THE JAMES A. BAKER III
INSTITUTE FOR PUBLIC POLICY
OF
RICE UNIVERSITY

CHINA AND LONG-RANGE ASIA ENERGY SECURITY: AN ANALYSIS OF THE POLITICAL, ECONOMIC AND TECHNOLOGICAL FACTORS SHAPING ASIAN ENERGY MARKETS

PRIVATIZING CHINA'S STATE-OWNED OIL COMPANIES

DR. STEVEN W. LEWIS,
DEPARTMENT OF POLITICAL SCIENCE AND
TRANSNATIONAL CHINA PROJECT,
JAMES A. BAKER III INSTITUTE FOR PUBLIC POLICY

PREPARED IN CONJUNCTION WITH AN ENERGY STUDY SPONSORED BY THE CENTER FOR INTERNATIONAL POLITICAL ECONOMY AND THE JAMES A. BAKER III INSTITUTE FOR PUBLIC POLICY
RICE UNIVERSITY – APRIL 1999

This paper was written by a researcher (or researchers) who participated in a Baker Institute research project. Whenever feasible, these papers are reviewed by outside experts before they are released. However, the research and the views expressed in these papers are those of the individual researcher(s), and do not necessarily represent the views of the James A. Baker III Institute for Public Policy. For the purposes of ordering a copy, this working paper is **China: VI** in a series of XII.

Privatization in China: Credibility, History and Oil

Privatization in the former socialist central-planned economies (CPEs) has taught us two very important lessons about institutional change: credibility matters and history matters more. The fundamental problem of credibility during privatization is how to create new political and economic institutions that guarantee the government's commitment to enforcing the new property rules: how do we know the new governments will not take back what has been given away, either directly through nationalization or indirectly through excessive taxation? How can the new governments tie their hands in such a way that the people will believe them when they say they will not try to regain absolute control over the economy? The price of failure is very high. As the new leaders of the former CPEs of Eastern Europe have found out, unsuccessful privatization leads to economic apathy and stagnation: people just sit on their hands, neither investing nor participating in economic activity. And privatization programs that lead to what are popularly viewed as unjust or unequal redistributions of wealth have helped bring down more than a few newly-minted, democratically-elected governments.

Compared with the other CPEs, then, China has double trouble. China is still controlled by the Communist Party, so there is no new government authority to lend fresh credibility to the privatization policies. And China has no meaningful history of formal political constraints on government policies: no history of democratic parties, separation of powers, or an independent judiciary. Although weakly revived from a near-forgotten grave, even Russia's democratic legacy of political parties, competitive elections and a separation of legislative and executive powers was politically salient. China has no such institutional heritage to which it can return. Everything is new, making credibility itself a product of experimentation.

Indeed, given the lack of change in political institutions in China, we must wonder why there has been so much economic growth since reforms officially began in 1978. Hundreds of billions of dollars of investment, both domestic and foreign, have poured like a tidal wave into new forms of economic property in China -- from foreign ventures to private enterprises to cooperative farms -- and yet no there have been no significant changes in the political landscape. The Communist Party still rules China uncontested, so how have people come to believe that it will not re-nationalize or tax into bankruptcy their hard-won assets and endeavors? After all, this is the same party -- and indeed the same leadership -- that nationalized China's economy in the 1950s.

The paradox deepens when we consider the extremely high cost of credible information in China. In order to maintain effective political control, the CCP tries to maintain a tight grip on the media, as well as the growth of any rival political or social organizations (parties, organized religion, social groups). Every organization of public communication in China must toe the "party line". This was especially true after 1989, when the government ordered the shut down of some three million "private" enterprises. The newspapers, radio and television stations broadcast daily the Party's goal of sticking to the Socialist path. How can such a Party persuade the Chinese people that it wishes to marketize, liberalize (and de facto privatize) the vast Chinese economy? Miraculously they succeeded: less than two years later even foreign investment was at record highs, with the growth of new enterprises and joint ventures skyrocketing after 1992. China's economy began to boom in the 1990s, and privatization was underway again. With so much control over public information, how can privatization be credible? How do the Chinese, and foreign investors, "know" that the state will not take back what it has already allowed to pass into private hands?

