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Reforming China's Monopolies

Faculty Research Working Paper Series

Peijun Duan

Central Party School

Tony Saich

Harvard Kennedy School

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HARVARD Kennedy School

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Ash Center Occasional Papers

Tony Saich, Series Editor

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Ash Center for Democratic Governance and Innovation
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Letter from the Editor

The Roy and Lila Ash Center for Democratic Governance and Innovation advances excellence and innovation in governance and public policy through research, education, and public discussion. Three major programs support our mission:

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Our Occasional Papers series highlights new research from the Center that we hope will engage our readers and prompt an energetic exchange of ideas in the public policy community.

In this paper, I and my coauthor Peijun Duan, a senior professor at China's Central Party School, present an in-depth examination of monopoly control in the Chinese system and assess its impact on China's prospects for continued development. Further, we argue that monopoly control in the Chinese political economy is not simply an economic phenomenon but also a phenomenon deeply embedded in a comprehensive system of power that draws from the legacy of a centrally planned economy and from Chinese societal traditions. Finally, we conclude the paper by proposing specific reforms to reduce state monopolies in order to enhance economic efficiency, promote more equitable growth, and avoid the "middle-income trap."

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A handwritten signature in black ink, appearing to read 'Tony Saich', with a stylized flourish at the end.

Tony Saich, *Series Editor and Director*
Ash Center for Democratic Governance and Innovation
Harvard Kennedy School

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Introduction

China's development over the last thirty years has been nothing short of remarkable. Economic growth has pulled hundreds of millions of people out of poverty as workers have moved from low-productivity agriculture to higher-productivity occupations with higher incomes. Unprecedented urbanization has been an integral part of this progress, and the majority of China's population now lives in either cities or small towns. Yet, despite this progress, there is a general consensus that the economic model that has served China so well in the past must undergo fundamental changes in order to maintain this economic momentum, and that the country will face increasing social challenges. On the downside, development has also led to rising inequalities and increasing corruption. The continuing dominance of monopolies within the Chinese political economy is a primary contributor to the problems of economic inefficiencies and corruption.

China's new leadership, with Xi Jinping as general secretary, clearly recognizes these problems. Economic policy needs to shift to a more consumer-driven model of growth and away from an excessive reliance on exports and state investments. These two drivers will remain valuable but there is little possibility that their contributions can be expanded. Thus, consumption, which will require the growth of small and medium enterprises and of the non-state sector more generally, will become increasingly important. In his first briefing as premier, Li Keqiang stated that China has "a lot to learn" to deepen market-oriented reforms and lower the entry barriers for private capital to engage with the finance, railway, and energy sectors. Li urged that administrative powers be reduced to enable markets to play a more significant role.¹ However, supporters of the state-owned sector of the economy and those benefiting from monopoly control may try to resist these shifts. This issue became a hot topic during the summer of 2013 as various groups attempted to influence policy direction. Journalist Li Yuyang made a spirited defense of China's state-owned enterprise (SOE) system, claiming that privatization was not a viable path and that simply holding a dominant position in a particular market did not mean that the SOEs exhibited monopolistic behavior.² Such contentions were quickly rebutted by Sheng Hong who argued that monopolistic trends in five industries (banking, oil, telecom, railways, and salt) had led to social losses amounting to 4.8 percent of GDP in 2010.³ Despite significant reforms, the monopolistic trends in the system remain

strong and may frustrate the desire of the new leadership to push through further reforms to ensure that China avoids the “middle-income trap.”

The dominance of monopolies is also a major cause of the corruption that pervades the Chinese system. The problem of corruption received wide attention at the 2012 Eighteenth Party Congress as well as in Xi Jinping's post-Congress comments and actions. Further, corruption is clearly a matter of grave concern to Chinese citizens. In surveys of public attitudes towards the government that we have been conducting for over a decade, citizens have consistently identified corruption as the number-one governance problem, but only 6.4 percent of those surveyed feel that the government will seriously tackle the problem. These results reveal that the government's focus on “putting people first” and its attempts to encourage local governments to be more responsive to, and to take care of, those in need seem to be having limited effect. We asked six pairs of questions comparing government behavior that corresponds to concern for ordinary people or to bureaucratic behavior (see Table 1). Although dissatisfaction remains relatively high and satisfaction relatively low, all indicators improved between 2003 and 2011. However, there is still significant cause for concern, as, irrespective of the place of residence, large percentages of those surveyed feel that the behavior of local officials is bureaucratic rather than responsive to the needs of ordinary people. In 2011, a majority of respondents still reported that local officials devoted their energies to getting closer to their superiors and to the wealthy rather than to the concerns of ordinary citizens. This remains a problem for the new leadership, as the local level of government is responsible for the delivery of most services to the Chinese people.

This raises the question of governance and whether over the next decade China will improve its governance indicators in order to ensure continued development. Nevertheless, in comparative terms, China's indicators are not too bad, except in the area of “voice and accountability.” According to the World Bank, China's governance performance has not varied significantly since 1996 (Kaufmann, Kraay and Mastruzzi, 2010). Four of the six indicators rank in the 25th to 50th percentiles. The exceptions are government effectiveness (60.7 in 2011) and voice and accountability (4.7 in 2011). Compared with other large developing countries and countries with similar income levels, the evaluation of China is relatively favorable. However, as China strives to emulate the “tiger economies” of East Asia and other economies that have escaped the “middle-income trap,” it still has a long way to go to improve its governance indicators (see Table 2). Institutions,

lagging behind economic growth, may become a drag on further development. One could argue, of course, that the causality is unclear and that it is the rising incomes that have led to a need for improved governance rather than better government performance yielding higher per capita incomes.

This working paper focuses on an aspect of governance that is crucial to the next phase of China's development: reducing state monopolies in order to enhance economic efficiency and promote more equitable growth. It is important to note that monopoly control in the Chinese political economy is not simply an economic phenomenon but also a phenomenon deeply embedded in a comprehensive system of power. Monopolies in the economic sphere (resources, prices, markets, and assets) are serious, but they are derived from the legacy of the centrally planned economy. They are also rooted in the traditional structure of Chinese society and its culture. In this paper, we will present a comprehensive examination of the phenomenon of monopoly control in the Chinese system. This approach is much more extensive than referring to a single individual, organization, or group that enjoys exclusive control over specific economic resources, products, technologies, or markets, including resource monopolies, price fixing, and so forth. This complexity also means that any solution to the problem will require not only economic reforms but also widespread changes entailing legislative, administrative, personnel management, and ideological adjustments. If successful, such a shift in its development strategy will help China avoid the "middle-income trap."

I) The Characteristics of China's Economic Monopolies

1.) Resource Monopoly

The industrial sector is dominated by SOEs that are key elements in the economic monopoly due to their exclusive control over natural resources. A survey conducted in Guangdong province reveals that SOEs can enter more than 80 industries, whereas foreign companies can enter only 60 and the private sector only 40.⁴

a.) Energy Resources

The use of franchises, as enshrined in the Mineral Resources Law (*Pochan ziyuan fa*, 矿产资源法), has been important to ensure monopoly control in the energy sector. In the oil industry, China National Petroleum Corporation (CNPC), China Petrochemical Corporation (Sinopec), and China National Offshore Oil Corporation (CNOOC) operate franchises to carry out exploration and development of onshore and offshore oil and gas. Any enterprise without a franchise is prohibited from engaging in this work.

Cooperation with foreign partners is also tightly controlled.

Regulations entrust CNPC and Sinopec to be in charge of all Sino-foreign ventures with respect to the exploitation of continental petroleum resources.⁵ Similarly, regulations covering offshore exploitation guarantee CNOOC overall responsibility for international collaborations.⁶ CNOOC is a state-owned entity that enjoys a franchise for the production, sale, exploration, and development of all offshore resources.

Restrictions also limit competition among the main enterprises in the energy sector. In July 2004, however, the State Council decided to open all oil and gas exploration fields to the major domestic enterprises and to allow CNPC and the Sinopec Group to engage in offshore oil and gas exploitation, while CNOOC was allowed to engage in onshore oil and gas exploitation. In recent years, the number of enterprises with franchises for oil and gas exploitation has gradually increased. As of December 31, 2006, those legal entities owning oil, gas, and mineral rights included CNPC, Yancheng Petroleum, and China National Coal Group Co. Ltd., among others (see Table 3).

A second factor that restricts foreign engagement is the examination and procedural process. Any foreign company wishing to enter the oil industry must conclude contractual relations with a company authorized by the

Chinese government. The State Council has authorized CNPC and Sinopec to negotiate, conclude, and execute all contracts with foreign entities to develop onshore petroleum resources. They also enjoy franchises for those areas that the State Council has approved for exploitation. However, the Ministry of Commerce must first approve all contracts.

Third, there are tight restrictions governing investment and approval procedures. Any new hydropower construction project on a major river with a total installed capacity of 250,000 kW or more must be approved by the Investment Department of the State Council, and all other projects must be approved by the investment departments of the respective local governments. Similarly, the Investment Department of the State Council must approve all pumped storage power station projects, thermal power station coal-fired projects, wind power plants with an installed capacity of 50,000 kW or more, and nuclear power plants and power grid projects of 330 kV or more. The investment departments of local governments must approve all smaller projects in these categories. Wholly foreign-owned enterprises can be established by foreign investors, with the exception of nuclear power projects and hydropower projects of 250,000 kW or more.⁷

Restrictions also exist with respect to the engagement of private entities. Regulations prohibit private capital from investing in the market for the transmission, distribution, and sale of electricity. Even though Chinese law does permit the use of private capital in the market for electricity generation, in practice the impact of private capital has been limited. Shortly after the State Council issued its “Thirty-six Guidelines on the non-Public Economy” (*Feigong jingji 36 tiao*, 非公经济36条) in 2005, the State-owned Assets Supervision and Administration Commission (SASAC) reorganized the SOEs, requiring that they maintain complete control over seven major industries, including electricity and the power grid.

b.) Telecommunications Industry

Similar restrictions exist in other key sectors such as railways and the tobacco industry. The telecommunications industry provides a good example of the trend toward monopoly control and restrictions on foreign- and private-sector engagement. First, the permit system sets a number of conditions for any major foreign investor to operate basic telecommunications services. These conditions include being qualified as a legal person, having a registered license, possessing the necessary financial and human resources, and having a good track record in the field.⁸ All applicants must also provide a feasibility study report that includes its business plan, potential market,

analysis of the investment benefits, the fee-charging mechanism, and the anticipated quality of services. To obtain a business license for basic telecommunications services, a minimum capital requirement of 200 million *yuan* is imposed for those operating at the provincial level or the equivalent, whereas a capital requirement of 2 billion *yuan* is imposed for those operating nationally or across provincial jurisdictions.⁹

Second, there are restrictions on the form of business. Foreign businesses can only invest in the sector as a Sino-foreign joint venture, with the foreign entity investing no more than 49 percent. For value-added telecommunications, the foreign partner can contribute up to 50 percent.¹⁰

Finally, there are also business-license restrictions. In 2005, the Ministry of Information Industry issued a notification stating that only China Telecom and China Netcom can engage in the Internet phone business, with pilot testing in Shenzhen (Guangdong province), Shangrao (Jiangxi province), Changchun (Jilin province), and Tai'an (Shandong province). At the same time, Skype software was banned.

2.) Monopoly Pricing

State controls allow prices to be set either low or high in order to enable state entities to maximize their interests. This price-setting mechanism can be exploited by one or more enterprises or within a specific business area by determining the volume of production and setting prices to produce the desired outcome. Price controls are maintained through government pricing, directive pricing, and hybrid pricing.

a.) Government Pricing

The tobacco, electricity, and railway sectors are examples where government pricing is implemented. The Tobacco Monopoly Administrative Department (*Yancao zhuanmai xingzheng zhuguan bu*, 烟草专卖行政主管部门) under the State Council selects certain representative brands and the Price Administration Department (*Wujia zhuguan bumen*, 物价主管部门) of the State Council determines their prices. The prices of non-representative cigarettes are set by the Tobacco Monopoly Administrative Departments at the provincial level or their equivalents. The determined price is reported to the provincial-level pricing authority.¹¹ Since 2003, the State Monopoly Bureau (*Guojia zhuanmai ju*, 国家专卖局) has operated a system of unified price approvals.

