or service being provided. Corporate and government press releases could also provide such information, but locating such information for all government purchases would be extremely challenging. The second methodology is "top-down" because it relies on aggregated data on industry output and investment, government purchases by industry, imports, and SOE production by industry.[151] Using some reasonable assumptions and simple math, it would be possible to estimate the SOE share of government purchases using the framework of input-output analysis. [152] This is the approach taken here.

The analysis was conducted using data from 2007, the year of the input-output table. The results, shown below, indicate that the estimated SOE and SHE shares were 43 percent for investment-related procurement made through state-owned-or-controlled enterprises and 79

[148] (Interview with U.S. government official 2011).
[149] (Deng, et al. 2011) 4.
[150] (World Trade Organization 2010) 24-25 (par. 8).
[151] The SHE share of construction output was estimated based on the SOE share. See Attachment 2. The output share for the various service sectors was based on investment shares, as information on the gross output of service-producing SHEs relative to services output by industry was not available.
[152] (Miller and and Blair 2009).

percent for government consumption expenditures. On a combined basis, the estimated SOE share was 61 percent. These high shares reflect the high SOE output shares in the sectors in which procurements occur.

Table VIII-1: Estimated SOE share of China's procurement expenditures, 2009

	Purchases for Final Use *Bil. RMB*	SOE Share *Percent*
Government consumption expenditures	3,519	79.6%
SOE gross fixed investments	3,579	43.1%
Combined	7,098	61.2%

Source: Authors' estimates based on National Bureau of Statistics of China.

C. SOE Procurement in the United States

The Commission has requested information about SOE activity in the U.S. procurement market. At the federal level, direct SOE participation is restricted by the Buy America Act, which requires that all materials used in construction of public projects originate in the United States or designated countries. U.S. procurement is fairly transparent, with substantial information about contracts available on the web site *usaspending.gov*. However, a review of the database of prime and sub-award contractors turned up only one central SOE: Baosteel Group Corporation, with a total contract amount of less than half-a-million dollars for the lease or rental of facilities during FY2010.

SOE participation in the U.S. federal procurement market is, if anything, indirect—and even this is very difficult to document. For example, the Bechtel Corporation is a major federal contractor, with recent contracts involving the construction of a waste treatment plant for the Department of Energy and reactors for the Navy during FY 2010. A review of the web site *importgenius.com* shows that Bechtel also imported structural steel during FY 2010 from a company United Steel Structures Ltd. (USSL), located in Guangzhou. According to *Bloomberg Businessweek*, GSSL is a subsidiary of Guangzhou Shipyard International Co. Ltd. (GSI),[153] a firm that is listed on the Hong Kong Stock Exchange. Based on GSI's 2010 Annual Report, the firm's controlling shareholder is the China State Shipbuilding Company (CSSC), which holds 35.71 percent of GSI's outstanding shares.[154] CSSC is a centrally-owned SOE that is 100 percent owned by SASAC.[155] While this narrative illustrates that Bechtel imported structural steel from

[153] (United Steel Structures Limited n.d.).
[154] (Guangzhou Shipyard International Company Limited 2011) 11-12.
[155] See Attachment 1: SASAC list of Central SOEs (#7). China Shipbuilding is the seventh firm on the list.

a subsidiary of a firm owned by a centrally owned SOE, it is unknown whether Bechtel used this steel in its federal projects.[156]

States that have no Buy America provisions are able to use taxpayer moneys for foreign procurements as long as the state government does not seek federal funds. Thus, the SOE role in projects conducted by local governments is easier to discern. For example, Shanghai Zhenhua Heavy Industry Co Ltd (ZPMC) won the bid from the California Department of Transportation for delivering sections of the suspension portion of the east span of the San-Francisco-Oakland Bay Bridge.[157] According to its Web site, ZPMC is a state holding company listed on the Shanghai Stock Exchange. The firm's major shareholder is Hong Kong-listed China Communications Construction Company Limited (CCCC).[158] According to CCCC's 2010 Annual Report, its beneficial owner is the SASAC-owned China Communications Construction Group Limited, which owns 70.1 percent of CCCC's shares.[159] The contract value exceeds $350 million out of the $7.2 billion Bay Bridge project (*i.e.*, 4.9 percent).[160] Another company, Shanghai Pujiang Cable Co. (SPCCC) is supplying the one-mile main cable for the bridge, though the value of that item is not known. SPCCC, China's largest cable company, is jointly owned by a private firm and three sub-national SOEs.

China Construction America, Inc. (CCA) is a wholly owned U.S. subsidiary of China State Construction Engineering Corporation Limited (CSCEC), which CCA touts as being a publically listed firm in China.[161] CSCEC is listed on the Shanghai Stock Exchange (listing 601668.SS), but its primary owner is the SASAC-owned China State Construction Engineering Corporation.[162] CSCEC went public only recently, in July 2009, and was the world's most valuable IPO that year.[163] CCA has been successful in procuring construction contracts in South Carolina and New York. Its South Carolina projects include public schools, (e.g., at the University of South Carolina); the Chancery Building of the Chinese Embassy in Washington, D.C.; and renovation of the Alexander Hamilton Bridge (with Halmar International) the largest single-phase project ($407 million) overseen by the New York State Department of Transportation.[164] In order to compete for such large projects, CCA required large bonding facilities. These were obtained

[156] Publicity surrounding a lawsuit against Home Depot and other firms indicates that the Buy America Act is often ignored by firms selling goods to the Federal government. See (Elias 2011).
[157] (Barboza 2011).
[158] (Wang and Levy 2011).
[159] (China Communications Construction Company Limited 2011) 48.
[160] (Barboza 2011).
[161] (Overview: China Construction America, Inc. 2009).
[162] See Attachment 1: SASAC list of Central SOEs (#48).
[163] (Abrami and Zhang 2011) 3.
[164] (Abrami and Zhang 2011) 8-10.

from AIG, and CCA's large state-owned parent proved critical in this regard.[165] Indeed, a Harvard Business School case study of CCA demonstrates that the firm's state support was also critical to the firm's success, and that CCA's revenues have been growing at a time when U.S. non-residential construction was crashing.[166]

The hurdle for using SOE-manufactured goods in federal projects depends on which provisions of U.S. law apply. For example, Buy America provisions for steel require a price difference of 25 percent before foreign steel can be used to build a highway bridge with federal funds. But under certain circumstances, Buy-American provisions of the law apply. Under these provisions, foreign steel can be used if the price differential exceeds six percent. It is not known to what extent this distinction has facilitated the used of SOE-produced steel in federally funded projects, but at the time of this writing there was on ongoing dispute about the use of Chinese steel in the Tanana Bridge project in Alaska, which is being built primarily with Department of Defense funding funneled through the Federal Railroad Administration.[167]

In addition to state-funded projects, SOEs have had success in winning business in federally funded projects overseas. The Millennium Challenge Corporation (MCC), a relatively new U.S. foreign aid agency, awarded nine contracts to Chinese firms worth $320 million for projects in Africa--at least five of those contracts went to Chinese state-owned companies.[168] However, recent changes in the law now make SOEs ineligible to compete for MCC-finance contracts.

IX. The SOE role in China's five-year development plans

Five year plans are issued by the CCP and provide overall objectives and goals related to social and economic growth. Industrial planning in key sectors or regions is also incorporated into the plans, including which industries and products should be targeted for preferential government support. The plans enumerate the types of preferences to be provided such industries. In the words of the Chinese government, the five-year plans aim to "arrange national key construction projects, manage the distribution of productive forces and individual sector's contributions to the national economy, map the direction of future development, and set targets."[169] They are commonly referred to as a national "blueprint" for industrial development. The plans serve as economic and industrial instructions for planning agencies, local and provincial governments, banks, and state-owned enterprises. However, these entities are not always mentioned explicitly.

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[165] (Abrami and Zhang 2011) 10.
[166] (Abrami and Zhang 2011). See Exhibits 1, 15a, and 15c.
[167] (Alaska Railroad Isn't Joking - It's Paying the Chinese US Department of Defense Funds to Build a US Army Bridge 2011); and (The Associated Press 2011).
[168] (McLaughlin 2010).
[169] (What is the Five-Year Plan 2007).

The 10th Five Year Plan for National Economic and Social Development, covering the period from 2001-2005, called for "energetically optimizing and improving [the] industrial sector" by enhancing traditional industries with new technologies and intensifying construction of transportation, energy and other infrastructure facilities. The plan calls for these activities to focus on the energy and metallurgy industries. In addition to calling for substantial new capacity in several key industries, the plan also aimed to equip these industries with sophisticated technology and equipment. While not emphasized, the plan did call for the government to "hold a controlling stake in strategic enterprises that concern the national economy" and also to "uphold the dominance of the public sector of the economy [and] let the state-owned sector play the leading role," a pronouncement that was later elaborated in SASAC's document defining strategic and pillar industries.

After the successful implementation of the 10th Five Year Plan, the government was confronted with a new problem, namely, overcapacity in several key industries such as steel and chemicals. So, the central government's 11th Five Year Plan, covering the years 2006-2010, focused on consolidation of capacity, along with the creation of new, high-efficiency facilities that can compete on a global scale.[170] The plan provides for improving the quality of certain products through the acquisition of new technology and equipment and consolidating key industries through mergers to create larger and more internationally-competitive companies (i.e., firms that can export into international markets). With regard to state-ownership, the plan's diction changed somewhat from the 10th Five Year Plan, stating that China must adhere to the "fundamental economic system with public ownership as the mainstay and diverse forms of ownership developing side by side."[171] Still, this language does not provide any inkling that the government intended to eliminate or severely erode its reliance on SOEs.

As before, China faced a problem after the successful implementation of the 11th Five Year Plan: an economy largely driven by, and dependent on, exports and investment. The 12th Five Year Plan, unveiled in March of this year, focuses on "rebalancing" the economy. An important point is the emphasis of consumption over exports.[172] The plan further encourages increasing technological capabilities in key sectors. Moving away from traditional industrial sectors, such as steel, base metals and chemicals, the plan emphasizes "Strategic Emerging Industries" such as energy, health care, and technology. The government aims to have its new "backbone" industries include biotechnology, new energy, high-end equipment manufacturing, energy conservation and environmental protection, clean-energy vehicles, new materials, and next generation IT. "National champions" are to take the lead in developing these industries. The

[170] (National Development and Reform Commission 2006).
[171] (National Development and Reform Commission 2006).
[172] (National Development and Reform Commission 2011).

plan states that the government must "{c}hannel state capital into industries pertinent to national security and the economy through discretionary and rational capital injection or withdrawal." This language does not suggest that the government plans to allow market forces to determine the structural development of the Chinese economy.

Based on the overall plan, industry-specific five year plans are then formulated. These plans can be vague with respect to the anticipated role for SOEs. The plans generally emphasize favored industrial sectors. Five year plans are then formulated at the provincial level. These plans mirror the national plans but are tailored to the needs of a specific province. These plans will sometimes mention "key" enterprises in favored industrial sectors. Specific requirements about state-ownership are not often listed. However, often times "key" enterprises are state-owned.[173]

The five year plans are implemented through a series of industrial catalogues. The catalogues are planning documents that list key industries and products that are favored by the central government, pursuant to the broad statements included in the Five Year Plans. For example, the National Development and Reform Commission developed the "Catalogue for the Guidance of Foreign Investment Industries," which specifically encourages industrial projects targeted for foreign investment.[174] The State Development and Planning Commission and State Economic Trade Commission developed the "Catalogue of Key Industries, Products, and Technologies Encouraged for Development by the State,"[175] which provides more specific guidance on the intended adjustments to China's industrial structure.