Making privatization credible is a problem not only for the small foreign investor and the medium-sized factory manager and staff, it is also a key dilemma for China's giant, state-owned oil and gas conglomerates. In recent years they have publicly proclaimed a massive restructuring program, creating two "integrated oil and gas companies" -- CNPC and Sinopec -- and two smaller, more upstream-oriented companies specializing in remote onshore and offshore exploration and development -- CNOOC and China Star Petroleum. But to understand where China's oil companies are going we need to look beyond the corporate titles, media reports and official documents and look at the actual changes in ownership structure. The best predictor of privatization in China is the past: what have these companies been doing over the last few decades? There have been significant changes in the ownership structure of these companies, and to know where they are going in the future we need to understand the major historical trends in privatization in China and how they have come to be viewed as credible.

In the next section of this paper I argue that China's market reforms are credible and the Chinese government's hands are effectively "tied" when it comes to reversing the tide of privatization, both for small and medium enterprises and the large state-owned oil and gas companies. Unlike the CPEs of Eastern Europe, however, this credibility comes not from the creation of democratic political institutions or the establishment of the rule of law, but from the simultaneous emergence of three trends: (1) the construction of dense networks of contractual and ownership ties between Chinese enterprises to internalize both market costs and political risk; (2) the withering away of the central government's capacity to monitor the gradual privatization of Chinese companies by their employees and managers, and (3) the rising economic authority of fiscally autonomous local governments that compete with each other to provide market environments suitable for investment.

The result is an emerging political and economic system in which the decentralization of government ownership and regulatory authority and the informalization of corporate structure and ties are the guarantees that the Party and the central state cannot re-establish a central planned economy. In a nutshell, China's privatization reforms have become too complex for authorities in Beijing to control. Central leaders are effectively blind to the extent of changes in ownership in China's state-owned enterprises, and the Chinese people know this because they can see it themselves in the gradual privatization of their own workplace. Credibility comes from the personal experience of one's own success in privatizing one's own piece of the central planned economy pie, and in observing similar actions by one's partners in these informal networks.

The implications of this trend for the privatization of China's state-owned oil and gas companies are presented in the final section of this paper. I conclude that the two new conglomerates, CNPC and Sinopec, face considerable obstacles in their drive to set up major, integrated, multi-national corporations. These include significant opposition from local governments, employees, and subsidiary fields and refineries. They must also deal with a central government that wants to preserve their protected regulatory status -- as a "cash cow" SOE -- and to foster their international role in order to meet China's long-term energy supply needs. But the central authorities are also to create new sources of competition between the companies in order to maintain its own authority. Moreover, the central government's ability or intentions to help CNPC and Sinopec in their goal of reigning in local governments, employees and subsidiaries are by no means clear.

Most importantly, the privatization and restructuring of China's oil and gas companies will depend on how these companies reconcile their contradictory strategies of courting the local governments and employees to assist with informal privatization, and at the same time enlisting the aid of the central government to shut down local fields and refineries that are not viable. In order to shed surplus labor and the less-productive social welfare functions of the traditional Chinese socialist enterprise, the *danwei*, they must work together with local governments and employees. But in order to re-centralize authority over fields and refineries -- especially to shut them down, and in doing so cause great economic hardship for some localities -- they must work against the local governments and employees. The prospects for resolving this contradictory set of goals are not promising because these companies have yet to develop strategies and institutions for working with local governments over the long-term. Moreover, in confronting the local governments the state oil and gas companies risk undermining the main source of credibility underlying China's incremental privatization: decentralization and informal privatization.

The Fundamental Structure of Business and Government Relations in China

Throughout the massive nationalization programs of the 1950s, the rapid industrial development of the 1960s, the political chaos of the Cultural Revolution in the late 1960s and 1970s, and more recently through the unprecedented privatization and marketization reforms of the last two decades, one organizational feature of Chinese society has persisted: the autonomous or "cellular" nature of the socialist enterprise and its predominance in the economic, political and social lives of Chinese.

The Chinese socialist enterprise or *danwei* has been described neatly as a "small society" in that it has provided everything social from health care, family planning (and control) and education to urban and commune populations. The *danwei* has also been a primary-order judicial organization through mediating disputes between neighbors and colleagues, even investigating and punishing violations of the state criminal code. It has also often acted as the bottom rung of a socialist distribution network in times of crisis: organizing corvee labor to build and repair infrastructure and distributing scarce goods during times of rationing.