Electricity pricing is primarily handled by the administrative departments, with the sale price and the feed-in tariff formulated by administrative assessments and approvals. Railway transportation prices are set by government pricing mechanisms and specific provisions of the Railways Act.

b.) Government Directive Pricing

Government directive pricing occurs when government or quasi-government enterprises set prices in accordance with market conditions. But control remains with the government or the quasi-governmental enterprises.

Before 1982, the government set all oil prices. Between 1982 and 1994, a dual-pricing system was implemented. The monopoly price for crude oil was limited to 100 million tons; any production in excess of this amount was sold at international prices. However, because of low orders in the domestic and external refined oil markets, between 1994 and 1998 the prices for domestic and external refined oil were merged. This policy of unified pricing means that oil pricing once again became a government monopoly.

In 1998, the National Development and Reform Commission (NDRC) announced a new policy calling for “establishing a pricing mechanism for the crude oil and product oil markets by government regulations in accordance with the fluctuations in international oil market prices.”¹² This meant that there would be a government price monopoly, but the international market would determine the actual price. The benchmark price of crude oil was to be determined monthly by the NDRC according to international market rates and tariffs for similar quality crude oil. Domestic crude oil prices were geared to the prices in the international oil market as of June 1 of each year and oil products were fixed to the prices in the international oil market as of June 5 of each year.

On December 19, 2008, it was announced that domestic land oil prices would continue to be linked directly to international market prices but the price determination resided with government-authorized enterprises. CNPC and Sinopec set the crude benchmark prices according to the average Free On Board of crude oil as determined by the prices over the last month in the Singapore market.

c.) Hybrid Pricing

Hybrid pricing occurs when government pricing, directive pricing, and market prices coexist in a particular field, as in the case of the telecommunications industry. The prices for value-added telecommunications are subject to the government-directed price as well as the market price. In markets where

there is adequate competition, the market would regulate telecommunications tariffs.

The categories for management through hybrid pricing (for example, the important standard tariffs for telecom services) are formulated and promulgated by the Information Industry Department (*Xinxi chanye zhuguan bumen*, 信息产业主管部门) of the State Council through consultation with the State Council's Pricing Department. Once the State Council approves the price, it is promulgated and implemented. This hybrid pricing structure is a result of the fact that prior to 1978 the government controlled all telecom prices. But beginning in 1996 the government carried out a series of vertical adjustments to telecom charges (in 1997, 1998, and 2001) in order to introduce competition and to allow a reasonable allocation of services. In practice, however, government departments still control most pricing readjustments.

3.) Market Monopoly

American economist Joe S. Bain (1959) developed a classification scheme to analyze industrial concentration based on this formula: $CR_n = \frac{\sum_{i=1}^n X_i}{\sum_{i=1}^m X_i}$. X_i refers to the related value of i enterprises (such as sales revenue, capital, and employment), n refers to the number of the largest companies that have been selected within the industry, and m refers to the total number of enterprises in the industry. In general, if the value of CR_n is large, then the several largest companies exert a great influence throughout the entire industry.¹³ Following from this, Japanese economist Masu Uekusa (1982) divided industry into two main categories, oligopoly or competition, according to the index of market concentration of the top eight enterprises (CR_8). The highest degree of oligopoly was 70 percent or higher, while decentralized competition was less than 20 percent.

High levels of market concentration are clearly seen in the Chinese railway, oil and gas, and telecommunications industries. While there was a decline in market concentration in railway passenger and freight traffic between 1992 and 2007, the concentration remained at 94.9 percent for passenger traffic, and the concentration for freight traffic dropped to 83.5 percent (99.6 percent in 1992, yielding a composite value of 89.2 percent) (see Table 4).¹⁴ Similarly, there was a decline in state-owned railways from 92.25 percent in 1992 to 81.5 percent in 2007, but the concentration remained high.

We see a similar concentration in the crude oil production market (see Table 5). From 1989 to 2012, the share of CNPC (CR_1) dropped from 98

percent to 53 percent, but CR2 (CNPC and CNOOC) revealed a high degree of oligopoly (74 percent) and CR4 (CNPC, Sinopec, CNOOC, and Yancheng Petroleum) was over 98 percent, indicating the highest level of oligopoly. A similar pattern can be found in the gasoline and diesel market share where in 2006, CNPC and Sinopec enjoyed an 88.4 percent share for gasoline and a 92.4 percent share for diesel oil. With respect to the natural gas industry, after initially dropping from a high of 96.7 percent in 1990, the share of CNPC rose from a low to 74 percent in 2012. The share of the three main groups (CNPC, CNOOC, and the Sinopec Group) was 99.7 percent in 2012 (see Table 6). Thus, even after the restructuring, with respect to natural gas extraction CNPC retained a dominant position, with Sinopec and CNOOC much weaker. The almost total dominance by these three main enterprises reflects the strict limits on the issuance of oil exploration licenses.

Before 1998, China Telecom enjoyed a basic monopoly in the telecommunications market. However, since 1999, the reforms have created a four-enterprise market enjoyed by China Telecom, China Netcom, China Mobile, and China Unicom. Together the CR4 is 97.6 percent, with China Mobile enjoying 48.78 percent of the revenue in the sector. By contrast, China Telecom's share declined from 100 percent in 1998 to 24.3 percent in 2007.

4.) Assets Monopoly

The assets monopoly is a key feature of the Chinese system. Although in theory the SOEs are publicly owned, citizens are not the shareholders. The SOE appellation indicates that control and ownership belong to the state and its appointed agency. For example, Article 67 of the Company Law (*Zhonghua renmin gongheguo gongsi fa*, 中华人民共和国公司法) notes that wholly owned SOEs do not hold shareholders' meetings and the functions of shareholders' meetings are carried out by SASAC. SASAC can authorize the company board to carry out some of the rights and responsibilities of the shareholders' meetings to decide major issues. However, SASAC decides on mergers, separations, dissolutions, increases or decreases in registered capital, and the issuance of corporate bonds. Some of these decisions, such as mergers, separations, or bankruptcy filings, must be reported to the government for approval. Citizens as shareholders have no mechanism to restrict the possession, management, control, or distribution of assets. Thus, the appointed government agents hold a monopoly over the assets. This phenomenon leads to inefficiencies, a lack of innovation, inequitable distribution, corruption, and imbalances in the economic structure.

a.) SOE Control and the Proportion of Total Assets

As we have seen, SOEs dominate the oil industry where the proportion of state-owned shares exceeds 70 percent. In 2006, the share of state-owned shares in CNPC, Sinopec, and CNOOC were as high as 90 percent, 77 percent, and 71 percent respectively. In terms of oil extraction, in 2005, SOEs accounted for 97.1 percent of total assets, 92.2 percent of total industrial output value, and 93.9 percent of industrial added value.

In the tobacco industry, property rights are entirely state-owned. In November 2005, the State Council ruled that the China National Tobacco Corporation would be responsible for investor-owned rights for its enterprises, would operate and manage state-owned assets, and would undertake responsibility for maintaining and increasing value.¹⁵ The consumption tax, the central enterprise income tax, and the value-added tax (constituting 75 percent of all taxes) are all part of central government income. The tobacco tax and the remaining 25 percent of the value-added tax and the urban construction tax are all part of local government income.

We can find similar data for the power and telecommunications sectors. In addition, SOEs consume a large amount of resources at discounted prices, or even at no charge. For example, SOEs hold around 5 million hectares of land for which they pay no rent. Telecommunications companies and CCTV can use their channels without paying rent, while CCTV still derives billions of *yuan* from advertising revenue. These benefits are derived from their monopoly control.

II) Integrated Monopolies and Chinese-Style Authority

1.) The Characteristics of the Legislative Monopoly

The asset, resource, price, and market monopolies are underpinned by legislative support at various levels.

a.) Legislation Regarding the Asset Monopoly

The Mineral Resources Law, promulgated in 1986 and revised in 1996, makes it clear that all mineral resources belong to the State and that the State Council exercises authority over mineral resources on behalf of the country. Even if ownership of land use changes, national ownership of surface and underground mineral resources does not change. This transfer of the people's right of ownership to the State Council means that all rights reside with the central government.

The question then arises as to how the central government carries out its ownership. The central government disperses its powers to the relevant departments and agencies at subordinate levels. Article XI of the Mineral Resources Law states that the Geological and Mineral Resources Department (*Dizhi pochuan zhuguan bumen*, 地质矿产主管部门) under the State Council is responsible for supervision and management of exploration and mining of national mineral resources. Other relevant State Council departments assist in this work. The geological and mineral resources departments at the provincial levels and their equivalents manage resources within their respective jurisdictions, aided by other relevant departments. This structure is supported by certain enterprises, such as CNPC.

We see the same construct with respect to the railway and power sectors. For example, the Electricity Law (*Zhonghua renmin gongheguo dianli fa*, 中华人民共和国电力法) (Article VI) states that the Power Management Department of the State Council is responsible for the supervision and management of national electricity and is supported by other relevant departments. At lower levels of government, the local people's governments at or above the county level are responsible for the supervision and management of electricity resources within their respective jurisdictions.

b.) Legislation Regarding the Resource Monopoly

The most effective way to ensure monopoly control over resources is through the administrative approval and licensing system. The Mineral

Resources Law sets out terms for the management of exploration and mining of natural resources that ensure state control. Similarly, the Electricity Law outlines a permit system that requires power-supply enterprises to apply to the Power Management Department under the State Council when establishing services or seeking to change electricity service areas that cut across provincial administrative agencies. These licenses must be obtained before an application can be submitted to the relevant office of the Bureau of Industry and Commerce.

Perhaps the clearest example of the burdensome nature of the permit system is found in the tobacco industry. Article III of the Tobacco Monopoly Law (*Zhonghua renmin gongheguo yancao zhuanmai fa*, 中华人民共和国烟草专卖法) stipulates that the State operates a monopoly management system with respect to the production, sales, and import and export of tobacco. Article XII states that an enterprise can only engage in tobacco production when the Tobacco Monopoly Administration of the State Council issues a “tobacco monopoly production enterprise license” (*Yancao zhuanmai shengchan qiye xukezheng*, 烟草专卖生产企业许可证). Similarly, any merger or dissolution of an enterprise must be approved by the administration. It is required that a license be obtained before an enterprise can apply to the Bureau of Industry and Commerce. Similar provisions exist for retail and wholesale enterprises. The county-level tobacco monopoly administrations are authorized to issue licenses within their respective jurisdictions, but enterprises producing cigarette papers, filters, and tobacco manufacturing equipment must be licensed by the Tobacco Monopoly Administration of the State Council.

c.) Legislation Regarding the Price Monopoly

The relevant laws for electricity, railways, and tobacco make it clear that pricing oversight exists in these sectors. The Electricity Law states that there is unified price-setting, including for the grid prices of electricity production, the sales prices of the grid, and the mutual supply prices between grids; power supply enterprises are to calculate consumption charges in accordance with state-approved prices and the records of the electricity meters. For electricity prices across provinces, the relevant parties are required, following negotiations, to send a proposal to the Price Administration Department of the State Council or its authorized agent. Power supply enterprises are not allowed to change the price of electricity on their own.

With respect to railways, the Railway Law expressly states that the rates for passenger fares, goods, and baggage are to be drafted by the rele-

vant railway departments and then are to be submitted to the State Council for approval. Similarly, the Tobacco Monopoly Law stipulates that the purchase price of tobacco be formulated by the Price Administration Department of the State Council in conjunction with the Tobacco Monopoly Administration.

d.) Legislation Regarding the Market Monopoly

Many regulatory clauses provide special protection for state-owned businesses with respect to mineral resources. Furthermore, all construction projects in the power sector must conform to electric power development planning and state industrial policy. If they violate these regulations, they are closed down. The Tobacco Monopoly Law states that all enterprises engaged in the production of cigarette papers, filters, and cigarette-manufacturing equipment can only sell their products to tobacco companies that have a license for tobacco monopoly production. The March 2008 “Administrative Measures for Tobacco Monopoly Licenses” (*Yancao zhuanmai xukezheng guanli banfa*, 烟草专卖许可证管理办法) explicitly state that no foreign investors shall be allowed to enter this sector.