The "Directory Catalogue on Readjustment of Industrial Structure" issued in 2005 by the National Development and Reform Commission, China's premier planning agency, is another influential planning document.[176] The State Council issued implementing regulations that instruct government entities to follow this catalogue when making key decisions concerning highly preferential treatment on finance, taxation, provision of land, and importing and exporting privileges.[177] Article 12 of the regulations states:

> The "Catalogue for the Guidance of Industrial Structure Adjustment" is the important basis for funding investment directions, and for the governments to administer

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[173] (Coated Free Sheet Paper from the People's Republic of China: Final Affirmative Countervailing Duty Determination 2007) and (Certain New Pneumatic Off-The-Road Tires from the People's Republic of China: Final Affirmative Determination of Sales at Less Than Fair Value and Partial Affirmative Determination of Critical Circumstances 2008).
[174] (Catalogue for the Guidance of Foreign Investment Industries 2007).
[175] (Catalogue of Key Industries, Products, and Technologies for Development by the State n.d.)
[176] (Directory Catalogue on Readjustment of Industrial Structure 2005).
[177] (Interim Provisions on Promoting Industrial Structure Adjustment for Implementation n.d.).

> investment projects, to formulate and enforce policies on public finance, taxation, credit, land, import and export, etc.[178]

The catalogue is separated by industry. The industries included are 1) agricultural and forestry; 2) water conservation; 3) coal; 4) electric power; 5) nuclear energy; 6) petroleum and natural gas; 7) steel; 8) non-ferrous metal; 9) chemical products; 10) building material; 11) medicine; 12) mechanism; 13) automobiles; 14) marine vessel; 15) aviation and space flight; 16) light industry; 17) textiles; 18) architecture; 19) urban infrastructure and real estate; 20) railway; 21) highways; 22) water transport; 23) air transport; 24) information industry; 25) other service industry; and 26) environmental protection and energy-saving comprehensive utilization.[179]

The projects included in the catalogue range from broad statements, covering nearly any conceivable application in the industry, to narrow instructions, focusing on specific production lines. For example, under the petroleum and natural gas industry subheading, the catalogue lists "{p}etroleum and natural gas exploration and exploitation" as an encouraged project. In contrast, under the steel subheading, the catalogue lists as an encouraged project the "{c}onstruction of new generation large-volume mechanic coke oven of coke dry quenching, coal charging and coke pushing and cleaning apparatus with the height and width of the carbonization chamber no less than 6 meter and 500 mm respectively."[180]

A review of a partial translation of the 12th Five-year Plan indicates SOEs will be affected by efforts to:

- Improve the services industries in China, many of which are currently dominated by SOEs;
- Support the old industrial base in Northeast China;
- Improve income distribution;
- Optimize investment structure;
- Channel investments into industries considered important to national security and the economy;
- Develop national champions and Chinese brands;
- Develop strategic emerging sectors;
- Implement industry innovation projects;
- Reform energy production.

[178] (Interim Provisions on Promoting Industrial Structure Adjustment for Implementation n.d.).
[179] (Directory Catalogue on Readjustment of Industrial Structure 2005).
[180] (Directory Catalogue on Readjustment of Industrial Structure 2005).

Services: The plan echoes many of the policies used to develop manufacturing industries, such as opening up the service sector to various types of ownership, providing preferential utility rates to encouraged services sectors, and raising capital through equity and bond issuance.

Support for Northeast China: The favored sectors include manufacturing (e.g., equipment manufacturing, raw materials, automobiles and agricultural products deep processing); services industries (e.g., financial, logistics, tourism and software and outsourcing); and agriculture. The SOEs in the region will continue to be reformed and the non-public economy will be encouraged.

Improve income distribution: The proportion of SOE gains taken by the state will rise and be redistributed. Salaries of senior managers at state controlled firms will be standardized and reflect operational and management performance, as well as technical achievements. In addition, payroll and salary standards will be adjusted in some industries to reduce the disparity between rural and urban areas and across industries.

Optimize investment structure: The aim is to improve investment decisions by SOEs to avoid excessive expansion and duplicative investments.

Channel state capital into key industries. The government will inject capital into key industries and withdraw them from others. Large SOEs that are not able to be listed and those that remain solely funded by the state will undergo corporate reforms. Certain industries will begin the reform process (e.g., salt and railway) while other industries (primarily strategic industries) will deepen reforms.

Develop national champions and Chinese brands: The plan urges advantaged enterprises to create alliances and mergers in order to increase industry concentration, with a focus on the auto, steel, cement, machinery, aluminum, rare earth, pharmaceutical, electronic information industries, shipbuilding, petrochemical, light industry and textiles. The development of large enterprises with core competencies and world-famous brands is to be encouraged. SOEs are not mentioned explicitly, but they already dominate many of the industries which are mentioned.

Develop strategic emerging sectors: The idea is to develop new strategic industries, presumably to become world leaders in emerging industries. These include energy-saving and environment-friendly new-generation IT, biology, high-end equipment manufacturing, new energy sources, new materials and new energy automobiles. The plan specifies a number of specific goods and services (e.g., cloud computing) and instructs that the value added of these new industries should reach eight percent of GDP.

Implementing industry innovation: This aspect of the plan urges the development and implementation of major technology projects to be carried out by the state, which presumably indicates SOEs. The aim is to master core industry technologies and accelerate large-scale industry development.

Reform energy production: This entails developing clean and diversified energy sources; optimizing the exploration, storage, and transmission aspects of energy distribution; and developing the country's energy infrastructure.

It does not matter that the 12th Five-Year Plan does not mention SOEs explicitly with regards to key development projects and industry goals; the SOEs are already dominant in most of the industries which are mentioned in the plan. And, in cases where projects require large capital expenditures, only SOEs are in a position to make such investments. Thus, although China is comfortable with a mixed economy that incorporates private enterprises and foreign investments, it continues to rely on SOEs to carry out what it deems to be the most important projects. And although China is comfortable with the market allocating resources to improve enterprise decision-making, it does not trust the market to determine China's industrial structure.

X. The SOE role in technology transfers

The development of advanced technology industries is a major priority for the government of China. This section describes the government's technology plans and explores the role of SOEs in facilitating technology transfers through joint ventures with foreign firms. This section responds to the Commission's eleventh question.

In the last few years, there has been a consensus among China watchers that the role of centrally-controlled SOEs (120 companies) has become greater and that China is once again following a *guojin mintui* policy ("the state advances as the private sector retreats") to foster national champions in the strategic industries of the future. The state's share of assets has been growing at the expense of private capital in the following industries: steel, chemicals, coal, petroleum, mining, electricity generation, civil aviation, highways, water, finance, brokerage, insurance, real estate, posts, etc.[181]

SOEs are the default vehicles that are used to implement state policy. They are usually the partner of choice for FIEs that want to enter a market in China that is closed to wholly-owned foreign enterprises. SOEs are typically the only partners that have the government

[181] (Is China Re-nationalizing? 2010).

connections and economies of scale required for major projects. Recent examples of SOEs acting as state actors in facilitating technology transfer from foreign companies include the China Commercial Aircraft Corporation's agreements with General Electric (GE) and the other foreign aviation companies to build commercial aircraft and the agreements between China South Locomotive & Rolling Stock Corporation and its subsidiaries with Kawasaki Heavy Industries, Siemens, and Bombardier to build high-speed rail in China.

Even foreign executives, generally reluctant to speak out due to fear of retribution in China, have voiced their concerns with the China market. The most notable example occurred at a conference of business executives in Rome in July 2010, where GE's CEO Jeffrey Immelt observed, "I really worry about China. I'm not sure that in the end they want any of us to win, or any of us to be successful."[182]

The State Council articulated its desire to incubate indigenous technological development in *The National Medium- and Long-Term Plan for the Development of Science and Technology (2006-2020)* (MLP), issued on February 9, 2006.[183] In his study on China's innovation efforts, James McGregor explains that the Chinese government has put in place an "industrial policy ecosystem" that includes:

- a domestic patent regime that can be used to retaliate against foreign companies inside China if they file IPR violation lawsuits against Chinese companies outside of China;
- compulsory certification and standards requirements that slow or block the entry of foreign products into the China market;
- requirements for the disclosure of technology secrets and other proprietary information that serve to exclude foreign products from major Chinese markets; and
- poor enforcement of IPR protection.[184]

The Chinese government is very specific about the kind of cutting-edge technology that it is targeting, and the MLP lists 8 fields of technology and 16 mega-projects that China deems necessary for becoming an advanced technological nation.[185] The 8 fields of technology are:

- Biotech
- Advanced Materials
- Advanced Energy Technology
- Laser Technology
- Information Technology
- Advanced Manufacturing
- Marine Technology
- Aerospace Technology

182 (Immelt Hits Out at China and Obama 2010).
183 (Government of China n.d.).
184 (J. McGregor July, 2010) 22.
185 (J. McGregor July, 2010) 14-15.

In addition and complementary to the 8 targeted technologies, the MLP also lists 16 "Mega Projects" (3 of which are classified as they are most likely military projects) that the Chinese government deems critical for China to become a modern and technologically advanced nation. The government will fund these mega projects with the aim of creating "indigenous innovations" through "co-innovation" and "re-innovation" of foreign technologies supplied by companies seeking to profit from the massive government outlays on the mega projects.[186]

Perhaps the best way to appreciate the technology environment in China and the role played by SOEs and other actors in creating "indigenous innovations" through "co-innovation" and "re-innovation" of foreign technologies is through recent examples in the fields of aviation and high-speed rail.

A. Aviation

The State Council first initiated a feasibility study into the possibility of developing a mid-sized indigenous passenger aircraft in 2003.[187] The goal was enshrined in the 2006 MLP blueprint and the airliner became one of the top priority mega projects. Of the 120 central SOEs listed on SASAC's website, three of the first five listed companies are involved in the aerospace or aviation industry, and another four are included in the total list.[188, 189]

In March 2008, the China Commercial Aircraft Company (COMAC) was formed to drive the plane's development, manufacture and commercialization. COMAC is China's official challenger to the duopoly of Boeing and Airbus. COMAC was established in Shanghai in May 2008 with a registered capital of RMB 19 billion and its mission is to design and build large passenger aircraft of over 150 passengers to reduce China's dependency on Boeing and Airbus.[190] China currently accounts for 22 percent of Airbus' 2010 orders and 15 percent of Boeing's orders.

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[186] Per the MLP, the 16 "mega projects" include: (1) Core electronic components, high-end general use chips and basic software products, (2) Large-scale integrated circuit manufacturing equipment and techniques, (3) New generation broadband wireless mobile communication networks, (4) Advanced numeric-controlled machinery and basic manufacturing technology, (5) Large-scale oil and gas exploration, (6) Large advance nuclear reactors, (7) Water pollution control and treatment, (8) Breeding new varieties of genetically modified organisms, (9) Pharmaceutical innovation and development, (10) Control and treatment of AIDS, hepatitis and other major diseases, (11) Large aircraft, (12) High-definition earth observation systems, (13) Manned spaceflight and lunar probe programs, (14-16) Undisclosed, believed to be classified military projects.

[187] (J. McGregor July, 2010) 33.

[188] (Main Functions and Responsibilities of SASAC 2011).

[189] China Aerospace Science and Technology Corporation, China Aerospace Science and Industry Corporation, China Aviation Industry Corporation, China National Aviation Holding Company (Air China), China Eastern Air Holding Company, China Southern Air Holding Company, and China Commercial Aircraft Corporation.

[190] (China plane business gets its wings 2008).

COMAC wants to spur the aviation industry by effectively competing with the Airbus A320 and the Boeing 737. According to the China Daily:

> Much of COMAC's ambitions also stem from the government's plan to transform China as an aviation major capable of making jumbo jets, regional planes, business jets, propeller planes and helicopters all at home. That in turn is expected to have a positive impact on a host of allied industries related to the aviation industry.[191]

COMAC's first jet to be marketed will be the ARJ21, a twin-engine regional jet that was modeled on the McDonnell Douglas Corporation's MD-90. The ARJ21 was originally planned to be rolled out in 2007, but production delays have postponed its launch date until the end of 2011.[192] The ARJ21, a 90-seat regional jet powered by two, fuselage-mounted General Electric CF34-10A engines, is to compete in the regional air market.