Most importantly, it has served a role in defining and enforcing property rights, including those necessary for fulfilling the planned production of the socialist enterprise, but also the compensation, bonuses and even housing of employees (Naughton 1997). The gates to these factories have been literally the gates to employment and a stable livelihood in China since the 1950s (Solinger 1997). This is also true for fiscal affairs and taxation. Despite the emergence of a growing middle class of professionals and other individuals with both few ties to the traditional work unit and scattered and varied sources of income, China has yet to develop even a locally effective system of individual income tax collection (Wong, et al, 1996). The work unit is still responsible for meeting the collective fiscal obligations of the bulk of Chinese society. Finally, because the Communist Party has been so successful in eliminating the influence and mobilizational powers of competing political parties, religious organizations, trade unions, and any other forms of social, political and economic organization, there are few groups that can transcend or mobilize across *danwei*s. The Chinese people have quite rightly become accustomed to seeing the *danwei* enterprise or corporation as the basic unit of their society and the locus of interaction with their government.

Although the Chinese people are largely ethnically homogenous, they are culturally as diverse in terms of regional and local identity, shared histories, and language and communication as Europeans or the citizens of the former Soviet Union. And yet the vast bulk of them share a salient organizational history of having lived within these small societies, the "*danwei*" or socialist corporation, for much of their lives. It is still true for many parts of China today that the most common question asked of a stranger is, "What is your *danwei*?" This identification with the socialist corporation when it comes to discussing important issues has survived the waves of marketization and privatization, and the transnationalization of the media of popular culture, even in China's cosmopolitan urban populations.

Moreover, this cellular feature of Chinese society is unique among the central planned economies. The Russian or East European worker's interaction with the government may have been channeled through the socialist state-owned enterprise for most property issues, but housing was usually owned by municipal governments, and workers within urban areas had substantial job mobility. Unlike their Chinese counterparts, Eastern European workers could, and often did, switch jobs between state owned enterprises (Naughton 1997). When the famines and droughts of the early 1960s had emptied China's cities of the surplus rural labor that had been drawn by the industrialization programs of the late 1950s, central and local authorities created an internal passport system. This not only kept the rural laborers out of the urban labor markets throughout much of the 1960s, 1970s and early 1980s, but also kept urban workers confined to one *danwei*. In China, the first enterprise you joined would be the one from which you retired (Solinger 1997).

In an era where this "iron rice bowl" of lifetime employment has been shattered, and where privatization both de facto and de jure is transforming China's economic landscape, the socialist corporation may seem antiquated, irrelevant, marginal. Many people who work in China's state-owned enterprises and government-owned *danwei* only receive a portion of their income from them, and indeed may only show up to "work" for a few days each week (Solinger 1997). Younger generations are struggling to learn how to work in the new businesses of China and may have no experience with the old conventions and norms of decision-making within the *danwei*. But this situation should not discount their importance in the early decades of China's gradual economic reforms -- the 1970s and 1980s -- nor does it automatically exclude their persistent relevance as actors today. In fact, they may still be relevant today even if people come to hold views and attitudes and beliefs that are inconsistent with those advocated and rewarded in the socialist *danwei*s of the previous decades. So long as people have not yet located or created alternative forms of organization that are more credible in their eyes, then the old forms are still salient.

Clearly the way the *danwei* or corporation handles communication between the Chinese people and their government is important for the design and implementation of any government policy. Indeed, it is tempting for social scientists to think of them as mere information conduits. Theories of policy design and implementation frequently make this assumption. But when government policy seeks to change the rules of property ownership and distribution the corporation may assume a more strategic role in making these institutional changes. The *danwei* can change or distort government signals to constituents, and vice versa. As such, it can influence the formation of public expectations about the credibility of government policies. Note that even when *danwei* leaders voice the "party line" on government economic policy their actions to the contrary shape public expectations about the efficacy of such policies. Expressing the official policy on privatization when actually working with workers and staff to de facto privatize the state assets in an enterprise is common.

In addition to the extremely cellular nature of Chinese economic organization, there are two other historical features of business and government relations in China that are important in understanding China's privatization trajectory.