2.) Administrative Monopolies

a.) Integration of Government and Enterprise

In certain fields, administrative departments completely control the behavior of SOEs. This is quite clearly the case in the tobacco industry. On January 1, 1982, the China National Tobacco Corporation (*Zhongguo yancao gongsi*, 中国烟草总公司) was established, with responsibility for the production, supply, sales, and centralized management of all personnel, finances, and goods in the sector. Further, on January 1, 1984, the State Tobacco Monopoly Bureau (*Guojia yancao zhuanmai ju*, 国家烟草专卖局) was set up, with bureaus at lower administrative levels, to manage the national monopoly.¹⁶ In fact, the Bureau and the Corporation operate as a unified institution and together with their local counterparts form a highly centralized system. This is referred to as “unified leadership and vertical management” (*Tongyi lingdao chuzhi guanli*, 统一领导、垂直管理). Planning within the tobacco system is highly concentrated, with tobacco companies having to obtain approval from the Monopoly Administration Department if they want to produce more cigarettes or cigars than that provided for them by the annual plan. Similarly, the Tobacco Monopoly Administration of the State Council must approve construction work in the sector, i.e., any upgrad-

ing of facilities or production expansions. The Administration also controls tobacco imports and exports.

b.) Administrative Enterprise Management

Many industries are overseen by administrative departments; the more powerful the supervising agency, the more likely it is to use its power to limit competition. In general, if an industry is under the management of a single department, the extent of the monopoly is likely to be greater than if the industry is under multiple departments. However, the extent of the monopoly also depends on the authority of the various departments. Thus, for example, among the departments that used to oversee the telecommunications industry—including the former Ministry of Industry and Information Technology (MIIT), the former State Administration of Radio, Film and Television (SARFT), NDRC, SASAC, the Ministry of Commerce, and the Ministry of Culture—the two that had the greatest authority were the MIIT and SARFT, which formulated the basic policies and laws governing market regulation. The NDRC has authority over pricing and investment in fixed assets as well as over any new technology products. SASAC has supervisory authority as well as power to appoint personnel. The Ministry of Commerce and the Ministry of Culture have authority over foreign capital investments and investments in related cultural industries, respectively. Clearly, the oversight of these departments has a significant impact on the nature of the monopoly in each industry. It is not surprising that, in terms of accessibility, licenses for mobile phone production are strictly limited.

c.) Administrativization of State-Owned Enterprises

It would seem that the administrative functions of some departments are weakening. However, in other cases, these functions have been transferred to the enterprise level and still constitute an administrative monopoly. For example, in the oil industry, before 1980, the State Planning Commission and the State Economic Commission were responsible for investment plans and goals, while the Ministry of Finance was responsible for financing, the Ministry of Geology for exploration, and the Ministry of Oil for the management of production and operations. All enterprises were subordinate to the Ministry of Petroleum and were only responsible for implementation. This is a classic example of command-style vertical management.

After 1980, however, a series of administrative reforms was introduced and the National Energy Commission was established to manage the oil, coal, and electricity sectors. But, in 1982, the Commission was disband-

ed and the Ministry of Petroleum was established to exercise macroeconomic control over the industry. However, between 1988 and 1993, the Ministry of Energy replaced the Ministry of Petroleum. At the same time, CNPC and the Sinopec Group were set up to take on some administrative functions, such as management of the oil industry. In 2001, the Ministry of Energy was disbanded and the State Bureau of Petroleum and Chemical Industry was established under the State Economic and Trade Commission. Direct government management of the oil industry was weakened when CNPC and Sinopec took over some of the management functions. Then, in 2003, the State Bureau of Petroleum and Chemical Industry was disbanded and much of its administrative power was taken over by CNPC and Sinopec. With the establishment of the National Energy Administration Bureau between 2003 and 2005 and with the Energy Work Leading Group set up in 2005 to guide the work of the industry, much of the executive business management power devolved to the enterprises. At the same time, some government management functions were dispersed among the NDRC, the Ministry of Housing and Urban-Rural Development, the State Administration of Work Safety, the Ministry of Commerce, the Administration of Environmental Protection, and the State Tax Administration.

3.) Personnel Monopoly

a.) Decline in the Power of the General Manager and the Board of Directors over Personnel

The Company Law clearly defines the power of the board of directors and of the general manager over personnel. However, in practice, some authority has actually been taken over by the Organization Department of the CCP and by SASAC. The Company Law outlines an impressive array of powers: the board of directors is accountable to the shareholders and can appoint or dismiss the company managers, decide their remuneration, and also appoint or dismiss deputy managers and the heads of finance on the recommendation of the managers. SOEs are required to establish a board of directors, but all the members of the board are appointed by SASAC. Only the employees' representatives are elected by the employees' General Assembly. Thus, in reality, many key powers have been transferred to the Organization Department and SASAC. For example, the Organization Department and SASAC, rather than the board of directors, directly recruit and appoint the company managers and deputy managers, thus overriding the legal provisions.

b.) Business Leaders Holding Administrative Positions

The Company Law is not properly implemented, in part, because the managers of large SOEs hold administrative-level positions and, as such, an administrative institution must oversee them. In general, central SOEs can be divided into three categories. First, there are those enterprises managed by SASAC, including mainly those in the following sectors: military, oil, petrochemical, power, non-ferrous metal, metallurgy, coal, automobiles, major mechanical and electrical equipment, telecommunications, civil aviation, and construction. Second, there are financial enterprises managed by the China Banking Regulatory Commission, the China Insurance Regulatory Commission, and the Securities and Futures Commission. Third, there are enterprises managed by other departments under the State Council, such as those in the tobacco, railway, airport, radio, television, culture, and publishing industries. Central enterprises usually refer to those managed by SASAC, of which in 2012 there were 117, holding assets of about 40 trillion *yuan*. In these enterprises, party and administrative leaders are managed by the central government.

There are two systems of personnel management in the enterprises managed by SASAC. In fifty-three enterprises, party and administrative heads are appointed by the CCP Central Committee, with day-to-day management undertaken by the Central Committee Organization Department (the Cadre Fifth Bureau—*Ganbu wuju*, 干部五局) and they have the administrative ranking of a vice minister. Some may even rank at the ministerial level and be a member or an alternate member of the CCP Central Committee. (Zhang Qingwei is a good example. As director of the Commercial Aircraft Corporation of China, Ltd., Zhang was appointed member of the Sixteenth and Seventeenth Central Committees; subsequently, he was appointed governor of Hebei province in 2012.) The deputy directors and general managers of these 53 enterprises are all appointed by SASAC, and day-to-day management is carried out by the First Management Bureau for Corporation Leaders within SASAC (*Guoziwei qiye lingdao ren yuan guan li yiju*, 国资委企业领导人员管理一局) in consultation with the Organization Department's Cadre Fifth Bureau.

In the second system, party and administrative leaders of the remaining enterprises are appointed by SASAC, and daily management is carried out by the Second Management Bureau for Corporation Leaders (*Guoziwei qiye lingdao ren yuan guan li erju*, 国资委企业领导人员管理二局). These leaders enjoy the administrative rank of bureau-level chief. Some are also alternate members of the Central Committee. One such example is

Shi Dahua, the former chair of the China Railway Engineering Corporation, who, although only enjoying a bureau-level rank, was an alternate member of the Sixteenth and Seventeenth Central Committees.

One notable feature of this system is that individuals may be moved between corporate positions and government and party posts outside of the enterprise. For example, Wei Liucheng, the former manager of CNOOC, was appointed governor of Hainan province and then served as party secretary before being replaced in 2012 by Luo Baoming. The case of Zhang Qingwei described above is a similar such example. Many of the top leaders of the 53 enterprises (party secretary, chairman of the board, and general manager) who have enjoyed the rank of vice minister have since been directly appointed as provincial vice governors. For example, Li Xiaopeng, the former general manager of the China Huaneng Group, was appointed vice governor of Shanxi province before being promoted to governor. Transfers also occur in the reverse direction. Chen Biting moved from vice governor of Jiangsu province to chair of the Shenhua Group Corporation Ltd. and He Tongxin moved from vice governor of Hunan province to chair of the China General Technology Group.

The provisions of the Company Law cannot be implemented, in large part, due to this treatment of the administrative heads of enterprises as cadres of similar rank in the politico-administrative system. This situation persists despite the fact that the September 22, 1999, Central Committee decision on SOE reform clearly states that “enterprise and business leaders no longer have an administrative rank.”¹⁷

c.) The Special Effects of the Revolving Door

The “revolving door” that encompasses transfers between enterprises and government and party functions has two effects. First, moving from a particular industry to the relevant government department that oversees policy formulation and implementation in that industry allows the individual to grant special benefits to the individual’s former enterprise. Second, when moving from government to an enterprise, the former position may allow the individual to acquire special benefits for the enterprise, which opens the possibility of permitting unfair advantages and profits.

The oil industry provides a good example of the symbiotic nature of management (see Table 7). A high percentage of those holding senior management positions in the industry come from those institutions that oversee the industry or from government departments. We find a similar phenomenon in the railway industry. For example, of the six ministers and deputy

ministers in the Railway Ministry in 2007, all but one came from the industry. Similarly, the majority of officials in the Railway Bureau and associated industries came from the Ministry. By contrast, in the telecommunications industry, only a small number of officials previously worked in the industry. However, many who did work in the industry now enjoy high positions in the government. Nevertheless, many former officials are currently working in the telecommunications industry.

4.) Monopoly over Ideological Resources

a.) Monopoly over Naming

In October 2003, the Central Committee promulgated its decision on several issues concerning the socialist market economy.¹⁸ The decision states that all market players should enjoy equal legal status and equal rights of development. In particular, the decision emphasizes that non-state enterprises should enjoy equal treatment with respect to investment, financing, taxation, land use, and foreign trade. With respect to foreign enterprises, the decision notes that enterprises engaged in foreign economic and trade activities should be treated equally in accordance with the requirements of the market economy and WTO regulations.

Given that the highest authority issued this document, it would appear that the issue of equal treatment for the non-state sector and foreign enterprises had been resolved. However, in practice, this has not been the case. After the decision was issued, a number of influential articles were published, including in the *People's Daily*, referring to “the eldest son the Republic.”¹⁹ These sources clearly regarded SOEs as the eldest son in the family, holding the most honored place among the siblings. Non-state enterprises and foreign enterprises were regarded as less worthy. The metaphor highlights the persistent nature of these inequalities; such inequalities are deeply influenced by China's historical and cultural traditions in which inequalities between the eldest and youngest sons are prominent. The eldest son, born to the first wife, enjoys a special privilege with respect to inheritance of the “throne” and property. This primogeniture is a basic principle of a patriarchal institution and has been used to oppose the concept of equal status for all enterprises; even in a socialist market economy, the SOEs enjoy a special position as national representatives and heirs. The former chair of Sinopec, Chen Tonghai, commented in 2009 that “As the eldest son of the Republic, if we do not have a monopoly, then who will?”²⁰

Such ideas were expressed as early as 1995 when Wang Honghe published an article in *News Front* (*Xinwen zhanxian*, 新闻战线) entitled “Do Not Use an Inappropriate Metaphor” (*Buyao luan biyu*, 不要乱比喻), opposing the comparison of SOEs to “the eldest son of the Republic.” This view continued to evolve as defense of the SOE sector became even more pronounced. On June 1, 2012, an article in the *People's Daily* stated that SOEs are the “primary entity in the socialist market economy.” Even though “primary entity” replaced “eldest son,” the essence is the same: private and foreign enterprises remain in a lower position. The article argued that the primary entity plays an important role in determining the nature of the economy. In a capitalist market economy, private capital is the “primary entity” that determines the nature of the economy. However, in China, the SOE is dominant. Four arguments for this viewpoint have been put forward. First, SOEs are owned by the whole people and thus they work for the interests of the whole country and society and, unlike private enterprises, they do not seek to maximize their own interests. This reflects a basic requirement of the socialist market economy and ensures the correct economic direction. Second, SOEs are the micro-foundation of national macroeconomic control and powerful entities that implement the “scientific outlook on development” (*Kexue fazhan guan*, 科学发展观). Third, SOEs play a decisive role in the national economy due to their abundant resources. Fourth, the quality of SOEs is judged to be higher than that of private enterprises. In 2010, 38 of the world's 500 top enterprises were SOEs. Of China's top 500 enterprises in 2011, SOEs accounted for 63.2 percent. SOEs are clearly regarded as the lifeblood of the national economy, safeguarding national economic security and protecting against international economic risks. Furthermore, their political reliability ensures adherence to the socialist road.²¹

The key argument has not changed: the “primary entity” determines the nature of the socialist market economy. It is interesting to note that on its website, SASAC does not indicate the name of the author of the above article and instead simply states that the “*People's Daily* says that the SOE is the ‘primary entity’ in the socialist market economy.” The purpose of the omission implies that this authoritative party publication supports the idea of the SOEs as the “primary entity.”