COMAC's next jet is to be the C919, a narrow-body jet that China hopes will be able to compete directly the Airbus 320 and the Boeing 737. Construction of the C919 began in September 2009, with first deliveries expected in 2016. The C919 jet will contain advanced avionics supplied by GE, including some of the same technology that is going into the much-delayed next generation Boeing Dreamliner.[193] Several other American companies have also been chosen as suppliers for the C919 aircraft, providing power generators, fuel tanks, hydraulic controls, brakes, tires and other gear. The roster of U.S. suppliers includes Rockwell Collins, Honeywell, Hamilton Sundstrand, Parker Aerospace, Eaton Corporation and Kidde Aerospace.[194]

Foreign players have been lining up to integrate their technology into the C919 design via technology transfers and joint development. Parker Aerospace, GE, Honeywell and Goodrich have all partnered with various Chinese entities or the main aviation SOE, the Aviation Industry Corporation of China (AVIC).[195] Industry analysts believe it is only a matter of time before fierce competition begins between China's aviation manufacturers and international heavyweights such as Boeing and Airbus, and COMAC has already made inroads into Boeing's traditional 737 markets and is in talks with budget carrier Ryan Air about a potential order of the C919 jet.[196]

[191] (China Ready To Challenge Airbus, Boeing 2011).
[192] (ARJ21 Wing Problems Drive Program Delay 2010).
[193] (G.E. to Share Technology with China in New Joint Venture 2011).
[194] (G.E. to Share Technology with China in New Joint Venture 2011).
[195] (J. McGregor July, 2010) 34.
[196] (Ryan Air May Spend Billions on Cheap Chinese Jets 2011).

COMAC is relying heavily on joint ventures to assist with technology development and production. COMAC's joint venture activity commenced in July 2010, when subsidiary Shanghai Aircraft manufacturing Co., Ltd. announced a Shanghai-based joint venture to design, develop, manufacture and support the fuel and hydraulic conveyance systems for the C919 and the global aviation market.[197] In July 2011, Labinal, a subsidiary of French firm Safran, recently established a 49-51, Shanghai-based joint venture with COMAC specializing in electrical wiring for the C919.[198] On August 4, Hamilton Sunstrand, a subsidiary of United Technologies announced a joint venture agreement with central SOE AVIC to develop the electrical system for the C919.

B. High speed rail

The alleged most egregious example of a Chinese company appropriating foreign technology has occurred in the high-speed rail sector. In June 2004, the Ministry of Railways (MOR) solicited bids to make some 200 high speed trains. Four companies eventually submitted bids – a Japanese consortium led by Kawasaki Heavy Industries, Alstom of France, Siemens of Germany and Bombardier of Canada. All of the companies except Siemens were awarded part of the 140 billion yen contract, with Kawasaki winning the largest portion. Kawasaki was the leader of a six-company Japanese consortium including Mitsubishi Corporation, Itochu Corporation, Marubeni Corporation, Mitsubishi Electric and Hitachi.

According to an October 20, 2004 press release on Kawasaki's website, the MOR awarded Kawasaki and its local partner, CSR Sifang Locomotive, a contract worth 80 billion yen ($100 million) to produce 480-cars arranged in 60 eight-car trains. Of the 60 train sets, three were directly imported from Japan, six were kits assembled at CSR Sifang, and the remaining 51 were made in China using transferred technology from Kawasaki with domestic and imported parts. The trains that were produced in China were known as "CRH2" trains and they were modeled on the E2 series Hayate trains that run in Japan.[199]

During the production of the 51 cars made at CSR Sian's plant in Qingdao, Kawasaki took dozens of CSR engineers to Japan for training.[200] Some later helped set up the Qingdao factory, which now churns out about 200 train sets per annum. However, CSR no longer has any affiliation with Kawasaki, and despite the fact that the trains emerging from their Sifang plant look

[197] (Eaton Corporation and Shanghai Manufacturing Co., Ltd. Announce Joint Venture Agreement to Support COMAC C919 Aircraft Platform 2010). The venture received a business license in March 2011 and was formally launch on June 28, 2011.
[198] (Donald 2011).
[199] (Kawasaki Heavy Industries n.d.)
[200] (Shirouzo 2010).

identical with the E2 series Hayate trains, CSR Sifang engineers claim that the trains are Chinese.

In a July 8, 2010 article in the *Financial Times* entitled "Japan Inc Shoots Itself in the Foot on Bullet Train," Luo Bin, vice-chief engineer at CSR Sifang's Technology Development Center, states "The shape may be the same, but [inside] it's completely different…This is our design." Mr. Luo went on to further state that within two years of sealing the deal with Kawasaki, Sifang had "digested" all the technology required for their manufacture, and that CSR Sifang has improved on it so thoroughly that its latest models have "nothing at all to do with *Shinkansen*."[201]

As for the critical question of whether the Chinese "stole" Japanese technology, Mr. Sasaki said that China did not have any of the basic technology for building high-speed trains in 2004, and that the Japanese provided the basic designs for the Chinese trains. He indicated that the Chinese had developed some innovations but acknowledged that the technology was still 98 percent Japanese.[202]

Although Kawasaki did not enter a joint venture with Sifang, foreign technology provided by foreign partners through joint ventures with SOEs is an important part of the development story. The CRH1, another train model, incorporated technology from the Canadian firm Bombardier Regina, and was built by a joint venture with Sifang Power Transportation, a subsidiary of the state-owned CSR.[203] The French producer Alstom, producer of the TGV, has joint ventures with the SOEs Changchun Railway Co. and China Northern Locomotive and Rolling Stock Industry.[204]

In sum, China's SOEs have played a key role in the process of acquiring foreign technology to develop industries favored by the Chinese government. China's high speed railways were built using foreign technology, some of which was secured through joint ventures. Currently, the SOE COMAC is developing a jetliner and is following a similar pattern by forming joint ventures with foreign producers of complex systems. In all instances reviewed for this report, the joint ventures are based in China, as are the manufacturing activities and related employment.

[201] (Dickie 2010).
[202] (Dickie 2010).
[203] (H. Wang 2007).
[204] (China Ministry of Railways (Brief Article) 2004).

XI. Are SOE leaders market-driven or Party driven?

There have been important reforms to SOEs, which have been transformed from appendages of ministry bureaus to large enterprises with listed firms, joint ventures with foreign firms, and large overseas holdings. The ways in which SOEs are managed have also changed due to corporate reforms. SOEs now seek to make money, and many have succeeded in recent years. According to SASAC's web site, operating revenues for central SOEs in 2010 totaled RMB 16.7 trillion.

Listings by SOE subsidiaries are now relatively commonplace, but it is really quite remarkable considering that private entrepreneurs were considered enemies of the state only four decades ago. But as discussed above, China's SOEs continue to be influenced by policy considerations. The set of relationships that convey the government's policy priorities to SOEs and their listed subsidiaries is the subject of this section, which responds to the Commission's fifteenth question.

A. SOE reforms in China and the role of SASAC

The law governing SOEs, the *Law on Industrial Enterprises Owned by the Whole People* (*SOE Law*), removed the government from direct control over SOEs, granting legal status to them and defining the state as an owner.[205] Eventually, many SOEs were "corporatized," *i.e.*, converted to joint stock companies and registered under the *Company Law*, which was first introduced in 1994.[206] Over half of all SOEs were corporatized in this way by the end of the 1990s. Corporatization is designed to separate company owners from company management so that the company can be run on a commercial basis and to eventually allow investors to purchase limited amounts of shares. The process of corporatization succeeded in raising equity capital for SOEs, but the state's ties to the SOEs remain strong. The *Company* Law was revised in 2006 to provide more security for minority shareholders, but transformed firms are still not immune from state interference, and their increased autonomy made it easier for managers to expropriate the firms' assets.[207]

Recent reform initiatives have indicated a greater willingness to provide for shareholder protection. For example, the amendments to the *Company Law* in 2006 increase shareholders' ability to collectively influence matters placed before the board, and generally increase transparency obligations.[208] Importantly, the amendments introduce the concept of fiduciary duties and expand management's civil liabilities in order to increase accountability to

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[205] (Yusuf 2006) 45.
[206] (China in the Global Economy: Governance in China 2005) 308-312.
[207] (Anderson 2005) 19.
[208] (China Update 2006) 2-3.

shareholders.[209] Articles 55, 56, 121, and 122 of the *Company Law* provide that employees, unions, and shareholders have the right to oversee and evaluate the activities of the company in certain circumstances. Shareholders are now permitted to bring suit if directors or management violate their obligations. In addition, China's Securities Regulatory Commission has issued a number of administrative measures aimed at improving the protection of minority shareholder rights. The step considered most important by many experts is improving the system for minority shareholder voting on major issues.[210]

The Sixteenth National Party Congress presented the *Guiding Principles for State-owned Assets* in 2002, which reinforced the state's role as owner of SOEs.[211] The State-owned Asset Supervision and Administration Commission (SASAC) was created in May 2003 and manages SOEs registered under the *Company Law* "on the principle of separating government administration from enterprise management and separating ownership from management."[212] The SASAC "shall not interfere in production and operation" activities but rather will act as the majority shareholder to take major policy decisions and choose managers.[213] A priority of the SASAC is to improve the performance of SOEs' boards of directors by appointing and removing directors based on performance measures.[214] The SASAC may authorize directors to take independent decisions on "important matters of the company." The state nevertheless decides any matter related to the increase or reduction in capital, issuance of bonds or changes in corporate structure, such as mergers, divisions, or liquidation. The chairman and vice-chairman of the board are appointed by the SASAC from among the board members.[215]

Per the SASAC's website, its main functions and responsibilities are:[216] 1) Supervision and evaluation of state-owned enterprises; 2) Oversight of state-owned assets; 3) Recruiting of top executive talent; 4) Drafting of laws, administrative rules and regulations that promote increased development of corporate law in China; and 5) Coordination of local state-owned assets as prescribed by law. As for personnel policies, the website further states:

"SASAC appoints and removes the top executives of the supervised enterprises, and evaluates their performances through legal procedures and either grants rewards or inflicts punishments based on their performances; establishes corporate executives' selection system in accordance

[209] (Anderson 2005) 19.
[210] (China Update 2006).
[211] (China in the Global Economy: Governance in China 2005) 305.
[212] (Trade Policy Review, Report by the Secretariat: People's Republic of China 2006) 133.
[213] (Trade Policy Review, Report by the Secretariat: People's Republic of China 2006) 133-134.
[214] (China in the Global Economy: Governance in China 2005) 305.
[215] (Trade Policy Review, Report by the Secretariat: People's Republic of China 2006) 129.
[216] (Main Functions and Responsibilities of SASAC 2011).

with the requirements of the socialist market economy system and modern enterprise system, and improves incentives and restraints system for corporate management."

The SASAC will assess the senior and middle management of an SOE on these four criteria on an annual basis, and will award each person a grade of "A", "B", "C" or the equivalent. The SASAC conducts these ratings both by having the subject complete a self-assessment and by having the subject's colleagues fill out anonymous ratings forms vis-à-vis their leaders (an indigenous Chinese version of a 360 degree personnel review). If a senior SOE manager has three years of mediocre ratings in a row, he will usually be removed from his job.[217]

Contemporaneous with rating the senior SOE managers, the SASAC also picks 10 mid-to-upper level SOE managers (*houbei* or "people waiting in the wings") and rates them according to a similar methodology. Those who receive a high rating will be first in line for higher ranking positions when openings occur.

As central government ownership of companies such as energy or defense-related firms is considered key to national security, the central government maintains absolute or controlling stakes in such enterprises. Hence, SOEs affiliated with the central government are under tighter government control than firms affiliated with local governments at the three jurisdictional levels: provincial, municipal (or city), and county (or township). It should be noted that there are local SASACs at all of these three levels, and that their duties with regard to provincial, municipal, and county-owned SOEs parallel those of the central SASAC.

Despite the above-described systems to pick the most competent candidate for a position, the Chinese personnel system is still riddled with corruption and cronyism, especially at the local levels.[218] As the system is to some extent self-governing and self-regulating, sycophancy and loyalty to one's direct superior often count more than any sort of objective measure of competency. Most Chinese SOE boards fall into the typologies highlighted in a recent OECD report: 1) the operational board*,* for the board that runs the SOE as an extension of a government department; 2) the conduit board, which simply relays directions given by ministers; 3) the symbolic board, which is circumvented and uninvolved; and 4) the subjugated board, which is dominated by a powerful CEO or chair.[219]

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[217] (Interview with former SOE executive 2011).
[218] (R. McGregor 2010) 75.
[219] (Frederick 2011).