Gao Shangquan, former vice chair of the National Development and Reform Commission and president of the China Economic System Reform Research Association, was an early critic of the monopoly system. He has said, “Some people think that opposing the administrative monopoly is equal to opposing the SOEs growing bigger and stronger and opposing socialism

and destroying the party's base. Their theory is based on the idea that the state-owned economy is the foundation of party rule.”

In 2003, when participating in the drafting of the report of the Third Plenum of the Sixteenth Central Committee, Gao argued that it is difficult to explain the following four phenomena. First, when the Soviet Union collapsed, SOEs dominated the national economy, so why was there no support within the ruling Communist Party of the Soviet Union for the continuance of the socialist system? Second, after World War II, the share of the state-owned economy in the developed capitalist economies was as high as 30–35 percent but no one regarded them as socialist. Third, in Zhejiang province, there is a low level of investment in the state-owned economy but the economy is developing rapidly and the people are becoming richer. Fourth, the extent of the state-owned economy in Vietnam is much lower than that in China, but Vietnam is certainly regarded as a socialist country. Thus, Gao argues, the strength of CCP rule is not proportional to its share of the state-owned economy but instead depends on the “three people's” [principles] (popular feelings, the people's livelihood, and the will of the people—*minxin, minsheng he minyi*, 民心, 民生和民意). In Gao's view, you can rule if you win the hearts of the people. To win support, it is important to improve the people's livelihood and support the will of the people, such that they have the right to speak, participate, and supervise the state. If the three people's [principles] are implemented, the ruling foundation of the CCP will be more stable.²²

b.) Policy Resource Monopoly and Information Asymmetry

SOEs enjoy a number of special treatments that are not generally available to private enterprises. Leaders of SOEs may be appointed to central decision-making bodies, thus giving them access to important policy information. An increasing number of SOE personnel have been appointed to leading party bodies such as the Central Committee. Membership in these leading organizations allows them to express their opinions on national policy. It enables them to read top-secret, confidential, or internal party documents. They can also attend training programs at the Central Party School, among others. This provides a distinctive information asymmetry between entrepreneurs in the state-owned sector and private entrepreneurs.

5.) Recap of the Theory of Chinese-Style Monopoly

Existing theories about economic monopolies do not adequately explain the

essential characteristics of the Chinese monopolies. In general, three types of monopolies have been identified: a “natural monopoly” formed from the economies of scale in the technology of production, an “economic monopoly” formed through collusion among several manufacturers (behavior monopoly), and a “franchise monopoly” due to government legal and policy restrictions (administrative monopoly).

Although Chinese monopolies are not explained by natural or behavioral monopolies, administrative monopolies can explain some, but not the full extent, of the Chinese monopoly system (monopolies over resources, prices, markets, and assets, and legislative, administrative, personnel, and ideological monopoly over power). Furthermore, administrative monopolies do not explain the economic structure (the planned economy) or the traditional cultural background that gives rise to monopolies. Thus, we need an explanation that includes a combination of politics, economics, and culture.

a) The Comprehensive Monopoly of Power in China

Works by Coase (1937, 1960) and North (1990) focus on the importance of effective property rights in resolving the problem of monopolies. However, their work does not explain the origins and evolution of the monopoly enjoyed by state-owned property rights. Stiglitz (1996) argues that during a period of transition, market competition is more important than property rights and privatization in explaining economic performance. Furthermore, their work does not cover the nature of ownership in China.

China's highly centralized planned economy originated after the Chinese Communist Party seized state power through violent revolution and the state took over the means of production and basic economic resources. This resulted in a monopoly system with three basic characteristics. First, it differs from an administrative monopoly because of its scope across many industries. Second, administrative regulations have been implemented to retain some form of monopoly during the reform. Third, the scope of the monopoly extends beyond the economy into government and administration. Table 8 shows the extent of the monopoly across different sectors.

As the table illustrates, monopoly powers are comprehensive and wide-ranging. Power is embedded in asset ownership that nominally is owned by the whole people but in fact belongs to the government. The government appoints the officials who directly manage the assets. The table shows that a monopoly exists in industry (resources), prices, the market, and assets (property rights). In contrast to ownership by the whole people, the interests of the minority, or a minority of institutions, control monopoly power.

III) Damage Caused by the Comprehensive Monopoly of Authority

The comprehensive monopoly of authority has a number of negative consequences. These include depressed market efficiency, income inequalities, corruption, an exacerbation of economic structural imbalances, market distortions, and rising social conflicts.

1.) Analysis of the Yield of State-Owned and Private Assets

Table 9 shows that although since 2000 both state-owned and private assets have increased, the increase in the private sector has been double that in the state-owned sector. This disparity can be attributed to their different property rights and the difference between monopolies and competition.

In 2012, the operating income, total net profits, total assets, operating income per capita, and per capita profits of the top 500 Chinese enterprises totaled 23.55 percent, 19.89 percent, 27.46 percent, 49.59 percent, and 41.90 percent respectively of the top 500 global enterprises. Of the top 500 Chinese enterprises, the top ten enterprises are in the banking sector or are state-owned monopolies. In 2012, the profit margin of the Industrial and Commercial Bank of China (ICBC) totaled 208.27 billion *yuan*, or a daily average of over 570 million *yuan*. The high profits in the banking sector and the state-owned monopolies are due to the contribution of extra policy dividends and extra resource dividends. The loans, assets, and total profits of the leading four banks in fact are lower than their concentrated deposits.

Table 10 shows that private enterprises have more patents and R&D development expenditures than SOEs. From 2004 to 2010, R&D expenditures and the number of patents in the private sector rose rapidly; patents in the private sector were nearly double those in the state-owned sector.

Furthermore, the monopoly system breeds inequality and corruption. The assets of the whole people become a source of income for a small minority of the people. According to the National Statistics Bureau, seven monopoly industries employ 28.33 million workers—less than 8 percent of the workforce—but their wages and other income amount to 55 percent of the total wages of the national workforce. While the wages and other income of the workers in the seven monopoly industries are legally obtained, this ratio suggests that, through the use of proxy power, monopoly control means that some of the assets that should belong to the whole people are obtained as “special income” for the few. Other statistics show that during the period

of the tenth Five-year Plan (2002–7), staff and workers in China's cities and towns received an average wage increase of 14.4 percent, whereas those employed in state-owned entities enjoyed a 15.1 percent increase. Furthermore, between 2003 and 2005, the wages of staff and workers in central SOEs increased by 16.8 percent.

Therefore, monopoly control over assets, combined with monopoly control over prices and the market, result in excessive revenue for the monopoly industries. In general, the ten industries with the highest per capita incomes are monopolies with a nominal wage that is 3.6 times higher than the national social wage. If hidden income is also taken into account, the actual income in the monopoly industries is about ten times higher than the average social wage. The average wage and other income of workers in monopoly industries, such as electricity, telecommunications, petroleum, finance, insurance, water and electrical supply, and tobacco, are about seven times those of workers in industries in competitive markets.²³

2.) The Asset Monopoly Results in Corruption

The “black box” of the bidding process in the construction industry is an obvious source of corruption. According to the 2010 annual financial audit report of fifteen central SOEs, published on June 1, 2012,²⁴ between 2008 and 2010, thirty-one projects of the Sinopec Group, with contracts amounting to 1.7 billion *yuan*, did not require a tender. China Telecom affiliates did not tender 67.54 million *yuan* of their bulk purchases. Two companies, one in construction and one in equipment procurement, under the Sichuan First Auto Works Toyota Motor Co. Ltd. (part of the FAW Group), although not participating in open tenders, signed contracts amounting to 114 million *yuan*. Furthermore, Wuhan Iron and Steel Group and its affiliates did not have standardized procedures for open tenders, despite 268 million *yuan* in contracts.

In addition, some central SOEs are engaged “welfare corruption” by violating the wage and benefits regulations. Between 2004 and 2010, two units under the China Electronics Technology Group Corp. (*Zhongguo dianzi keji jituan gongsi*, 中国电子科技集团公司) violated the regulations by purchasing 78 million *yuan* worth of commercial insurance for workers. As of the end of 2010, 146 middle management staff of the China Electronic Information Industry Group Co., Ltd. (*Zhongguo dianzi xinxi chanye jituan*, 中国电子信息产业集团) and its affiliated enterprises violated regulations by holding nineteen second-class corporate shares, worth a total of 96.5 mil-

lion *yuan*. From 2006 to 2010, the animal husbandry group and another company belonging to the China Agricultural Development Group Corporation violated regulations by purchasing participatory group annuity insurance for workers in the amount of 12 million *yuan*.

Asset monopolies also can result in individual corruption. For example, the original CEO of the State Grid Corporation (*Guojia dianli jituan*, 国家电网集团), Guo Yan, fled after the audit showed that among the loss of assets amounting to about 4.5 billion *yuan*, he was responsible for 1 billion *yuan*. In addition, between 1999 and 2007, Chen Tonghai used his positions as deputy and then general manager of China Petroleum & Chemical Corporation and as deputy chair and chairman of the board to transfer land and contracts totaling 196 million *yuan* for his own benefit and for that of his associates. The use of their positions to line their own pockets confirms that the assets that should belong to the whole people are actually controlled by the few.

3.) Exacerbating Economic Structural Imbalances

Statistics from the National Statistics Bureau show that between 2000 and 2009, the investment rate continued to rise while the consumption rate declined. According to World Bank data, the investment rate in 2010 was 48 percent.²⁵ Despite the still comparatively high growth rates, this imbalance between investment and consumption has created economic tensions and has undermined stability. The high investment rate can be attributed, in part, to the SOEs. Statistical data on corporate investments show that between 2004 and 2008, SOEs accounted for 49 percent of urban investments. SOEs continue to invest because of their monopoly control over state-owned assets. After paying taxes, the best exit route for SOE profits is investments. As a result, the scale of investments by SOEs has increased. If this mode of economic growth is not changed, investments will eventually outstrip supply. The increased demands for natural resources will also have negative consequences for the environment.

a.) Unbalanced Supply Structure

Table 11 and Table 12 reveal the following: First, China's innovative capacities and its technical capabilities are both insufficient. As a result, the share of output of the high-tech industry in China's overall GDP is not large enough and the supporting role that the high-tech industry should play in the economy is limited. In general, innovation in the high-tech sector provides

less than 20 percent of support to the Chinese economy. Second, the high-tech industry is not profitable. Taxes and profits in the industry are low in terms of output value. Between 2002 and 2008, profits and taxes were under 8 percent of output value. Third, momentum in the development of the high-tech industry is weaker than that in the manufacturing industry. Its value added in terms of GDP hovers between 4 and 5 percent.

This lack of innovation, or more specifically the lack of technical capability, means that the high-tech sector is unable to support industrial transformation and performance. Table 13 shows that the share of tertiary industry as a percentage of GDP rose only 1.3 percent between 2001 and 2008, hovering around 40 percent. This was due to the slow development of the high-tech industries that resulted in poor innovation in the tertiary sector. The industrial structure is a direct reflection of the economic problems arising from the supply structure.

4.) Market Mechanism Distortions

Monopoly control in the fields of energy, telecommunications, transportation, and finance leads to a deterioration of the market environment and has a negative impact on the development of small- and medium-sized enterprises (SMEs). Private enterprises comprise the bulk of the SMEs, which contribute over 60 percent of GDP, over 50 percent of taxes, and create 80 percent of urban employment. SMEs are thus an important vehicle to ease employment pressures and to solve livelihood problems. As such, the state-owned monopoly also has an adverse impact on the people's welfare.²⁶

The percentage of local government income from land sales has been increasing since 2005. According to an investigation by the Ministry of Land and Resources, of 620 real estate development projects, the price of land accounted for 15 to 30 percent of the projects, with an average level of 23.2 percent. A survey by the National Federation of Industry and Commerce of eighty-one real estate projects reveals that the proportion of direct costs attributable to the cost of land can be as high as 58.2 percent, and 49.42 percent of project expenses (including the cost of land and taxes) is used by the government, accounting for 37.36 percent of the total income in government accounts.

Land income is a major source of revenue. Farmers and villagers with land-use rights cannot set market rates as the government—county and city officials, in this instance—controls land sales and makes all decisions regarding price, use, and requisition.

5.) Monopolies Lead to Social Conflicts and Unrest

According to an analysis by the State Bureau for Letters and Petitions (*Guojia xinfang ju*, 国家信访局), between 2000 and 2006 more than 10 million people submitted petitions. This increase in the number of petitioners and the rise in the number of “mass incidents” (*Qunti shijian*, 群体事件) are indicative of the rise of social unrest (see Table 14). The main concerns were social security, the demolition of urban housing, rural land requisitions, enterprise restructuring, military retirement benefits, environmental issues, official work styles, and various other injustices. These eight issues accounted for about half the total number of petitions. One of the top three reasons for petitions was related to land use. This is because the monopoly over land rights leads to civil rights violations. Due to the importance of land rights to local government revenue, local officials dominate the price-setting process and villagers and farmers do not have an effective mechanism to seek redress. As a result, they often have no recourse but to submit petitions to higher levels of government.

The Ministry of Land and Resources has released information about the complaints it received in the first half of 2011 on its 12336 hotline (at the ministry, provincial, municipal, and county levels) for reporting illegal activities. The majority of the complaints focused on illegal land use, and this represented a growing trend. During this period, there were 38,469 tips, a 13 percent increase over the previous period. Of these, 25,346 (66 percent of the total) concerned illegal land use. The Petition Departments of the central and provincial Ministry of Land and Resources received a total of 17,937 letters, and 10,478 visits by 38,503 people. Of the letters, 12,582 (70 percent) concerned land, and among the visits, 7,384 visits and 27,816 people focused on land issues (70 and 72 percent, respectively). The centers at the provincial, municipal, and county levels received 28,411 calls on their hotlines, a 15 percent increase over the previous year. Of these, 21,722 calls (76 percent) concerned illegal land use, an increase of 10 percent over the previous year. The growing number of emotional collective petitions accepted by the Ministry accounted for 28.3 percent of the total petitions and 65 percent of the visitors, a year-on-year increase of 57.5 and 62.8 percent, respectively. These numbers are indicative of the serious problems stemming from land-related disputes.²⁷

IV.) Countering and Reducing the Negative Influence of the Monopolies

To reduce the negative impacts of the monopolies, the problem of authority must be addressed because the monopolies in the Chinese system, as described above, are part of the comprehensive structure of government authority. Below we offer a number of policy suggestions, as encapsulated in “three separations” and “four guarantees.” The “three separations” include separation of enterprise ownership, separation of company management rights, and separation of rights for company personnel from government authority. The “four guarantees” include guarantees for legislative, judicial, ideological, and public supervision to ensure the “three separations.”

1.) Separation of Ownership from Government Authority

The fact that national enterprises are called state-owned enterprises means that possession and control by national shareholders is entrusted to government agencies and agents. Because national shareholders do not have any mechanism to control, manage, or distribute the assets, authority to control the assets, which we refer to as asset monopolies, reverts to the agencies and agents.

A basic way to resolve this monopoly is to separate ownership from government authority. This will entail the following two steps.

a.) The State-Owned Assets Supervision and Administration Commission Should Not Act As a Special Agency of the State Council

That SASAC exists and functions under the State Council is indicative of the fact that government is not separate from enterprises. The public management functions for the SOEs should be transferred to the relevant departments of the State Council and neither SASAC nor any other agency under the State Council should assume these functions. The ownership functions should be transferred to a new organization to be established by special procedures of the National People's Congress (NPC)—the National Asset Management and Supervision Committee (NAMC) (*Guojia zichan guanli jiandu weiyuanhui*, 国家资产管理监督委员会). The purpose of this step is to separate government from enterprise.

b.) National Enterprises Should Be Governed by the Market Through the National Asset Management and Supervision Committee Established by the NPC

To realize the effective separation of national enterprises from government

authority, special procedures should be introduced to transfer enterprise functions to the people's congresses.

i.) The NAMC should be elected by the NPC. The NPC Finance and Economic Committee (*Renda caijing weiyuanhui*, 人大财经委员会) should introduce a plan for the composition of the NAMC based on full deliberation and public discussion. This plan should be considered and approved by the NPC Standing Committee, and then be delivered to the NPC for approval. The plan should include the nomination criteria and procedures for membership on the NAMC (such as nominations by representatives, and recommendations by professional bodies and the NPC Finance and Economic Committee), its organizational structure, treatment of personnel, and so forth. The NPC Finance and Economic Committee should be responsible for the professional review of candidates and should submit the reviews to the NPC Standing Committee for discussion and approval. The NPC should elect the members and the NPC Standing Committee should make a public announcement of the results to the nation.

ii.) The NAMC should carry out the functions of a national asset investor. It should be responsible for the preservation and increase in value of assets and it should issue an annual report to the NPC describing the income distribution program of national enterprises, including the dividend plans for investors, the amount turned over to the social security fund accounts, and the income plans for workers and staff in national enterprises. After these plans have been discussed and adopted by the NPC, the NPC Finance and Economic Committee should supervise their implementation. The NAMC as a national investor should be responsible for organizing the National Professional Asset Management Companies (NPAMC—*Quanguo zichan zhuan ye guan li gong si*, 全民资产专业管理公司) and organize the board of directors, chairs, and vice chairs in accordance with the Company Law. The NPAMC will manage the various national assets in a professional, market-oriented manner. It will be responsible for improving the corporate governance structure, establishing a modern enterprise system, and implementing corporate restructuring and diversifying equity. It will also place some of the large enterprises on the stock market, while accelerating the equity diversification of other large enterprises.²⁸

c.) As a Transitional Measure, a Certain Amount of the Profits of the National Enterprises Should Be Turned Over to the National Social Security Fund Account

Through legislative procedures such as NPC resolutions, a certain percent-

age of the profits of the national enterprises should be transferred to the social security fund account for each shareholder, providing each shareholder with dividend rights. This will greatly reduce control of the assets by agents, and thus will reduce the monopoly over assets.

Another recent approach to resolve the asset monopoly is the establishment of an SOE information disclosure system. Through this system, information is released on the appreciation of enterprise assets, the income of enterprise employees, and investment and business information. Such disclosures will also reduce asset and agent monopolies.²⁹

2.) The Separation of Business Rights from Government Authority

a.) Elimination of the Dual Roles of Government and Enterprises

i.) The dual roles of the government should be revoked. The government should not be both a public authority body (a referee) and a market player at the same time.

Governments should not operate as regional economic entities because this results in provincial competition over GDP and the creation of local monopolies. Government projects should not dominate the market by making investments and operating non-public projects. Furthermore, the government should not be the direct subject of business transactions and should not make use of land resources to obtain benefits by using its authority to determine prices and using judicial powers to acquire land, thus serving its own economic interests.

ii.) The dual characteristics of the SOEs should also be eliminated. Because government has some control over the SOEs, the SOEs do not have full rights as enterprises.

This change will require reforming the administrative mechanisms in the government approval process for projects to allow SOEs to function as independent decision-makers. At the same time, it will also be necessary to change the current state of affairs whereby SOEs receive special policy treatments and powers, thus obstructing free-market competition.

b.) Administrative Power Should Be Restricted and Regulated

Some of the government powers of the SOEs are derived from the expansion of government authority. In 2001, at the beginning of implementation of the reform of the administrative examination and approval procedures (*Xinzheng shenpi*, 行政审批), approvals were issued for over 4,100 national administrative licenses (*Quanguoxing xingzheng xuke*, 全国性行政许可), over

2,000 provincial administrative licenses involving hundreds of laws, more than 400 administrative regulations, and a large number of local laws and departmental rules. This made it impossible to separate economic and administrative activities.

Priority must be placed on limiting executive powers by undertaking the following measures:

i.) Independent reviews and evaluations. A special independent committee should be established to review administrative licenses and to submit reform proposals to the State Council Executive Committee for deliberation and adoption. When such reforms have legal implications, the proposals should be proposed jointly by the State Council Executive Committee and the NPC Legal Affairs Committee and then submitted to the NPC Standing Committee or the NPC for discussion and approval. This will ensure that implementation of administrative licenses is based on rule of law.

ii.) Legal review. The NPC should periodically review the laws that form the legal basis for administrative approvals. Those laws that are aligned with the interests of government departments should be abolished. All legislative and executive powers should be based on reasonable principles.

iii.) Institutional reforms. To limit the expansion of executive powers, the number of agencies should be reduced. A committee should be established to propose policies for long- and short-term institutional reforms (*Changqi cunzai de gaige jigou*, 长期存在的改革机构). Such a committee should be high-level, with clear operational procedures and independent of departments with executive power. It will also need to develop a long-term law enforcement legislative plan to support the reform program.

3.) The Separation of Human Resource Management from Government Personnel Authority

Authority over government personnel must be regulated in order to separate the standards applied to SOE managers from those applied to officials.

a.) Regulating the Power of Appointment and Dismissal of SOE Personnel

i.) The authority of SOE boards and managers to appoint and remove personnel should be guaranteed in accordance with the Company Law. The board should be responsible for deciding on the appointment or dismissal of managers as well as their remuneration. In turn, the managers should be responsible for proposing appointments or dismissals of deputy managers and financial officers.

ii.) Recruitment of managers should be carried out openly by the SOEs and not by SASAC. Since SASAC is under the State Council, NAMC (to be elected by the NPC) should be responsible for organizing the boards of directors of all asset management companies. In accordance with the Company Law, the candidates for managers should be decided by the board of directors rather than being appointed by organizations with executive authority.

b.) Separate and Regulate the Rights of SOEs as Market Subjects and Government Authority over Personnel Administration

i.) Private rights as market entities and public powers as government entities should be separated. Thus, government administrative-level positions, such as chairman, general manager, and other senior management positions, should be eliminated in accordance with the "Decision of the CCP CC on Several Major Questions Concerning SOE Reform and Development."³⁰ Unlike vice-ministerial or bureau-level officials, the chairman and general manager of the SOEs should not be managed by the party's Organization Department.

ii.) The "revolving door" based on administrative rank should be eliminated by abolishing Article 64 of the Civil Service Law (*Gongwu fa*, 公务员法), which allows SOE managers to be transferred to formal leadership positions, and by modifying or abolishing Article 4 of Chapter 10 of the Regulations for the Selection and Appointment of Leading Officials of Party and Government Leaders (*Dangzheng lingdao ganbu xuanba renyong gongzuo tiaoli*, 党政领导干部选拔任用工作条例), which states that officials can exchange positions between the party, government departments, and SOEs.