B. The role of the COD

Officially, SOEs incorporated under the *Company Law* are empowered to make their own managerial, operational, and production decisions. The state retains only the authority to appoint, remove, and reward directors. A minority of commercial enterprises is not incorporated under the *Company Law* and still operates under the old system of direct management by government ministries. A primary goal of SOE reforms has been to improve efficiency by introducing market management practices and by separating the ownership of firms from their management in order to restrict the state to the role of owner and limit its interference in day-to-day operations of the company. In theory, this provides greater autonomy to the SOE managers and allows them to make decisions based on market considerations. In practice, however, the CCP still appoints the majority of senior SOE managers despite a nominal separation of ownership and management. According to an analysis by Pei Minxin that appeared in *Foreign Policy* in 2006, the CCP appoints four-fifths of the chief executives at SOEs and more than half of all senior executives.[220]

The senior managers of the central SASAC enterprises are important people within the Communist Party framework. For the top 50 or so centrally-managed SOEs (*yangqi)*, the three top positions—party secretary, chairman of the board and CEO—are appointed directly by the Communist Party's Central Organization Department (COD) (*zhongzubu*).[221] Under the Chinese model, the board chairman is viewed as the *de facto* head to which everyone defers, including the CEO. Almost all of the people chosen for these top three positions are CCP members, and one person can hold two positions at the same time. In fact, the CEO and party secretary of many of the top *yangqi* are often the same person.[222] These positions are equivalent to a minister (*buji*) or vice-minister (*fubuji)* rank in the Chinese government, and the selected executives are reviewed and approved by the Standing Committee of the Politburo. They often serve as vice-governors of provinces before or after their tenures in senior management at the SOEs.

The appointments of all the remaining high-ranking positions (vice presidents, deputy party secretary, etc.) at these 50 *yangqi* are carried out by the SASAC in consultation with the COD. The central SASAC is also nominally in charge of all major personnel decisions at the remaining 70 centrally managed SOEs. Personnel decisions in provincial, municipal and county SOEs are also managed by the local arm of the SASAC.

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[220] (Pei 2006) 36.
[221] Former Chinese leaders such as Zhou Enlai and Deng Xiaopeng were both leaders of the COD before their ascension to the top echelon of power, giving an indication of the centrality of the COD to the Chinese body politic.
[222] (Pei 2006) 36.

Still, the COD wields tremendous power behind the scenes and is the real decision maker when it comes to making senior personnel decisions in the Chinese Government and the SOEs. The workings of the COD were described in a recent book by Financial Times journalist Richard McGregor *The Party: The Secret World of China's Communist Rulers*:

> The best way to get a sense of the Department's job is to conjure up an imaginary parallel body in Washington. A similar department in the US would oversee the appointment of the entire US cabinet, state governors and their deputies, the mayors of major cities, the heads of all federal regulatory agencies, the chief executives of GE, Exxon-Mobil, Wal-Mart and about fifty of the remaining largest US companies, the justices on the Supreme Court, the editors of the *New York Times*, the *Wall Street Journal*, and the *Washington Post*, the bosses of the TV networks and cable stations, the presidents of Yale and Harvard and other big universities, and the heads of think-tanks like the Brooking Institution and the Heritage Foundation.[223]

The COD has detailed dossiers on every member of the CCP, and is the undisputed arbiter of major personnel decisions in Chinese society. The CCP uses the *nomenklatura* method ("list of names" in Soviet terminology) to determine appointments. The central *nomenklatura* list comprises the top 5,000 positions in the Party-state, all of which are controlled by the COD. The list includes all ministerial and vice-ministerial positions, provincial governorships and first Party secretary appointments, as well as appointments of university chancellors, presidents of the Academy of Science and Academy of Social Sciences, etc.[224]

A source who was a high-ranking member of the personnel department of the Ministry of Science and Technology stated in an interview that it is still the COD that wields the real power behind the scenes for major personnel appointments at every stratum of Chinese society. The department has been headed since late 2007 by Li Yuanchao, a reportedly forward-looking leader who studied at the Kennedy School of Government at Harvard.

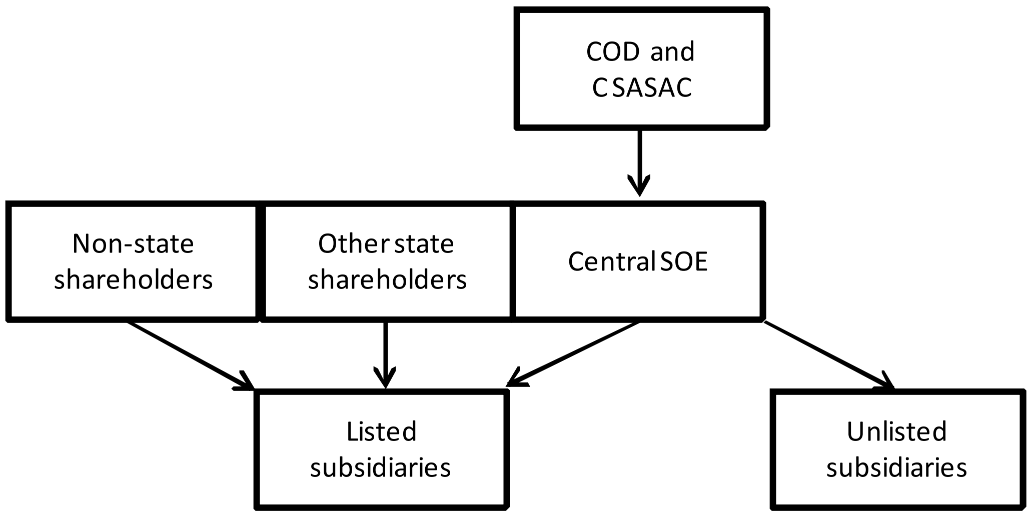
C. The market or the state?

The most recent wave of SOE reforms was aimed at embedding SOEs into a modern enterprise system. At the top sits the main SOE, which is owned by the state. For the top 50 SOEs, the COD of the CCP appoint the three top positions (and other positions it deems important)[225] and SASAC appoints other key management personnel. SASAC appoints senior executives as well as middle management remaining non-financial SOEs. This SOE typically owns controlling interests in both listed and unlisted subsidiaries. Listed shares can be owned by both private

[223] (R. McGregor 2010) 72.
[224] (Shambaugh 2000) 173.
[225] (Deng, et al. 2011) 14.

and institutional shareholders. In many cases, shares are also owned by other state-owned or controlled entities.

Figure XI-1: Ownership and control structure of listed SOE subsidiaries



So, given this structure, what happens when a listed subsidiary is faced with two options, one that benefits the financial interests of shareholders, or one that benefits the national interests of China as defined by the State Council? Company management would have to choose.

The incentives they face ensure that they will choose state interests over those of non-state shareholders. The executives of SOE owners are chosen and/or approved by COD and SASAC, which also determine executive salaries and their career paths. Their careers and financial success depends on how well they adhere to CCP priorities and/or government orders.[226] Moreover, the "Interim Provisions on Management of Executives in Central SOEs", issued jointly by the Central Committee of CCP and the State Council in December, 2009, clearly indicates that the Party maintains absolute control over the executives.[227] The executives of the listed subsidiaries' main shareholder, therefore, are incentivized to follow what is best for the state.

This institutional order suggests that the subsidiaries would also be likely to chose follow the interest of the Party/state. The disclosure documents submitted by SOEs that have raised capital in the United States support this conclusion. The statement of risk provided by China Southern Airlines Company Limited is quite explicit: "The Company is indirectly majority owned by the Chinese government, which may exert influence in a manner that may conflict with the

[226] (Deng, et al. 2011) 16.
[227] (Deng, et al. 2011) 13-14.

interests of holders of ADRs, H Shares and A Shares."[228] The other disclosure document viewed for this study make this same general point. For example,

Chalco: "The interests of our controlling shareholder {the SOE Chinalco}, who exerts significant influence over us, may conflict with ours."[229]

China Telecom Corporation Limited: "We will continue to be controlled by China Telecom Group, which could cause us to take actions that may conflict with the best interests of our other shareholders."[230]

CNOOC Limited: "CNOOC indirectly owned or controlled an aggregate of approximately 64.41% of our shares as of March 31, 2011. Accordingly, CNOOC continues to be able to exercise all the rights of a controlling shareholder, including electing our directors and voting to amend our articles of association."[231]

In short, it appears likely that when fiduciary duties of management at listed firms conflict with China's government priorities, management will, at a minimum, face an incentive structure that pushes it to chose the interests of China over the interests of private shareholders.

XII. Effects of SOE institutional interests on market access norms in China

SOEs are institutions, systems of established and prevalent social rules that structure social interactions. The Commission's twelfth question requests an assessment of what the SOE's institutional interest mean for U.S. and other foreign competitors in terms of their ability to access China's market and operate there in a non-discriminatory environment.

A. Key players

The incentives and constraints faced by SOEs determine their institutional interests. Because SOEs are not directionless entities, but are led by executives, it makes sense to focus on the incentives faced by these executives. The SOEs also have owners, presumably the people, whose interests are in theory articulated through the State Council and its agents (e.g., SASAC, local SASACs, and local government). SOEs also have workers, and their interests are worth

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[228] (China Southern Airline Corporation Limited 2011) 10.
[229] (Aluminum Corporation of China Limited 2011) 13.
[230] (China Telecom Corporation Limited 2011) 7. "Accordingly, subject to our Articles of Association and applicable laws and regulations, China Telecom Group, as our controlling shareholder, will continue to be able to exercise significant influence over our management and policies by: controlling the election of our Directors and, in turn, indirectly controlling the selection of our senior management…."
[231] (CNOOC Limited 2011) 50. However, the 20-F also notes that "{a}lthough CNOOC has retained a controlling interest in us, the management of our business will be our directors' responsibility."

considering as well. The primary actor here is the CCP, and its role will be discussed extensively.

SOE executives: As described above, the executives of China's important SOEs face two sets of incentives. On the one hand, they want the SOEs they manage to be profitable because SASAC's grading of management is based on the enterprise financial performance. On the other hand, their career paths are ultimately determined by the CCP's COD, which is more concerned with how well the executives carry out the goals of the state. A review of recent events indicates that when financial and state goals conflict, the goals of the state are dominant. For example, the government's fiscal stimulus measures in 2009 required significant amounts of lending by state-owned bank and investments by SOEs. According to one study of the stimulus, bank lending went primarily to SOEs who subsequently used those funds to invest in real estate.[232] The banks lent this money without the due diligence typically used, and the SOEs paid more for their acquisitions than non-SOEs who purchased otherwise identical properties.[233] Also, the retail operation of petroleum SOEs racked up huge losses in 2008 because they were forced to maintain low gasoline prices at a time when global fuel prices were skyrocketing.

State Council: The State Council is the highest executive organ of state power, as well as the highest organ of state administration in China.[234] The State Council has substantial power to legislate and regulate. It holds the power to propose legislation and may take direct action through administrative regulation delegated to it by the National People's Congress or the Standing Committee. The State Council exercises its economic regulatory power through documents such as "circulars," "measures," and "temporary measures." The Legislative Affairs Committee of the State Council may interpret legislation and, jointly with the NPC Standing Committee, resolve conflicts between regional laws and State Council regulations.[235] All members of the State Council are reviewed by the NPC (or its Standing Committee).[236] Thus, the State Council is beholden to the Party members in the NPC.

SOE employees: SOEs employ millions of Chinese. They have an obvious interest in the financial success of the SOEs at which they work because failure could lead to unemployment. This is no idle threat because past SOE closures did lead to job losses.

China's Communist Party: The Communist Party is omnipresent in every facet, and at every level, of government and has been so for the last sixty years. In the words of the BBC, the

[232] (Deng, et al. 2011) 41.
[233] (Deng, et al. 2011) 6 and 35.
[234] (The State Council 2005).
[235] (Chinese People Question Effectiveness of Anti-Monopoly Law on SOEs n.d.) 7-8.
[236] (The State Council 2005).