4.) Legislative Guarantees for the Separation of Government from Enterprises

a.) Amend the Property Law to Ensure Equality among Market Players

i.) The provisions in the existing laws that lead to unequal treatment for market players need to be eliminated. For example, Article 2 of the Land Administration Law (*Tudi guanli fa*, 土地管理法) provides that "The state may expropriate or requisition land in the public interest in accordance with the law, but should provide compensation accordingly. The State provides a system of compensation for land use for land owned by the State except for that land that has been allocated for use by the State in accordance with the law."³¹ Thus, as it now stands, an SOE can use land at no charge through a

process of transfer allocations, whereas a private enterprise can only acquire land at market prices or through leasing.

ii.) Equal property rights need to be guaranteed within the existing legislation. This includes, for example, “Several Opinions of the State Council on Encouraging and Guiding the Healthy Development of Private Investment” (*Guowuyuan guanyu guli he yindao minjian touzi jiankang fazhan de ruogan yijian*, 国务院关于鼓励和引导民间投资健康发展的若干意见) and the 2012 implementation details for the “New 36 Articles” (*Xin 36 tiao*, 新36条) that require creating an equal institutional environment for all economic entities to use production factors and to take part in fair market competition, with equal protection under the law.³² However, according to current policies and regulations, private companies cannot obtain “licenses for land-use rights” (*Guotu shiyong quan zheng*, 国土使用权证), meaning that they cannot obtain fixed asset-backed loans for factories or workshops on their land.

b.) Modify Those Laws that Merge Government and Enterprise, Eliminate Powers That Affect Enterprise Equality

i.) Some laws, such as The Railway Law, should be amended to reform the former Ministry of Railways (now under the Ministry of Transportation) and other institutions. The reform must be based on legal changes³³ since the Ministry of Railways has been changed to the Railway Authority and the Railway Corporation under the Ministry of Transportation.

ii.) The goal of separating government from enterprises should be achieved through legal means. In 2011, according to media reports, there were 219 provincial companies in Hubei province that had completed the separation of government from enterprises during the previous nine years, but there remained 120 companies that had still not achieved this objective and these companies still controlled assets totaling 40 billion *yuan*. In 1984, the central government issued a notice that prohibited government agencies and government officials from doing business. The notice states that these entities must "Adhere to the separation of duties between government and enterprises, the principle of separation between officials and businessmen, and never allow the use of power [...] to engage in enterprises for personal gain." In 1992, the central government issued a notice that forbids cadres in party and government organs at and above the county level from engaging in business. However, in order to realize this objective, legal changes will be required.

c.) Reform Regulations with Respect to Market Operators So That They Are Subject to Equal Treatment

i.) The monopolistic and discriminatory provisions in the present law, which are remnants of the planned economy, need either to be eliminated or modified. For example, the provision that requires specialized tobacco monopoly enterprises (*Yancao zhuanmai jingying qiye*, 烟草专卖经营企业) to submit purchases, sales, inventory plans, and reports to the Administrative Department of the State Tobacco Monopoly³⁴ does not allow market players to enjoy equal treatment. Because of the legal support they receive, SOEs can use state credit to obtain needed funds. Sample surveys and statistics show that the interest rate paid by SOEs is 225 basis points lower than that paid by private enterprises. From 2007 to 2009, the average income tax burden of 992 SOEs was 10 percent, whereas the average tax burden of private enterprises reached 24 percent.³⁵

ii.) Fair competition rights for market operators should be clearly defined and special legal provisions should be implemented against administrative monopolies. For example, only Chapter V of the Anti-monopoly Law (*Fanlongduan fa*, 反垄断法) deals with "abuse of administrative power to eliminate or restrict competition" (Articles 32 to 37); there are no other restrictions against administrative monopolies.

iii.) Improve the legal provisions for regulatory relief mechanisms. It should be clearly stipulated that when operators face unfair competition, they have the right to request intervention from the relevant departments. Punishment should be clearly defined for when administrative powers hurt fair competition.

5.) Judicial Guarantees to Separate Government from Enterprises

Because of the special relationship between SOEs and the government, SOEs are often favored in legal cases, with the result that anti-trust requirements are ineffective.

a.) Curb Unfair Judgments Because of "Close Relations" Within the Same System

Prevent any reoccurrence of cases such as that of Chen Tonghai.

On July 15, 2009, the Beijing Second Intermediate People's Court issued a verdict indicating that between 1999 and June 2007, Chen Tonghai, the former general manager of Sinopec, had accepted bribes in the amount of 196 million *yuan*. The largest bribe amounted to 160 million *yuan*, mak-

ing it the largest single bribe since the founding of the PRC. Chen stated publicly, "As the eldest sons of the Republic, if we do not have monopolies, who will?"

Rather than being sentenced to death, however, Chen received a two-year suspended death sentence because he surrendered, showed repentance, and reported on others.³⁶ A media report noted, "The people's court did not act independently and in issuing the sentence it carried out the instructions of its superiors to engage in monopoly behavior." The report also observed that "Chen had been born into a 'revolutionary family,' and his father, Chen Weida, 'had early on joined the revolution,' had served as a former provincial party secretary, and later also served as deputy party secretary of the Central Political and Legal Affairs Committee" (*Zhongyang zhengfawei fushuji*, 中央政法委副书记). If such a major case of injustice did not receive a fair trial, how could one expect other cases involving the state-owned monopolies to receive fair trials?

b.) The Court and the Procuratorate Should Operate Independently

Article 126 of the current Constitution stipulates, "The people's courts shall, in accordance with the law, exercise judicial power independently and shall not be subject to interference by administrative organs, public organizations, or individuals." The 1954 Chinese Constitution even more clearly stated, "The people's courts administer justice independently and are subject only to the law" (Article 78). Given the current judicial reality, it is essential that these two concepts be combined. Article 126 should be modified as follows: "The people's courts shall, in accordance with the law, exercise judicial power independently and shall not be subject to interference by administrative organs, public organizations, or individuals, and shall be subject only to the law."

To make independent judgments, the following reforms are necessary:

i.) Vertical leadership should be established within the court system (the Supreme Court—Superior Court—Intermediate Court—basic-level courts) to reduce interference in independent judgments by local agencies. The financial management system should be reformed so that the courts have independent budgets and receive funding through the vertical system. Decisions by judges should be made independent of their colleagues and supervisors, or any other levels of the judicial body. Constraints and interventions from the administrative hierarchy should be eliminated. Judges should be appointed based on their professional levels and practical experiences and not on the approval of administrative officials. The Judges Committee

(*Faguan weiyuanhui*, 法官委员会) should be responsible for the assessment and evaluation of judges, and their dismissals, transfers, or retirements should be based on legal conditions and procedures. Judges should enjoy "judicial exemption rules" (*Sifa huomian guize*, 司法豁免规则).

ii.) The vertical leadership system of the Procuratorate should be further strengthened and local personnel appointments should no longer rely on local governments. Treatment of the ranks of the prosecutors should be reformed: prosecutors must be approved by the same level of the local party Organization Department, and then their names should be submitted by the Procuratorate to the people's congress for appointment. In order to avoid interventions and controls by local governments, the Procuratorate at all levels should be funded directly through the vertical system.

Article IV of the People's Procuratorate Rules of Criminal Procedure (*Renmin jianchayuan xingshi susong guize*, 人民检察院刑事诉讼规则) makes it clear that the Procuratorate is part of the administrative management system, thus making it difficult to maintain the independence of prosecutors. This article should be changed to ensure that when the Procuratorate is handling criminal cases, the prosecutors shall be responsible, except for difficult cases that can be submitted to the specialized audit committee. Promotions should be based on occupational criteria and the assessment of the prosecutors' commission (*Jianchaguan weiyuanhui*, 检查官委员会), rather than by administrative mechanisms. Finally, prosecutors should not be removed from office, demoted, or dismissed without proper non-statutory facts or statutory procedures.

iii.) Lawyers' rights should be expanded to increase the independence of the judicial system and to strengthen judicial mechanisms. Lawyers should enjoy the same "judicial exemption rules" as judges, and should not be accused or face legal actions because of remarks or behavior during trials.

6.) Ideological Guarantees to Separate Government from Enterprises

a.) Establish the Proposition That All Enterprises Are Equal Before the Constitution

i.) Safeguard the authority of the constitutional provision that both SOEs and non-SOEs are "part of the socialist market economy."

Ideological arguments should not challenge this constitutional provision. The 2004 constitutional amendment put an end to ideological debates about the private economy. The amendment accords the state and non-state sectors of the economy equal standing. Any such statement that contradicts

this provision should be deemed unconstitutional.

ii.) Relevant provisions of the Constitution should be further amended through the NPC in a timely manner. This would include "protecting the equal legal status and the development rights of all market players" as noted in "The Decision of the CCP Central Committee on Some Issues Concerning the Improvement of the Socialist Market Economy" and the statement at the CCP Eighteenth Party Congress that "the equality of all market players is protected by law." These propositions should be incorporated into the Constitution.

b.) Establish an Ideological Basis for Equal Rights of All Enterprises

It must be clearly established that all enterprises, regardless of whether they are SOEs or private enterprises, are integral tools to develop the productive forces and thus in terms of ideology they should be treated equally.

7.) Guarantee Public Oversight of the Separation of Government from Enterprises

a.) Public Opinion

Public opinion can play an important role in providing public oversight over monopolies.

i.) The fundamental rights enshrined in the Constitution should be implemented, and a Press Law (*Xinwen fa*, 新闻法) should be enacted as soon as possible, thus freeing the management of news from administrative controls and legalizing public opinion.

ii.) The Constitution gives all citizens the right to freedom of expression and publication. Public opinion is a manifestation of such freedom of expression. Public reports and news criticisms are the main components of public opinion. Thus, it should be unconstitutional to declare that any speech or expression is a crime.

iii.) Supervisory bodies such as the news media must be independent but should bear the corresponding legal responsibilities.

b.) Establishing a Mechanism for Public Oversight

i.) A hearing system should be established and governments at all levels should hold hearings for administrative licenses. Administrative interventions are not necessary for problems that citizens, legal persons, or other social organizations can resolve on their own, or for those problems that can

be solved effectively through market mechanisms.

ii.) An information disclosure system (*Xinxi pilu zhidu*, 信息披露制度) should be established. Open party, government, and judicial affairs should be promoted. A "sunshine approval" (*Yangguang shenpi*, 阳光审批) system should be implemented, including open procedures and requirements, open disclosures by the person in charge of approvals, and open time frames. An electronic monitoring system should be advanced for administrative reviews and approvals.

iii.) A legal authorization system should be established over important administrative measures. The State Council Legislative Affairs Office should verify all new central government administrative approvals. If they have no legal basis, they should be discussed and decided by the NPC after verification by the Legal Committee of the NPC Standing Committee.

Tables

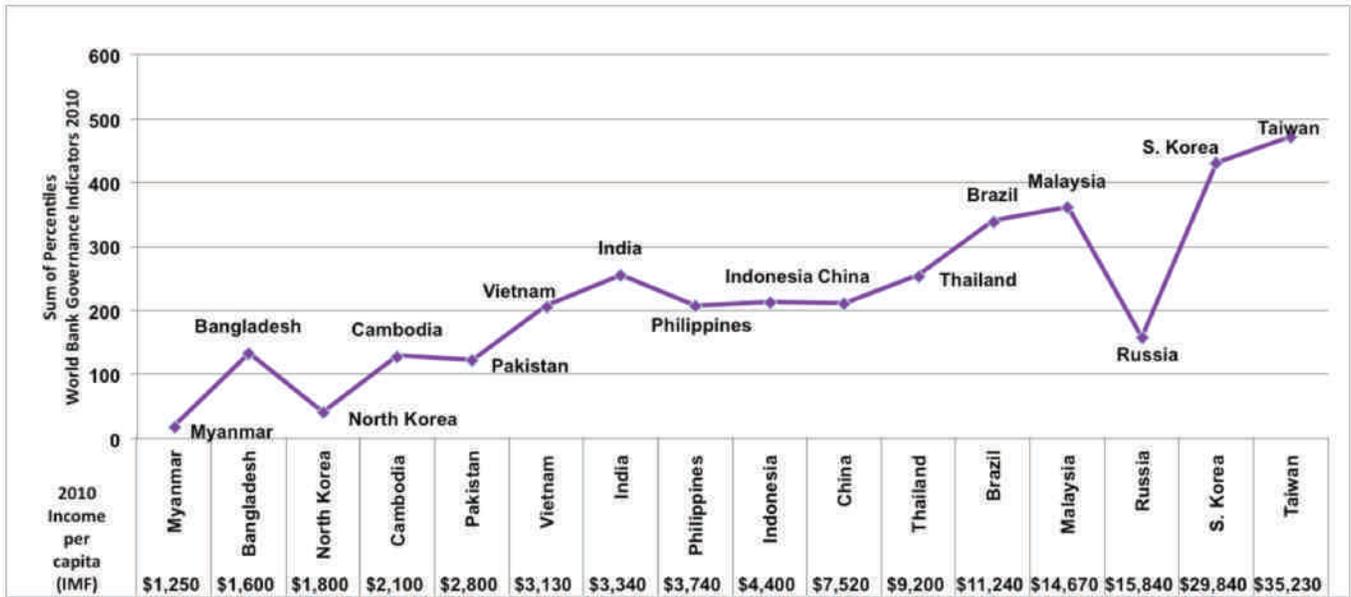
Table 1

Citizens' Perceptions of the Attitude of Local Governments and Their Subordinate Agencies, 2003–2011 (percentages)

	Bureaucratic Behavior				Concern for Ordinary People		
	2003	2009	2011		2003	2009	2011
Stand high above the people	48.2	39.4	42.2	Methods to help ordinary people	30.9	46.8	47.3
Close to those with money	50.1	43.9	44.6	Care about ordinary people with hardships	28.1	44.2	44.0
Move close to superior leaders	54.0	49.4	45.8	Have the intention of taking care of ordinary people	24.5	39.4	43.0
Act in line with slogans	51.2	37.4	42.5	Resolve real problems	26.3	45.6	47.1
Primarily look out for their own interests	49.8	40.3	41.6	Bring benefits to the ordinary people	23.7	45.6	42.5
Arbitrarily collect fees	41.3	17.6	31.6	Collect fees in accordance with the law	31.7	65.9	52.4

Source Authors' survey, 2003–2011.

Table 2
World Bank Governance Indicators/Income per Capita (PPP)



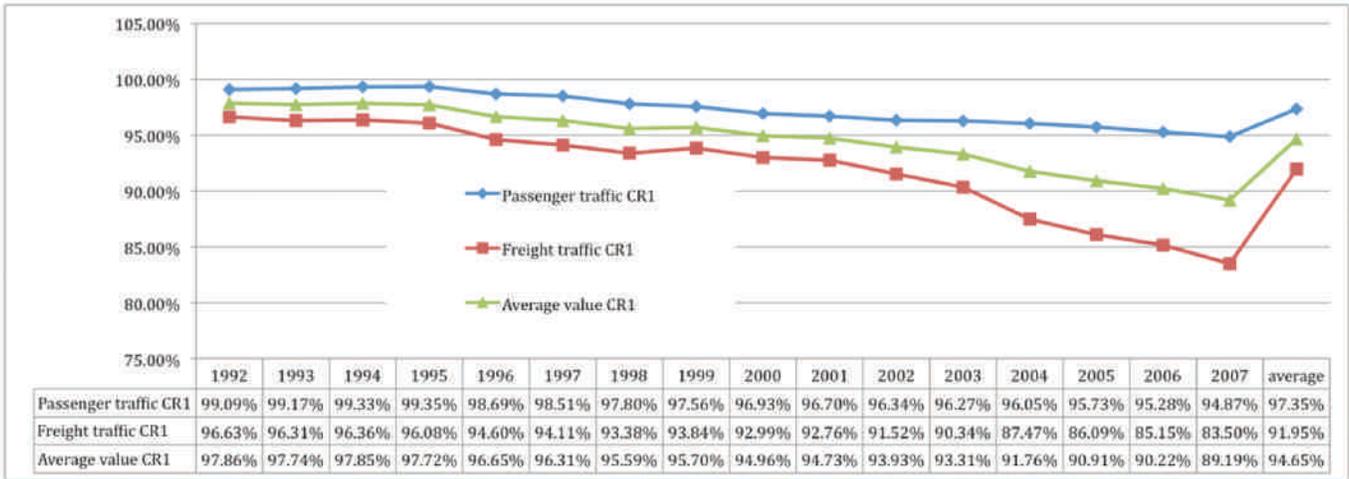
We thank David Dapice for this table.

Table 3
Prospecting and Mining Rights

Company	Prospecting			Mining		
	Prospecting rights	Area (Sq. Km.)	Percentage	Mining rights	Area (Sq. Km.)	Percentage
CNPC	426	1,807,332	41.6	393	66,222	80.9
Sinopec Group	357	982,001	22.6	207	10,791	13.1
CNOOC	251	1,387,791	31.9	38	3 969	4.8
Yanchang Petroleum	36	108,496	2.5	5	443	0.5
China National Coal Group Co. Ltd.	44	41,506	1.0			
Others	43	17,114	0.4	4	428	0.5

Source *Zhongguo kuangye nianjian 2007* (中国矿业年鉴 2007) (China Mining Industry Yearbook 2007).

Table 4
CR1 Data from the State-Owned Railway Regarding the Passenger and Freight Markets



Source Wang Huizong (王会宗), *Zhongguo tielu yunshuye xingzheng longduan yu yinru jingzheng wenti yanjiu* (中国铁路运输业行政垄断与引入竞争问题研究, A Study of Administrative Monopoly and the Introduction of Competition in the Chinese Railway Transport Industry), Shandong University PhD dissertation, 2010.

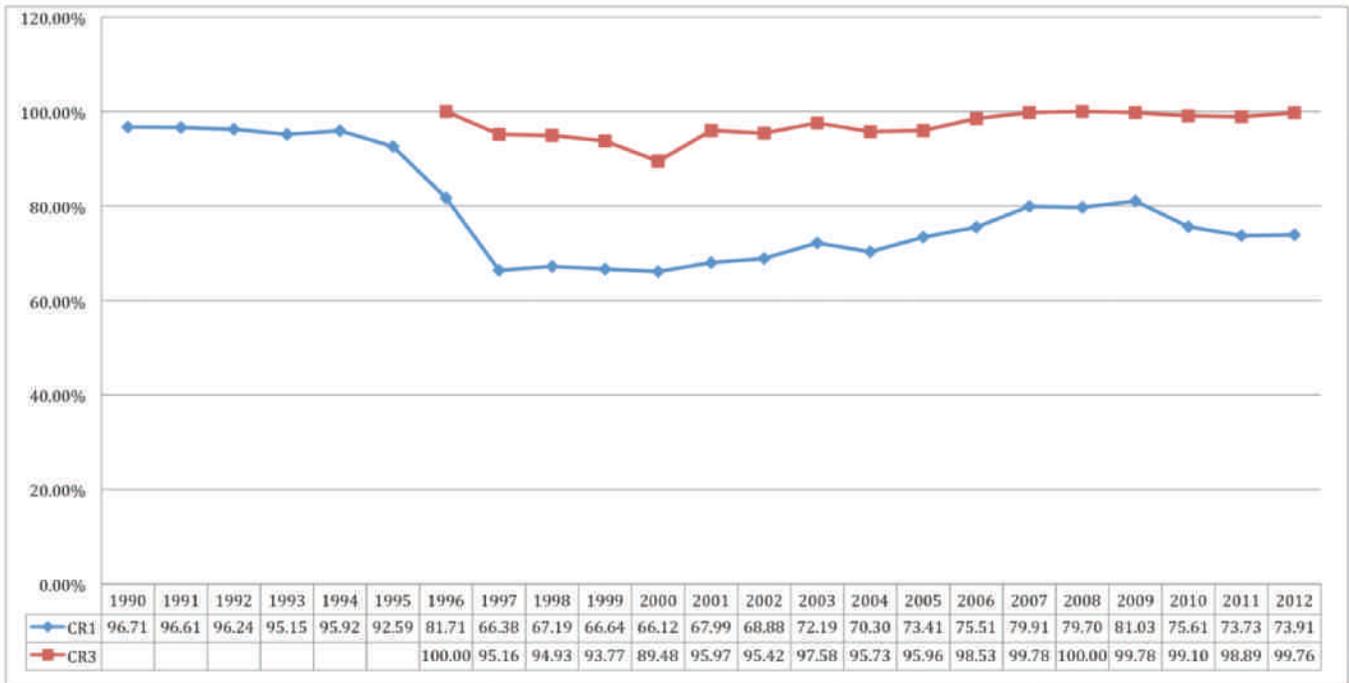
Table 5
Degree of Concentration of Chinese Oil Companies in the Crude Oil Production Market, 1989–2012 (Unit: 10,000 tons)

Year	National total output	CNPC	Sinopec Group	CNOOC	Yanchang Petroleum	Sinopec Star Petroleum Co., Ltd.	Shanghai Branch of the Sinopec Group	Others	CR1	CR2	CR4
1989	13,764.0	13,597.0	---	---	---	---	---	---	98.79%	---	---
1990	13,831.0	13,614.5	---	126.5	---	---	---	---	98.43%	99.35%	---
1991	14,099.0	13,647.2	---	241.4	---	---	---	---	96.80%	98.51%	---
1992	14,210.0	13,725.7	---	387.4	---	---	---	---	96.59%	99.32%	---
1993	14,400.4	13,912.4	---	463.5	---	---	---	24.5	96.61%	99.83%	---
1994	14,607.2	13,837.0	---	647.7	63.2	---	---	59.3	94.73%	99.16%	99.59%
1995	14,879.2	13,907.7	---	841.6	73.5	---	---	56.4	93.47%	99.13%	99.62%
1996	15,729.1	14,053.3	---	1,501.0	88.0	---	---	86.6	89.35%	98.89%	99.45%
1997	16,034.4	14,215.0	---	1,620.0	107.3	62.0	---	30.1	88.65%	98.76%	99.81%
1998	16,025.6	10,583.4	3,531.7	1,631.9	162.6	62.8	---	---	66.04%	88.08%	99.28%
1999	15,878.6	10,494.8	3,456.5	1,617.4	211.9	98.0	---	---	66.09%	87.86%	99.38%
2000	16,086.0	10,359.0	3,724.0	1,757.0	246.0	240.0	---	---	64.40%	87.55%	100.00%
2001	16,317.2	10,339.2	3,783.9	1,822.0	316.4	294.2	58.9	---	63.36%	86.55%	99.66%
2002	16,886.6	10,366.2	3,789.1	2,098.6	380.2	293.0	47.3	205.2	61.39%	83.83%	98.50%
2003	16,983.1	10,401.5	3,804.8	2,185.9	552.9	---	38.0	---	61.25%	83.65%	99.78%
2004	17,499.2	10,455.1	3,851.6	2,439.7	720.9	---	31.9	---	59.75%	81.76%	99.82%
2005	18,142.2	10,595.4	3,919.5	2,763.8	838.2	---	25.3	---	58.40%	80.01%	99.86%
2006	18,382.8	10,663.6	4,010.6	2,760.3	926.0	---	24.7	---	57.71%	79.45%	99.52%
2007	18,596.2	10,764.6	4,102.5	2,697.5	1,031.7	---	21.6	---	57.89%	79.95%	99.88%
2008	19,022.0	10,825.2	4,174.8	2,906.3	1,089.7	---	21.6	---	56.91%	79.00%	99.86%
2009	18,990.2	10,313.2	4,239.1	3,177.4	1,130.0	---	---	---	54.31%	76.63%	99.31%
2010	20,301.4	10,541.4	4,253.6	4,167.7	1,200.0	---	---	---	51.92%	72.88%	99.32%
2011	20,364.6	10,707.2	4,270.4	3,894.3	1,232.0	---	---	---	52.58%	73.55%	98.72%
2012	20,747.1	11,033.3	4,315.6	3,857.2	1,254.8	---	---	---	53.18%	73.98%	98.62%

Notes The data in this table are calculated based on domestic crude oil production, excluding imports, because oil imports have long been dominated by the Sinochem Group and the three major groups. Since the 1990s, oil exports relative to domestic crude oil production have been very small, so they are negligible. We thank Xihao Chen for this table.