"Chinese Communist Party has ruled the country since 1949, tolerating no opposition and often dealing brutally with dissent."[237] Going back to the "Great Helmsman" himself, Chairman Mao Zedong, the GOC's sole purpose has been, and continues to be, to serve the Communist Party, reinforce the power structure of the Communist Party, and to keep the Communist Party in control of the country. [238, 239]

Long ago Chairman Mao laid out this basic tenant: "Our principle is that the Party commands the gun and the gun shall never be allowed to control the Party."[240] In order to assuage the concerns of hard liners with China's reforms, Deng Xiaoping once proclaimed:

> As long as we keep ourselves sober-minded, there is nothing to be feared. We still hold superiority, because we have large and medium state-owned enterprises and township and town enterprises. More importantly, we hold the state power in our hands.[241]

Studies observe that ". . . China's current regime follows the same philosophy."[242]

Indeed, just recently, in Beijing, the Communist Party celebrated sixty years in power with a spectacular public ceremony.[243] The military, past and present government cadres, and senior Party leaders—including the highest levels of the Politburo—were all in attendance.[244] At the height of the ceremony, "tens of thousands of students flipped coloured cards to form phrases such as 'obey the Party's command' and 'be loyal to the Party.'"[245]

The Communist Party exerts its control over the government through a top-down pyramid. At the top stands a select few that form the power base of the entire system.[246] The Politburo's nine-member standing committee is the source of ultimate power in China.[247] The Politburo itself has 25 members, who are selected by the Party's Central Committee of 370 full- and part-time members.[248]

Exactly how the standing committee operates is secret and unclear, but once a decision has been made, all members speak with one voice.[249] When the orders are issued, the GOC and

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[237] (How China Is Ruled 2010).
[238] (Biography of Mao Zedong 2010).
[239] (Kominiak 1996) 10.
[240] (Kominiak 1996) 10.
[241] (Kane 2001) 30, citing to (Deng Xiaoping: The Stateman 1993) at 557.
[242] (Kane 2001) 48.
[243] (Party Like It's '49 2009).
[244] (Party Like It's '49 2009).
[245] (Party Like It's '49 2009).
[246] (How China Is Ruled 2010).
[247] (How China Is Ruled 2010).
[248] (R. McGregor 2010) 12.
[249] (How China Is Ruled 2010).

Communist Party apparatus is mobilized.[250] China's so-called legislature, the National People's Congress and People's Political Consultative Conference, filled with only the most loyal Party members, rubber-stamps the diktats.[251] The military, courts, and State Council all fall into line.[252] The orders flow down through the pyramid to all levels of government.[253]

The Communist Party and the government cannot be separated. The U.S. Department of Energy commissioned Sandia National Laboratories to conduct an in-depth study of the political and governmental structure in China.[254] The report explains that:

> The Party's control over the government is grounded in its sole authority to appoint and promote government officials. The Party leadership sets policy, oversees the workings of the government and manages the political and ideological indoctrination of government cadres.[255]

The report notes that even the army reports directly to the Communist Party.[256] Communist Party representatives sit side-by-side with officials in the government, army, and SOEs. They are "under the direct control of the Communist Party."[257] Indeed, the *Sandia Report* concludes that a group of "incestuous power elite," forms a "single political bureaucracy" consisting of Party, government, and military.[258] As noted in another in-depth academic study, China's intelligence officials, China's military officers, and China's political leaders tend to be closely related by blood, when they are not actually the same individuals.[259]

The entire system is based on law that is purposefully contradictory so that Party leaders can rule with impunity, if necessary. Although increasing attention reportedly is being paid to formal law, sources report that parties in China affected by a specific law customarily ask for the most recent interpretation of the law, not what the written letter of the law says. There may be active government policy on a particular topic for years before the policy has been codified into law.

In addition, once a law is promulgated, the practical meaning of a law is often determined by administrative regulations issued by the State Council or central government ministries months after the law is passed. Regulations also may be further modified by provincial and local rules

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[250] (How China Is Ruled 2010).
[251] (How China Is Ruled 2010).
[252] (How China Is Ruled 2010).
[253] (How China Is Ruled 2010).
[254] (Kominiak 1996) 10.
[255] (Kominiak 1996) 10.
[256] (Kominiak 1996) 10.
[257] (Kominiak 1996) 9.
[258] (Kominiak 1996) 9.
[259] (Kane 2001) 50.

and regulations. An example of this situation is China's Antimonopoly Law, which was passed in August in August 2007 after 13 years of debate. After the passage of the law, fundamental issues, such as whether the law is primarily directed at preventing foreign takeovers of Chinese companies, or whether it may be used to counter the monopoly power of large SOEs, are sill matters of uncertainty and debate.[260]

China's government policies have influenced the behavior of firms and industries since economic reforms began in the late 1970s, although the methods have changed radically and repeatedly, and continue to do so. China has undergone five major government reforms during this time—in 1982-83, 1988, 1993, 1998, and 2003.[261] Each of these reforms reorganized and redrew the major lines of government responsibility, reducing the number of ministries, commissions, and other organs of the State Council from 100 in 1982 to 28 in 2003. Each wave of reform has also attempted to re-draw the boundaries between the government and the SOEs. As a result, SOEs have evolved from being parts of government ministries involved in production activities to something more nearly resembling stand-alone enterprises.

The CCP exercises some measure of leverage and control over all the other actors discussed thus far. The Party appoints the top executives of key SOEs and determines their career paths after they are rotated out. The Party, through its members in the NPC, must approve all appointments to the State Council and all State Council appointees are Party members.

Workers, too, are under the eye of the Party. Unions are created under the umbrella of the All-China Federation of Trade Unions (ACFTU); independent unions are in practice not allowed.[262] Pursuant to the *Trade Union Law*, the purpose of the ACFTU is to "assist the people's government in their work and safeguard the socialist state power."[263] The ACFTU is funded by the Chinese government and its leadership is chosen by the CCP.

B. Impact on foreign access in China

The institutional interests of SOEs suggest that U.S. and other foreign business are likely to be disadvantaged in China whenever doing so would advance the interests of China in the eyes of the CCP. There are many potential scenarios in which SOE's institutional interests, in particular their special bond with the CCP, could harm, and indeed have harmed, business prospects for U.S. firms in China. These scenarios derive from the state's prominent role in guiding the Chinese economy.

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[260] (Chinese People Question Effectiveness of Anti-Monopoly Law on SOEs n.d.).
[261] (China in the Global Economy: Governance in China 2005).
[262] (Metcalf December, 2005); and (State March 8, 2006) Section 6(a).
[263] (The Trade Union Law of the People's Republic of China (amended October 27, 2001) 1992).

This does not mean that U.S. firms cannot make money in China, or cannot sell in China. Many U.S. firms have profited handsomely from the opening of China's economy. Many U.S. firms have invested in China, sold U.S.-made equipment in China, and made money in China, in part due to generous subsidies and competition limits put in place by the government.

But it is now increasingly obvious that these policies, and the gains they conferred on U.S. firms, were not due to the Party's conversion to free market capitalism. Rather, a more convincing interpretation of these policies is that they were put in place to accomplish certain very specific aims of the state. When the government desired foreign investment to spur job growth and kick-start China's economy, the result was incentives to attract foreign capital. As Deng Xiaoping said in a 1984 speech explaining China's opening to foreign investment,

> We welcome foreign investment and advanced techniques. Management is also a technique. Will they undermine our socialism? Not likely, because the socialist sector is the mainstay of our economy. Our socialist economic base is so huge that it can absorb tens and hundreds of billions of dollars' worth of foreign funds without being shaken. Foreign investment will doubtless serve as a major supplement in the building of socialism in our country. And as things stand now, that supplement is indispensable.[264]

SOEs are a tool used by the CCP to develop China's economy, carry out macroeconomic stimulus, and, increasingly, to secure the economic security of China and advance China's economic interests abroad. When foreign businesses advance the government's causes they are allowed access to China, but within the confines that are comfortable to the Party.

The Party does not seem comfortable with foreign entities owning controlling shares strategic industries. Thus, explicit limitations are placed on foreign ownership levels in those industries.

The Party wanted to upgrade the technology level of SOEs and the economy in general, so foreign companies with the needed technologies were attracted and allowed to form joint ventures with SOE subsidiaries. Now policy has shifted to favor indigenous technologies, and China increasingly is pursuing policies that aim for SOEs to develop indigenous technologies at the expense of foreign ones.

Foreign resource producers were happy to sell raw materials to Chinese steel SOEs, who were buying increasingly large quantities. But when China decided it should get a better deal than its international competitors, it formed a negotiating bloc of SOE steelmakers to deal better prices for China.

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[264] (X. Deng 1984).

The Rio Tinto case is instructive. In the latter half of 2008 and early 2009, China was engaged in a hotly contested dispute with Rio Tinto of Australia over iron ore prices. The GOC was irate over what it claimed to be price gouging by Rio Tinto. In reality, however, Rio Tinto merely asked the Chinese to pay the market price (i.e., the same price negotiated with the Japanese and Koreans).[265] Outraged that some of its steel producers may have reached an understanding with Rio Tinto that was not in line with its policy goals of cheap raw materials for all Chinese producers, the GOC jailed several steel CEOs under charges of treason – which can carry the death sentence[266] – for allegedly revealing "state secrets" in the negotiations.[267] In addition, the GOC jailed Rio Tinto executives, confiscated their business proprietary information, and handed over their information to Rio Tinto's state-owned competitors.[268]

In short, because SOEs are important to the state, and by extension the CCP, and because the state and CCP interests cast a long shadow over SOEs, U.S. and other foreign companies are likely to face limits to access in China when such access contradicts the interests of the Party or potentially harms the financial interests of SOEs.

Although the influence of the government and the Party are expressed most clearly through SOEs, it would be a mistake to assume that private enterprise in China ignores the government and the CCP and aspires to end the current economic and political system in China. Notwithstanding the romantic image from Tiananmen Square, most capitalists in China are not trying to bring about a transition to democracy in China. In the words of Kellee S. Tsai, "instead, most are working eighteen hour days and struggling to stay in business. Others are saving their profits to educate their one child, pay for medicine, buy a house, or retire. Quite a few entertain local officials as necessary business expense, and many are members of the Chinese Communist Party."[269]

Moreover, the state and the CCP has managed to extend its reach into the private sector. Most business associations in China are either organized by the state or have been co-opted by the state.[270] Private entrepreneurs are often automatically registered into join state-sponsored representative bodies, such as the All China Federation of Industry and Commerce, the Individual Labor association, and the Private Entrepreneurs Association. Moreover, in many instances the local entrepreneur hardly needs to be co-opted, because he is already a Party member and local politician—a "cadre-entrepreneur" or "red capitalist".[271] By 2003, 34

[265] (The Steel Fist of Government 2009).
[266] (China Officially Arrests Rio Employees 2009).
[267] (China Widens Probe of Steel Industry 2009).
[268] (China's Yukos: The Rio Tinto Case Shows Putinism Is Moving East 2009).
[269] (Tsai, Capitalism without Democracy: The Private Sector in Contemporary China 2007) 3.
[270] (Tsai, Capitalism without Democracy: The Private Sector in Contemporary China 2007) 7.
[271] (Tsai, Capitalism without Democracy: The Private Sector in Contemporary China 2007) 82.

percent of private entrepreneurs were Party members, compared to 14 percent a decade earlier.[272] Membership has its privileges: "Entrepreneurs who are men with strong political ties (i.e., members of formal political organizations), who run businesses with a large number of employees, and who have Party branches in the enterprise are more likely to have access to bank credit."[273]

Private entrepreneurs are now encouraged to join the CCP as well as consultative bodies. The situation for private capital in China has significantly improved in recent years.[274] But private businesses still face a number of operational and financing legal barriers that compel entrepreneurs to collaborate with local officials.[275]

In short, although the private sector does not face the same political constraints as do SOEs, neither is it free from CCP influence.