Sources *Guoji shiyou jingji* (国际石油经济) (The International Oil Economy), 1994, 1998, 2004, 2006, 2008, 2013; National Statistical Bureau, *Zhongguo tongji nianjian* (中国统计年鉴) (China Statistical Yearbook), various years; the company annual reports of CNPC, Sinopec Group, CNOOC; the Yanchang Petroleum Company website; and the Great Northern Shanbei network.

Table 6
Chinese Natural Gas Industry CRn Index, 1990–2012



Sources *Zhongguo huaxue gongye nianjian* (中国化学工业年鉴) (China Chemical Industry Yearbook); *Zhongguo shiyou tianranqi jituan gongsi nianjian* (中国石油天然气集团公司年鉴) (China Oil and Natural Gas Corporation Yearbook); Wu Yingying, “Research on the Problem of the Natural Monopoly Industry Organization Model in China: The Example the Natural Gas Industry,” Shandong University, PhD dissertation, 2009; Xiao Lu, “China's Crude Oil Production 2007–2012,” *The International Oil Economy*, no. 4 (2013).

Table 7

Percentage of Board Directors from Departments in Charge of the Oil Industry, 2006–2007

Year	2006	2007
CNPC	58.3	54.6
Sinopec	63.6	63.6
CNOOC	0.0	14.3
Average	40.6	44.1

Note Departments in charge of the industry include the Petroleum Administration Bureau, the Ministry of Petroleum Industry, the Petroleum and Chemical Industry Bureau, the National Development and Reform Commission, the Ministry of Commerce, the Local Planning Commissions, and the Economic and Trade Commission.

Sources *Zhongguo shiyou tianranqi gufen youxian gongsi nianbao*, 2006, 2007 (中国石油天然气股份有限公司年报, 2006, 2007) (China National Petroleum Corporation Annual Reports, 2006, 2007); *Zhongguo shiyou huagong gufen youxian gongsi nianbao* (中国石油化工股份有限公司年报) (China Petrochemical Corporation Annual Report); *Zhongguo haiyang shiyou zong gongsi nianbao* (中国海洋石油总公司年报) (China National Offshore Oil Corporation Annual Report).

Table 8
Comprehensive Monopoly of Power (percentages)

Primary indicators	Secondary indicators		Telecommunications	Oil	Gas	Railway	Banking	Tobacco	Electricity
Economic monopoly	Trade barriers		100	75	75	84	75	100	75
	Price regulation		75	75	100	100	100	100	75
	Market structure	Concentration of property rights	95.68	75	100	95	95	95	95
		Proportion of industry nationalization	55.53	75	100	96	95	95	95
	Structure of property rights	Market concentration	98	100	100	86	75	86	86
		Industrial integration	98	75	75	100	90	100	75
Power monopoly	Laws and regulations	Number of legal and regulatory limitations and exclusions of competition	75	75	100	75	75	100	50
		Extent of limiting and excluding legal and regulatory competition	87.5	75	100	100	75	100	50
	Administrative powers	Setting for the industry department in charge	75	50	75	100	100	100	100
		Management authority in charge of the industry department for the industry	75	50	75	100	100	100	100
		Management mode for the industry by the industry department in charge	75	50	75	75	75	100	50
	Personnel authority		75	75	75	88	75	75	75
Ideology		60	75	75	70	70	70	75	
Effect of corporate behavior	Profit-making behavior using monopoly		75	75	75	85	85	75	75
	Operational autonomy of enterprises		75	75	75	75	75	75	75
	Allocative efficiency	Investment	62.5	75	75	100	75	100	50
Demand and supply		75	75	75	100	75	100	100	
		Ratio of workers' income and average income	28.8	75	75	100	90	100	100
	Labor productivity		61.30	75	75	82	75	82	75
	Quality of services		75	75	75	75	75	75	100

Source Most statistics are derived from Yu Liangchen, “Xingzheng longduan celiang de zhibiao tixi” (行政垄断测量的指标体系) (An Index System for Measuring Administrative Monopoly), Shandong University, Anti-Monopoly and Competition Policy Research Center Working Paper, No. 2, 2008.

Table 9
Economic Efficiency of the State-Owned and Private Sectors

Ownership	Year	Number of Firms	Assets			Sales			Return on Assets (Sales/Assets)
			Value	% of National Total	Firm Average	Value	% of National Total	Firm Average	
SOE	2000	53,489	8,401	66.6	0.157	4,220	50.2	0.08	0.50
	2001	46,767	8,790	64.9	0.188	4,444	47.4	0.10	0.51
	2002	41,125	8,909	60.9	0.217	4,784	43.7	0.12	0.54
	2003	34,280	9,452	56.0	0.276	5,803	40.5	0.17	0.61
	2004	35,597	10,971	56.2	0.308	7,143	38.0	0.20	0.65
	2005	27,477	11,763	48.9	0.428	8,557	39.2	0.31	0.73
	2006	24,961	13,515	46.4	0.541	10,140	32.3	0.41	0.75
	2007	20,680	15,819	44.8	0.765	12,262	30.7	0.59	0.78
	2008	21,313	18,881	43.8	0.886	14,751	24.5	0.69	0.78
	2009	20,510	21,574	43.7	1.052	15,170	28.0	0.74	0.70
	2010	20,253	24,776	41.8	1.223	19,434	27.9	0.96	0.78
Private	2000	22,128	387	3.1	0.017	412	4.9	0.02	1.06
	2001	36,218	590	4.3	0.016	695	7.4	0.02	1.18
	2002	49,176	876	5.8	0.018	1,043	9.5	0.02	1.19
	2003	67,607	1,453	8.6	0.021	1,719	12.0	0.03	1.18
	2004	119,357	2,372	12.2	0.020	2,945	15.7	0.02	1.24
	2005	123,820	3,033	12.6	0.024	3,991	18.3	0.03	1.32
	2006	149,736	4,051	13.9	0.027	5,632	18.0	0.04	1.39
	2007	177,080	5,330	15.1	0.030	7,734	19.3	0.04	1.45
	2008	245,850	7,588	17.6	0.031	11,222	22.4	0.05	1.48
	2009	256,031	9,118	18.5	0.036	13,437	24.8	0.05	1.47
	2010	273,259	11,687	19.7	0.043	20,784	29.8	0.08	1.78

Source Compiled from National Statistical Bureau, *China Statistical Yearbook*, various years. See Jianxi Luo, Jizhen Li, and Peijun Duan, "Ownership and Innovation Efficiency: Evidence from China's Private and State-Owned Enterprises" (2012).

Table 10
Innovation Efficiency in the Private and State-Owned Sectors

Ownership	Year	R&D Expenditures (in billion Chinese yuan)	Patents	R&D Expenditures per 10,000 Firms	Patents per 10,000 Firms	Patents (Year <i>i</i>) / R&D Exp. (Year <i>i-t</i>)				
						<i>t</i> = 1	<i>t</i> = 2	<i>t</i> = 3	<i>t</i> = 4	<i>t</i> = 5
SOE	2003	11.3	730	3.3	213					
	2004	12.6	683	3.5	192	60.2				
	2005	16.2	961	5.9	350	76.4	84.7			
	2006	16.5	1,488	6.6	596	92.0	118.3	131.2		
	2007	18.2	1,921	8.8	929	116.4	118.7	152.8	169.4	
	2008	26.9	3,757	12.6	1,763	206.3	227.7	232.2	298.7	331.2
	2009	32.2	4,285	15.7	2,089	159.2	235.3	259.7	264.8	340.7
	2010	39.2	5,280	19.4	2,607	163.8	196.1	290.0	320.0	326.3
Private	2003	2.2	412	0.3	61					
	2004	4.1	1,058	0.3	89	473.0				
	2005	6.4	1,351	0.5	109	330.6	604.0			
	2006	10.5	1,885	0.7	126	292.6	461.3	842.7		
	2007	14.8	2,312	0.8	131	219.6	358.9	565.8	1,033.6	
	2008	23.4	4,177	1.0	170	282.9	396.8	648.4	1,022.2	1,867.4
	2009	32.2	6,343	1.3	248	271.1	429.6	602.6	984.7	1,552.3
	2010	41.2	8,659	1.5	317	269.1	370.1	586.4	822.6	1,344.2

Sources Compiled from National Statistical Bureau, *Zhongguo keji tongji nianjian* (中国科技统计年鉴) (China Science and Technology Statistical Yearbook), various years; Jianxi Luo, Jizhen Li, and Peijun Duan, "Ownership and Innovation Efficiency: Evidence from China's Private and State-Owned Enterprises," 2012.

Table 11
Main Economic Indicators of the High-Tech Industry, 2002–2008

	2002	2003	2004	2005	2006	2007	2008
Annual average employment (10,000)	424	477	587	663	744	843	945
Value added (100 million yuan)	3769	5034	6341	8128	10056	11621	14001
Production (100 million yuan)	15099	20556	27769	34367	41996	50461	57087
Taxes and profits (100 million yuan)	1166	1465	1784	2090	2611	3353	4024
Sales revenue (100 million yuan)	14614	20412	27846	33922	41585	49714	55729

Source National Statistics Bureau, *Zhongguo gao jishu chanye tongji nianjian 2009* (中国高技术产业统计年鉴2009) (China Statistical Yearbook on the High Technology Industry 2009).

Table 12

Value Added of High-Tech Industries as a Percentage of the Value Added of Manufacturing and GDP, 2002–2008

1-2 高技术产业增加值占制造业增加值及GDP的比重 (2002~2008)

Value added of high-tech industries as a percentage of value added of manufacturing and GDP



资料来源：同表1-1。
Source: Same as table 1-1.

Source National Statistics Bureau, *Zhongguo gao jishu chanye tongji nianjian 2009* (中国高技术产业统计年鉴 2009) (China Statistical Yearbook on the High Technology Industry 2009).

Table 13
Composition of GDP (current prices)

Year	GDP	Primary Industry	Secondary Industry	Industry	Construction Industry	Tertiary Industry
2000	100.0	15.1	45.9	40.4	5.6	39.0
2001	100.0	14.4	45.1	39.7	5.4	40.5
2002	100.0	13.7	44.8	39.4	5.4	41.5
2003	100.0	12.8	46.0	40.5	5.5	41.2
2004	100.0	13.4	46.2	40.8	5.4	40.4
2005	100.0	12.1	47.4	41.8	5.6	40.5
2006	100.0	11.1	47.9	42.2	5.7	40.9
2007	100.0	10.8	47.3	41.6	5.8	41.9
2008	100.0	10.7	47.4	41.5	6.0	41.8

Source National Statistics Bureau, *Zhongguo tongji nianjian 2010* (China Statistical Yearbook 2010), at <http://www.yearbookinfo.net/news.asp?id=625>, accessed September 17, 2013.

Table 14
Mass Incidents, 1993–2007

Year	Number	Percentage Increase
1993	8,700	—
1994	10,000	15
1995	11,000	10
1996	12,000	9
1997	15,000	25
1998	25,000	67
1999	32,000	28
2000	40,000	25
2001	n/a	12
2002	50,400	12
2003	58,000	15
2004	74,000	28
2005	83,600 (87,000) ^a	13
2006	>90,000	7.6
2007	>100,000 ^b	11

Source Albert Keidel, “China’s Social Unrest: The Story Behind the Stories,” at http://carnegieendowment.org/files/pb48_keidel_final1.pdf, accessed September 17, 2013.

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