XIII. SOEs as conduits for foreign policies

During the past ten years, China's major SOEs have extended their reach beyond China in response to the government's goals of enlarging markets for Chinese goods and services, securing access to raw materials, obtaining advanced technologies, and enhancing international awareness of Chinese brands. The so-called "going-global strategy" (*zouchuqu*) was proposed in 2000 at the 5th plenary session of the 15th Central Committee.[276]

With total foreign exchange reserves at $3.2 trillion (and almost of half of it in U.S. Treasuries), equivalent to about 50 per cent of gross domestic product and almost three times more than any other nation's reserves, China has a plethora of excess cash on hand.[277] China is desperately looking to diversify its foreign holdings, and the natural vehicle has been through overseas investments in industries that are of strategic importance to the PRC – namely energy and minerals. Given the size of resource extraction projects and their importance to China's economic development, central SOEs have played a prominent role in China's foreign investments. In 2006, SOEs were responsible for four-fifths of outward FDI; central SOEs alone were responsible for 66 percent of total outward FDI. Since the beginning of 2005 China has invested more than $250 billion in non-financial investments overseas.[278] SOEs account for

[272] (Tsai, Capitalism without Democracy: The Private Sector in Contemporary China 2007) 83.
[273] (Tsai, Capitalism without Democracy: The Private Sector in Contemporary China 2007) 84.
[274] (Tsai, Capitalism without Democracy: The Private Sector in Contemporary China 2007) 8.
[275] (Tsai, Capitalism without Democracy: The Private Sector in Contemporary China 2007) 12.
[276] (Lee 2009) 9.
[277] (China's Reserve's Climb by $153 Billion 2011).
[278] (Scissors July, 2011).

more than 90 percent of this activity. SOEs are backed by cheap government financing and often behave as instruments of Chinese foreign policy.[279]

China's rapid development has caused an insatiable appetite for natural resources. Hence, China's overseas investment is geared towards natural resources (oil, gas and coal), metals (copper, aluminum, iron ore and steel) and increasingly on agriculture. This trend is expected to continue; according to the International Energy Agency, China became the world's biggest energy consumer in 2009.[280] The recent sectoral and regional compositions of these Chinese investments according to the Heritage Foundation's Global Investment Tracker dataset are shown in the tables below.

Table XIII-1: Sectoral composition of China's recent foreign investments, July 2009-June 2011[281]

	Investment *(Bil. Dollars)*
Energy and Power	61.8
Metals	22
Finance and Real Estate	16.5
Transport	6.8
Agriculture	6.4
Technology	3.7
Other Industry	3.2
Total	**120.4**

Source: Scissors July, 2011.

[279] (Scissors July, 2011).

[280] (International Energy Agency 2010).

[281] Such data, typically based on announced investment totals, do not necessarily offer an "apples-to-apples" comparison with the survey data presented in Figure XIII-1.

Table XIII-2: Sectoral composition of China's foreign investments as of June 2011

	Investment *(Bil. Dollars)*
Other Western Hemisphere	72.3
Sub-Saharan Africa	56.4
West Asia	51.7
Arab World	43.7
Europe	43.2
East Asia	42.6
Australia	38.4
United States	30.5
Total	**378.8**

Source: Scissors July, 2011.

Australia has been the number one national destination for Chinese investment, with almost all of the investment going to the coal, gas, iron, steel and aluminum sectors. The United States is nominally the second destination, but most of the investments have been passive financial investments by the CIC.[282] Latin America, especially Brazil and Argentina, have seen an upsurge of Chinese investment in energy, minerals and foodstuffs, although Brazil has recently enacted measures to limit foreign investment in large landholdings. Africa has also seen a large rise in energy and mineral investment, especially after the China-Africa Summit of 2006. Almost $2 billion in agreements were signed and President Hu Jintao pledged to offer $5 billion in loans and credit and to double aid to Africa by 2009.[283]

The biggest players – "National Champions" – in overseas investment are among China's largest SOEs: national oil giants China National Petroleum Corporation (CNPC), Sinopec and the China National Offshore Oil Company (CNOOC), as well as metal conglomerates the Aluminum Corporation of China (Chinalco), China Metallurgical and Minmetals. Shipping and construction groups also figure high on the list, including the China State Construction and Engineering Corp., China Ocean Shipping Group (COSCO), and China Communications Construction. Among industrial companies, ZTE Corp (telecoms), Lenovo (IT) and Haier (household goods) are also prominent, as is the diversified conglomerate CITIC. The China Investment Corporation (CIC), China's sovereign wealth fund developed along the lines of Singapore's Temasek and Abu Dhabi's Investment Authority, alone has assets of some $200 billion and has made notable (but not very successful) investments in the financial sector. Just four entities – the oil giants CNPC

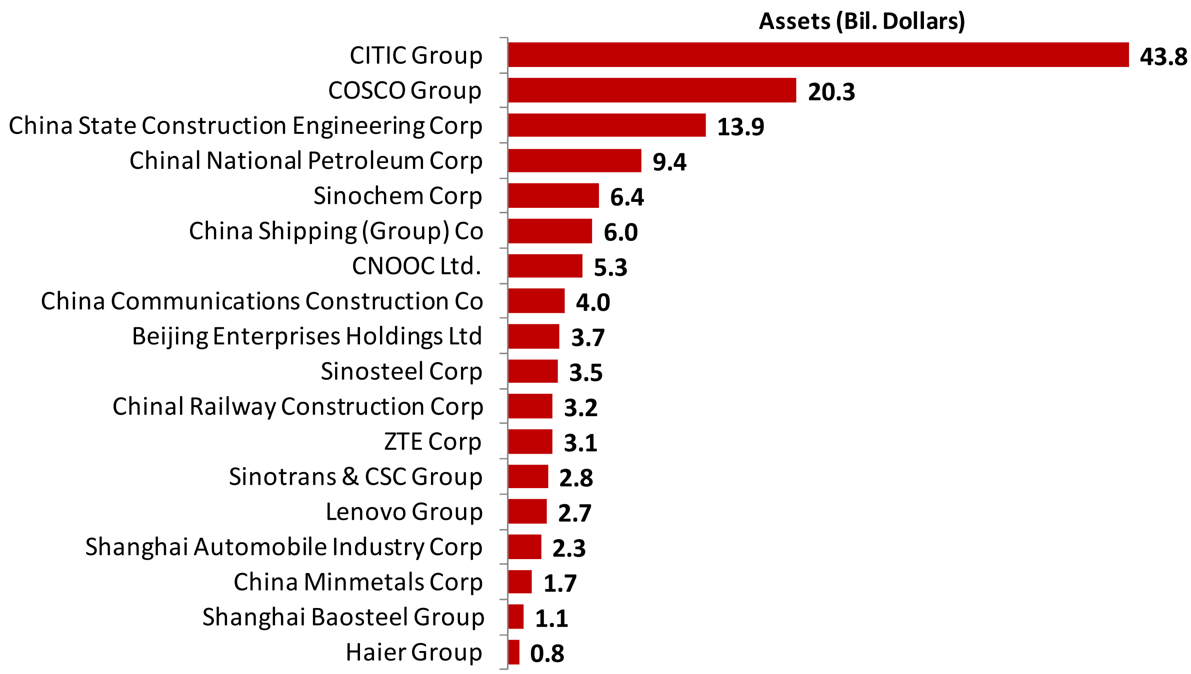
[282] Several attempts to buy real assets in the US have been stymied by US lawmakers due to national security concerns (e.g., CNOOC's aborted $18 billion takeover of Unocal and Huawei's aborted takeover attempts of 3Com, 2Wire and Motorola's wireless equipment unit).

[283] (China-Africa Summit Yields $1.9 Billion in Deals 2006).

and Sinopec, the sovereign wealth fund CIC, and metals conglomerate Chinalco – account for about half of Chinese spending since 2005.[284]

The latest data on the top holdings of foreign assets by non-banking Chinese multinationals are shown in the table below.[285]

Figure XIII-1: Foreign assets of China's main non-banking SOEs, 2010



Source: China's Ministry of Commerce and Fudan UCC 2010.

According to a former government official who was also a high ranking executive for a centrally-managed SOE, the question as to whether SOEs are acting on their own or as a proxy for the Chinese government is moot, for most SOEs are either wholly or majority owned by the state and thus their actions are a *de facto* proxy for their shareholder's interest.[286] One Beijing-based Australian mining executive said that the Chinese government may tell the SOEs that opportunities abound, but that it is up to the SOEs to take advantage of those opportunities. After an SOE finds a deal, however, its executives report back to their government minders,[287] and if the minders approve, they will make sure that the SOE obtains all the approvals and

[284] (Scissors July, 2011).
[285] (Home Away From Home Investment 2011).
[286] (Interview with former SOE executive 2011).
[287] The Asian-based lawyer also indicated that SOE executives clear their deals with the government.

financing necessary to consummate the deal.[288] This screening process spreads the risk among all the entities involved, thus reducing any repercussions for the SOE if anything goes wrong.[289]

The existence of such interactions does not mean that SOE executives ignore market incentives. SOEs are not in business to lose money, and many of their investment decisions reflect market principles to some degree. However, SOE investments and actions also reflect the long-term vision of their controlling shareholder (the Chinese government), and thus short-term profits are not necessarily their highest priority. As a general matter, SOE managers are incentivized to make investments from an economic point of view, but they also make investments that reflect Chinese government policy, especially in Africa, where Chinese-style ODA infrastructure projects are used to facilitate SOE investment.[290]

The government needs to approve any major overseas investment by any Chinese company.[291] SOE's overseas investments need the explicit approval of at least 4 government agencies: the NRDC, Ministry of Commerce, State Administration of Foreign Exchange and the SASAC. These agencies act as political and economic consultants for major overseas projects.[292] The NDRC is responsible for reviewing project feasibility and determining whether the investment is in sync with current government policy. MOFCOM is responsible for checking whether the investment makes commercial sense and is in sync with the target country's political and economic environment. SAFE is responsible for examining the source of funding for any investment and approving the conversion of RMB into foreign currency. In this sense, SAFE holds the ultimate trump card, as without foreign exchange approval no investments can occur.

The financial crisis in the West has given impetus for China to accelerate its overseas investments and further support its national champions. The top Chinese leadership has stated that SOEs will continue to be the main actors in China's *going out policy*, and that China will use its massive foreign exchange reserves to fuel this overseas expansion, especially targeting energy and natural resources. This was clearly stated by Prime Minister Wen Jiabao in a July 2009 speech to Chinese diplomats: "We should hasten the implementation of our 'going out' strategy and combine the utilization of foreign exchange reserves with the 'going out' of our enterprises."[293]

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[288] (Interview with resource industry executive 2011).
[289] (Interview with former SOE executive 2011).
[290] (Corkin April, 2008).
[291] Major investments are those that exceed $300 million in the resource sector and $100 million in non-resource sectors.
[292] (Interview with resource industry executive 2011).
[293] (Anderlini 2009).

The Chinese *going out policy* was meant to foster national champions, and these large-scale SOEs are the only corporate entities in China that have the scale, know-how and government backing to carry out large infrastructure, resource or energy investments. The government's push for the development of national champions and the procurement of overseas natural resources underpins a broader agenda of economic nationalism focused on energy security, geopolitics, and competitiveness. So the overseas investments of the central SOEs are clearly advancing the national interest as defined by the government.

Overseas investment regulations were simplified in China's most recent 5 year plan passed by the National People's Congress in March 2011. The changes make it easier for SOEs to invest overseas, and place a greater focus on outbound investment in key sectors such as energy resources, technology and R&D, manufacturing, agriculture and financial institutions. The investment thresholds were raised, as central NDRC approval is now needed only for investments by Chinese companies exceeding US$300 million in the resources sector and for investments exceeding US$100 million in the non-resources sector. These thresholds are 10 times those set out in the 2004 Rules.[294] Although the central SOEs no longer need any NDRC approval for projects under the abovementioned thresholds, outbound investments in sensitive industries and/or countries and other special projects still must be approved by the NDRC and/or the State Council.

XIV. Overall assessment of SOEs and state capitalism in China

Despite the indisputable growth of the private sector in China, and the presence of foreign investment, the state-owned sector remains important to China's economy. The observable state sector, which consist of SOEs and the enterprises they directly control, accounts for approximately 40 percent of the Chinese output under reasonable assumptions. If other public bodies, such as urban collectives, public TVEs, and FIEs associated with SOE affiliates are included, the share of the output directly or indirectly attributable to some form of public ownership is likely fifty percent.

That the state sector remains a force in China should be no surprise. Neither Deng Xiaoping nor the current leadership has sought to eliminate the state sector. As Deng noted in his 1984 speech cited earlier, "the socialist sector is the mainstay of our economy." While there have been conflicts between those who preferred more rapid reforms and those who sought to roll them back, the current goal of policy is "socialism with Chinese characteristics." On the

[294] (Notice of Ministry of Commerce on Further Enhancement of the Approval Scheme for Foreign Investment, Circular 7 2009).

economic front, socialism with Chinese characteristics means "a multi-ownership-oriented basic market economic system, with the public ownership in the dominance."[295]

As far as we can tell, the guiding principle of economic reforms from the time of Deng – including the acceptance of foreign direct investment, the increased role of the private sector, and the use of capital markets to raise funds for SOEs – has been to improve the performance of China's economy through the controlled introduction of market forces.[296] Reforms began in the countryside to revive the moribund rural economy before spreading to urban areas. The introduction of foreign capital provided a much needed dosage of foreign money, management skill, and technology. SOEs have been, and are being, streamlined to become more efficient and more responsive to market forces, and the state is limiting its role in certain sectors.

Still, saying that China is reforming its economy and becoming more market oriented is not the same as saying that it is abandoning the state sector, or that the private sector is dominant in China. The CCP is not pursing a free market economy in which all aspects of China's economy are determined solely by market forces. The state sector, as demonstrated in this report, responds both to economic incentives and to state policies. To the extent China is capitalist, China is pursuing state-guided capitalism, where the overall direction of the economy, including the private sector, is guided by government policies.

There is no easy way to predict what China's economy will look like in twenty years. China's economic reforms have not been linear and the pace and focus of reforms have reflected the policy leanings and priorities of the pinnacle of the CCP's leadership. As scholar Yasheng Huang explains, economic reforms in the countryside during the 1980s were made possible by a monumental change in China's political and policy environment indicated by the ascension of Deng Xiaoping to the helm of the CCP.[297] Similarly, the aftermath of the Tiananmen Square incident and the ascension of a new CCP leadership led to an era of reform more focused on restructuring and improving the performance of the state sector. Although market mechanisms have played an important role in this restructuring, there is no indication that the CCP was, or is, aiming to turn China into a bastion of free market capitalism dominated by privately-owned entrepreneurial firms responding to market incentives. The CCP continues to prefer a strong state sector.

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[295] (Socialism with Chinese Characteristics 2007).
[296] (Kane 2001), 30, citing to (Deng Xiaoping: The Stateman 1993) at 557 ("As long as we keep ourselves sober-minded, there is nothing to be feared. We still hold superiority, because we have large and medium state-owned enterprises and township and town enterprises. More importantly, we hold the state power in our hands.")
[297] (Huang 2008) 85-6.

Indeed, the current economic direction of China is "commanding heights" state capitalism,[298] with the Chinese government picking the winning industries of tomorrow and developing state-owned national champions that are prominent at home and abroad. The private sector and foreign companies will remain important actors China's economy, especially if they facilitate the government goals of enhancing indigenous innovation, restructuring the services sector, developing a commercial aircraft to compete with Boeing and Airbus, and leapfrogging the West and other countries in key emerging sectors. Clearly, state-guided capitalism in China is ascendant at the moment.[299]

The government's prominent economic role, coming a decade after China joined the WTO, throws into doubt expectations that China's WTO membership would lead it to pull back from market interventions. The back-and-forth between China's representative and the Working Party on China's accession is memorialized in the Working Party Report. As the following text from the report demonstrates, China itself encouraged these expectations:

> The representative of China further confirmed that China would ensure that all state-owned and state-invested enterprises would make purchases and sales based solely on commercial considerations, e.g., price, quality, marketability and availability, and that the enterprises of other WTO Members would have an adequate opportunity to compete for sales to and purchases from these enterprises on non-discriminatory terms and conditions. In addition, the Government of China would not influence, directly or indirectly, commercial decisions on the part of state-owned or state-invested enterprises, including on the quantity, value or country of origin of any goods purchased or sold, except in a manner consistent with the WTO Agreement. The Working Party took note of these commitments.[300]

But given the strong state direction embodied in the 12th Five Year Plan, as well as the incentive structure facing the leaders of China's SOEs, it is clear that SOEs will continue to be driven by government policies. Even if there are no explicit directions in the plan mandating SOEs to favor domestic over foreign goods and services, the mere fact that the Chinese government articulates goals that seek expansion and development of certain Chinese industries is potentially discriminatory because SOE leadership is incentivized to follow the plan. Put differently, as long as SOE executives are beholden to the CCP, they will have an incentive to chose state goals over financial goals when the two conflict.

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298 (Huang 2008) 239-240; (Deng, et al. 2011) 41-42; (State-owned Enterprises in China: Testimony of Barry Naughton 2011).

299 This is different than saying that the state sector will be expanding as a share of GDP. The state's efforts to reform the provisions in services in China could reduce the state's footprint in that sector just as it has in manufacturing.

300 (Report of the Working Party on the Accession of China October 1, 2001) 9 (par. 46).

U.S. firms are major players in some of the industries advanced by Beijing. As such, the current framework will disadvantage U.S. firms. What will it mean for Boeing when state-owned airlines in China must choose between Boeing aircraft and the C919 developed by COMAC? The Form 20-F of China Southern Airlines, quoted earlier, is hardly reassuring: "The Company is indirectly majority owned by the Chinese government, which may exert influence in a manner that may conflict with the interests of holders of ADRs, H Shares and A Shares."[301] Thus, even if market considerations dictate the purchase of the Boeing plane, China Southern may still purchase the C919. U.S. producers of telecommunications equipment faced this issue before when, as Barry Naughton noted in testimony before the Commission, the state-owned telecommunications service providers were "essentially coerced into adopting the Chinese indigenous technology standard, TD-SCDMA."[302] If the 12th Five Year Plan is any guide, U.S. firms in emerging industries are likely to encounter the same frustrations.

[301] (China Southern Airline Corporation Limited 2011) 10.
[302] (State-owned Enterprises in China: Testimony of Barry Naughton 2011).

Attachments

XV. Attachment 1: SASAC list of Central SOEs

	Central State-owned Enterprises	
1	China National Nuclear Corporation (CNNC)	中国核工业集团
2	China Nuclear Engineering Group Corporation (CNEC)	中国核工业建设集团公司
3	China Aerospace Science and Technology Corporation (CASC)	中国航天科技集团公司
4	China Aerospace Science & Industry Corporation (CASIC)	中国航天科工集团
5	Aviation Industry Corporation of China (AVIC)	中国航空工业集团公司
6	China State Shipbuilding Corporation (CSSC)	中国船舶工业集团公司
7	China Shipbuilding Industry Corporation (CSIC)	中国船舶重工集团公司
8	China North Industries Group Corporation(CNGC)	中国兵器工业集团公司
9	China South Industries Group Corporation(CSGC)	中国兵器装备集团公司
10	China Electronics Technology Group Co. (CETC)	中国电子科技集团
11	China National Petroleum Corporation (CNPC)	中国石油天然气集团公司
12	China Petrochemical Corporation (Sinopec Group)	中国石油化工集团公司
13	China National Offshore Oil Corp (CNOOC Group)	中国海洋石油总公司
14	State Grid Corporation of China(SGCC)	国家电网公司
15	China Southern Power Grid Corporation (CSG)	中国南方电网有限责任公司
16	China Huaneng Group (CNHG)	中国华能集团公司
17	China Datang Corporation(CDT)	中国大唐集团公司
18	China Huadian Corporation (CHD)	中国华电集团公司
19	China Guodian Group	中国国电集团公司
20	China Power Investment Corporation (CPI)	中国电力投资集团公司
21	China Three Gorges Corporation (CTGPC)	中国长江三峡集团总公司
22	Shenhua Group Corporation Limited	神华集团有限责任公司
23	China Telecommunications Corporation (China Telecom)	中国电信集团公司
24	China United Network Communications Ltd. (China Unicom)	中国联合网络通信集团有限公司
25	China Mobile Communication Group Co. (China Mobile)	中国移动通信集团公司
26	China Electronics Corporation (CEC)	中国电子信息产业集团有限公司
27	China FAW Group Corporation(FAW)	中国第一汽车集团公司
28	Dongfeng Motor Corporation(DFM)	东风汽车公司
29	China First Heavy Industries Group(CFHI)	中国第一重型机械集团公司
30	China National Erzhong Group Co.(China Erzhong)	中国第二重型机械集团公司
31	Harbin Electric Corporation(HE)	哈尔滨电气集团公司
32	Dongfang Electric Corporation(DEC)	中国东方电气集团有限公司
33	Anshan Iron and Steel Group Corporation (Ansteel)	鞍钢集团公司
34	Baosteel Group Corporation (Baosteel)	宝钢集团有限公司

Ctd.	Central State-owned Enterprises	
35	Wuhan Iron and Steel (Group) Corporation(WISCO)	武汉钢铁（集团）公司
36	Aluminum Corporation of China (Chinalco)	中国铝业公司
37	China Ocean Shipping (Group) Company (COSCO)	中国远洋运输集团总公司
38	China Shipping (Group) Company (China Shipping)	中国海运集团总公司
39	China National Aviation Holding Group (CNAH)	中国航空集团公司
40	China Eastern Air Holding Company (CEAH)	中国东方航空集团公司
41	China Southern Air Holding Company (CSAH)	中国南方航空集团公司
42	Sinochem Group Corporation (Sinochem)	中国中化集团公司
43	China National Cereals, Oils & Foodstuffs Corp. (COFCO)	中粮集团有限公司
44	China Minmetals Corporation	中国五矿集团公司
45	China General Technology (Group) Holding, Limited (Genertec)	中国通用技术（集团）控股有限责任公司
46	China State Construction Engineering Corporation (CSCEC)	中国建筑工程总公司
47	China Grain Reserves Corporation (Sinograin)	中国储备粮管理总公司
48	State Development & Investment Corporation (SDIC)	国家开发投资公司
49	China Merchants Group	招商局集团有限公司
50	China Resources (Holdings) Co., Ltd.	华润集团有限公司
51	China Travel Service (Holdings) H.K., Ltd. (HKCTS)	中国港中旅集团公司 (香港中旅集团有限公司)
52	State Nuclear Power Technology Corporation Ltd. (SNPTC)	国家核电技术有限公司
53	Commercial Aircraft Corporation of China, Ltd.	中国商业飞机有限责任公司
54	China Energy Conservation and Environmental Protection Group (CECEP)	中国节能环保集团公司
55	China International Engineering Consulting Corporation (CIECC)	中国国际工程咨询公司
56	China Huafu Trade and Development Group Corp.	中国华孚贸易发展集团公司
57	China Chengtong Holding	中国诚通控股集团有限公司
58	China National Coal Group Co. (ChinaCoal)	中国中煤能源集团公司
59	China Coal Technology & Engineering Group Co. (CCTEG)	中国煤炭科工集团有限公司
60	China National Machinery Industry Corporation (SINOMACH)	中国机械工业集团有限公司
61	China Academy of Machinery Science & Technology	机械科学研究总院
62	Sinosteel Corporation (Sinosteel)	中国中钢集团公司
63	China Metallurgical Group Corporation (MCC)	中国冶金科工集团有限公司
64	China Iron and Steel Research Institute Group (CISRI)	中国钢研科技集团公司
65	China National Chemical Corporation (ChemChina)	中国化工集团公司
66	China National Chemical Engineering Co. (CNCEC)	中国化学工程集团公司
67	Sino Light Corporation (Sinolight)	中国轻工集团公司
68	China National Arts & Crafts (Group) Corporation	中国工艺（集团）公司
69	China National Salt Industry Corp.	中国盐业总公司
70	Huacheng Investment & Management Co., Ltd.	华诚投资管理有限公司
71	China Hengtian Group Co.	中国恒天集团公司
72	China National Materials Group Corporation (Sinoma)	中国中材集团公司

Ctd.	Central State-owned Enterprises	
73	China National Building Materials Group Corporation (CNBM)	中国建筑材料集团有限公司
74	China Nonferrous Metal Mining (Group) Co. Ltd. (CNMC)	中国有色矿业集团有限公司
75	General Research Institute for Nonferrous Metals	北京有色金属研究总院
76	Beijing General Research Institute of Mining & Metallurgy	北京矿冶研究总院
77	China International Intellectech Corporation	中国国际技术智力合作公司
78	China Academy of Building Research （CABR）	中国建筑科学研究院
79	China Northern Locomotive & Rolling Stock Industry (Group) Corporation	中国北方机车车辆工业集团公司
80	China Southern Locomotive & Rolling Stock Industry (Group) Corporation (CSR Group)	中国南车集团公司
81	China Railway Signal & Communication Corporation (CRSC)	中国铁路通信信号集团公司
82	China Railway Engineering Corporation Group (CRECG)	中国铁路工程总公司
83	China Railway Construction Corporation Group (CRCCG)	中国铁道建筑总公司
84	China Communications Construction Company Ltd. (CCCC)	中国交通建设集团有限公司
85	Potevio Corporation (Potevio)	中国普天信息产业集团公司
86	Datang Telecom Technology & Industry Group	大唐电信科技产业集团
87	China National Agricultural Development Group Corporation	中国农业发展集团有限公司
88	Chinatex Corporation Limited	中国中纺集团公司
89	Sinotrans & CSC (Sinotrans Group)	中国外运长航集团有限公司
90	China National Silk Imp. & Exp. Corp.	中国丝绸进出口总公司
91	China Forestry Group Corporation	中国林业集团公司
92	China National Pharmaceutical Group Corporation (SINOPHARM)	中国医药集团总公司
93	CITS Group Corporation	中国国旅集团有限公司
94	China Poly Group Corporation	中国保利集团公司
95	Zhu Hai Zhen Rong Company (ZHZR)	珠海振戎公司
96	China Architecture Design and Research Group	中国建筑设计研究院
97	China Metallurgical Geology Bureau	中国冶金地址总局
98	China National Administration of Coal Geology	中国煤炭地质总局
99	Xinxing Cathay International Group	新兴际华集团
100	China TravelSky Holding Company (Travelsky)	中国民航信息集团公司
101	China National Aviation Fuel Group Corporation (CNAF)	中国航空油料集团公司
102	China Aviation Supplies Holding Company（CASC）	中国航空器材集团公司
103	China Power Engineerings Consulting Group Corporation (CPECC)	中国电力工程顾问集团公司
104	HydroChina Corporation (HydroChina)	中国水电工程顾问集团公司
105	Sinohydro Corporation (SINOHYDRO)	中国水利水电建设集团公司
106	China National Gold Group Corporation	中国黄金集团公司
107	China National Cotton Reserves Corporation	中国储备棉管理总公司
108	China Printing (Group) Corporation	中国印刷集团公司
109	China Lucky Film Corporation	中国乐凯胶片集团公司
110	China Guangdong Nuclear Power Co. (CGNPC)	中国广东核电集团

Ctd.	Central State-owned Enterprises	
111	China Hualu Group Co., Ltd	中国华录集团有限公司
112	Alcatel-Lucent Corporation Limited	上海贝尔阿尔卡特股份有限公司
113	IRICO Corporation Group	彩虹集团公司
114	FiberHome Technologies Group （FiberHome）	武汉邮电科学研究院
115	OCT Group	华侨城集团公司
116	Nam Kwong (group) Company Limited	南光集团有限公司
117	China XD Group	中国西电集团公司
118	China Gezhouba (Group) Corporation (CGGC)	中国葛洲坝集团公司
119	China Railway Materials Commercial Corporation (CRM)	中国铁路物资总公司
120	China Reform Holdings Corporation Limited	中国国新控股有限责任公司

Source: State-owned Assets Supervision and Administration Commission.

XVI. Attachment 2: Calculation of SOE share of China's GDP

Table XVI-1: Calculation of SOE share of GDP--with adjustment for state-holding enterprise participation in construction, 2007

	GDP share (2007)	SOE value added (Bil. Yuan)	Total value added (Bil. Yuan)	SOE Share of value added
Primary industry	10.8%	0.0	2,862.7	0.0%
Secondary industry: industry	41.6%	3,997.0	11,053.5	36.2%
Secondary industry: construction 1/	5.8%	680.1	1,529.6	44.5%
Tertiary industry 2/	41.9%	5,940.1	11,135.2	53.3%
Total	100.0%	10,617.2	26,581.0	39.9%

1/ Estimate for value added based on gross industry output value--see Worksheets 1 and 2.

2/ See Worksheet 3.

Source: National Bureau of Statistics of China; authors' calculations.

Table XVI-2: Calculation of SOE share of GDP--without adjustment for state-holding enterprise participation in construction, 2007

	GDP share (2007)	SOE value added (Bil. Yuan)	Total value added (Bil. Yuan)	SOE Share of value added
Primary industry	10.8%	0.0	2,862.7	0.0%
Secondary industry: industry	41.6%	3,997.0	11,053.5	36.2%
Secondary industry: construction 1/	5.8%	211.7	1,529.6	13.8%
Tertiary industry 2/	41.9%	5,940.1	11,135.2	53.3%
Total	100.0%	10,148.8	26,581.0	38.2%

1/ Estimate for value added based on gross industry output value--see Worksheets 1.

2/ See Worksheet 3.

Source: National Bureau of Statistics of China; authors' calculations.

Table XVI-3: Worksheet 1--Calculation of construction industry value added, without adjustment for state-holding enterprise share, 2007

	Value (Bil. Yuan)	
Construction industry value added	1,529.6	1
SOE const. gross output value (2007)	1,063.1	2
Total const. gross output value (2007)	7,680.8	3
SOE share	13.8%	4=2/3
Imputed SOE value added in construction	211.7	5=1*4

Source: National Bureau of Statistics of China; and authors' calculations.

Table XVI-4: Worksheet 2--Incorporation of state-holding enterprise value added in the construction industry, 2007

	Value (Bil. Yuan)	
Imputed SOE value added in const.	211.7	1
SOE industry GIOV (2007)	45,648.0	2
SOE + SHE GIOV (2007)	146,630.0	3
SOE/(SOE+SHE)	31.1%	4=2/3
Adjusted SOE value added in construction	680.1	5=1/4

Source: National Bureau of Statistics of China; and authors' calculations.

Table XVI-5: Worksheet 3-- Calculation of SOE value added for services industries, 2007

	SOE share of:				
	Urban fixed investment	Urban employment	Average	Sector Value Added	Imputed SOE Value Added
Transport, Storage and Post	90%	65%	78%	1,460.1	1,133.8
Information Trans., Computer Services & Software	96%	37%	66%	670.6	445.4
Wholesale and Retail Trades	14%	28%	21%	2,093.8	437.6
Hotels and Catering Services	16%	27%	22%	554.8	120.6
Financial Intermediation	73%	33%	53%	1,233.8	649.9
Real Estate	22%	23%	23%	1,381.0	312.4
Leasing and Business Services	54%	43%	49%	469.5	228.6
Scientific Rsch., Technical Srvc. & Geologic Prospecting	68%	77%	73%	344.1	249.8
Mgmt. of Water Conservancy, Env. & Public Facilities	87%	87%	87%	111.1	96.5
Services to Households and Other Services	28%	48%	38%	399.6	151.8
Education	84%	96%	90%	769.3	693.4
Health, Social Security and Social Welfare	82%	89%	85%	401.4	343.2
Culture, Sports and Entertainment	61%	86%	74%	163.1	120.1
Public Management and Social Organization	78%	99%	88%	1,083.0	957.0
	1	2	3=(1+2)*0.5	4	5=3*4

Source: National Bureau of Statistics of China; and authors' calculations.

XVII. Glossary of Terms

All-China Federation of Trade Unions (ACFTU): Main Chinese union that is funded by the government of China and whose leadership is chosen by the CCP

Central Huijin Investment Ltd.: State-owned (by a sovereign wealth fund under the control of the State Council) holding company that owns shares in China's state-owned banks

Central Organization Department of the CCP (COD): The Party organ that is responsible for personnel appointments in government and chooses the top three posts in SOE management

China Commercial Aircraft Company (COMAC): State-owned aircraft firm responsible for developing, manufacturing, and commercializing China's indigenous passenger aircraft

China Statistical Yearbook (CSY): Primary statistical publication of the China's National Bureau of Statistics

Communist Party of China (CCP): Ruling party of China

Collective enterprises: Economic entities in which assets are owned collectively and ownership is considered to be public

Five-year plan (guidance): Planning documents, issued by the CCP, which provide overall objectives and goals related to social development and economic growth

Foreign funded (or invested) enterprises (FIEs): All industrial enterprises registered as joint-venture, cooperative, sole (exclusive) investment industrial enterprises or limited liability corporations with foreign funds

Government Procurement Law: China's procurement law covering government purchases but excluding purchases made by SOEs

Gross industry output value (GIOV): An economic statistics term that refers to the total volume of final industrial products produced and industrial services provided during a given period

Guanxi: Interpersonal relationships through which influence can be exerted

Guojin mintui: Describes a policy environment in which the "state advances as the private sector retreats"

Houbei: Managers "waiting in the wing" to assume the most important management positions of SOEs

Limited liability corporations: Economic units with capital from 2 to 49 investors, which can include state sole funded corporations and other limited liability corporations

National Bidding Law: China's broader procurement law, which covers certain procurements by SOEs

National Bureau of Statistics (NBS): China's main statistical agency in charge of statistics and economic accounting in China

National Development and Reform Commission: China's main planning body, which formulates and implements strategies of national economic and social development

The National Medium- and Long-Term Plan for the Development of Science and Technology (2006-2020) (MLP): Planning document which articulates China's desire to lessen its reliance on foreign intellectual property and to create indigenous innovation

Pillar industries: Those industries in which the state, according to SASAC, should maintain significant, though not majority, ownership (equipment manufacturing, auto, information technology, construction, iron and steel, non-ferrous metals, chemicals, and surveying and design)

Policy banks: Banks that provide government directed concessional financing

Private enterprise: Economic units invested in or controlled by natural persons who hire workers for profit-making activities (includes private limited liability corporations, private share-holding corporations, private partnership enterprises and private sole investment enterprises)

Round-tripped foreign investment: Chinese capital that has returned to China as foreign direct investment in order to benefit from special tax incentives (though in recent years the tax benefits from round tripping have been eliminated)

State-owned Assets Supervision and Administration Commission (SASAC): Holds SOE shares on behalf of the state; responsible for guiding and supervising SOE reforms

State-controlled enterprise (SCE) or state-holding enterprise (SHE): Economic unit whose majority shares belong to the government or other SOE

State-owned enterprise (SOE): Non-corporate economic entities where all assets are owned by the state

Socialism with Chinese characteristics: With regards to China's economy, *socialism with Chinese characteristics* denotes a multi-ownership-oriented basic market economic system, with the public ownership in the dominance

State Council: The highest executive organ of state power, as well as the highest organ of state administration in China

Strategic industries: Those industries in which the state, according to SASAC, must maintain at least a fifty percent ownership stake of existing firms (defense, electric power and grid, petroleum and petrochemical, telecommunications, coal, civil aviation, and shipping)

Township and village enterprises (TVE): Businesses located in rural areas; includes privately owned and publically owned variants

Value added: An economic statistics term that refers to gross industrial output value minus intermediate inputs plus value-added taxes

Yangqi: Three top positions (party secretary, chairman of the board and CEO) at the top SOEs who are appointed directly by the Communist Party's Central Organization Department

Zhua da, fang xiao: "Grasp the big, let go of the small" referring to China's policy of disinvesting the state from smaller, less strategic industries while still maintaining an important role in strategic industries

Zizhu chuangxin: China's policy of promoting "Indigenous innovation"

Zouchuqu: China's "going global" strategy for SOEs

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