First, Chinese *danwei* are owned directly by all levels of government and are not bound by sectoral hierarchies, as they were in the former CPEs of Eastern Europe and the Soviet

Union. This multi-level ownership structure of China's central planning system creates obvious difficulties for government authorities in monitoring the privatization activities of enterprises, particularly when it has been possible for enterprises to be transferred or "adopted" up or down by new governmental "parents" (Huang 1994; Naughton 1995).

In China, as with many of the former CPEs, the level of administrative oversight is generally related to industrial sector. Capital-intensive infrastructure projects and heavy industry corporations were largely the creation of the central government in Beijing, particularly in those sectors in which China had little development prior to the revolution in 1949: aviation, petroleum extraction and processing, electronics, steel, shipbuilding (Shen 1998). But the piecemeal "liberation" of China from both the Japanese military and the Nationalists in the 1940s had de facto turned over much industry to the new provincial and local governments. In the 1950s, however, the "socialist transformation of capital" period, the national government tried to centralize authority over all large industrial enterprises as it sought to establish the administrative regime of a central planned economy. Local governments resisted if they wanted to retain control over industries in more lucrative or prestigious areas, especially the luxury goods: tea, alcohol, cigarettes, bicycles, watches, pens, home electrical appliances. The dual levels of state ownership in all localities created the incentive for work units themselves to be strategic and to seek out administrative agencies that could offer them more favorable terms of oversight. The institutional history of some Chinese corporations will show periods of central ownership and local ownership, with resulting variation in the degree of regulatory autonomy and the amount of fiscal resources able to be retained by the enterprise (Broadman 1999).

Consider the complex history of government ownership over the oil and gas sector *danwei*. Before the giant oilfield of Daqing in Northeast China's Heilongjiang Province was discovered by central military and petroleum administration engineers in 1959, China was dependent on crude oil imports via Sinochem, a corporation set up in the early 1950s manage the monopoly on foreign trade in oil and petrochemicals. Sinochem provided oil to a host of refineries, some of them owned by the central government sectoral ministries, others owned by local governments. As Daqing and other large fields came on line the field was transferred from provincial administration to a new central petroleum ministry. A new central chemical industry ministry was also strengthened, investing in large centrally-owned refineries in strategic areas throughout China. Exploration and development enterprises were formed under a central geology and mining ministry. The new State Planning Commission (China's Gozplan) was responsible for devising a five-year plan of state investment for developing the oil and gas sector, and the State Economic Commission (China's Gozarbitrazh) was responsible for coordinating the investments via the central sectoral ministries and their subordinate enterprises.

Locally-owned government refineries and fields were never completely eliminated, however, although they at times risked forced mergers with the central ministry *danwei*. In order to advance their own development needs, local governments -- particularly in the more advanced and prosperous coastal urban areas -- have continuously invested in new refineries and fields. The Jinshan Petrochemical Complex, begun with investments from Shanghai municipal authorities in the 1950s, is an excellent example (Jinshan County 1990). Politically ambitious managers of successful local refineries and fields have even sought out central authorities in order to be "adopted" administratively. Likewise, central authorities have taken the opportunity to divest themselves of unprofitable enterprises, particularly during the 1970s and 1980s, when monitoring of the activities of state-owned enterprises became more difficult. Thousands of centrally-owned enterprises became provincial and municipal enterprises during this period. Finally, even China's lowest levels of government -- the townships and villages -- have been players in the creation of oil and gas enterprises, particularly small-scale refining.

The result is an industrial ownership structure much less hierarchical than its Soviet counterparts. Oil destined for export in China may have had to pass through the hands of state enterprises owned by many levels of government: from a centrally-run field, to a township and village enterprise transportation company contracted to carry the oil to a municipality-owned storage depot and dockyard, before being loaded onto a ship under contract to Sinochem. Naturally, this requires the successful collaboration of central, municipal, and local government authorities, each of whom have their own development goals and plans. As a result, the monitoring costs for each level of government are higher than in the other CPEs. But note that this also provides direct information about the varying degrees of state control over industry held by each level of government to each enterprise in this chain of production and distribution. The employees in each link of the chain understand the policies and capabilities of the various governments because these are reflected in the behavior of their production and distribution stream partners.

I argue this variation in both the levels of administrative ownership and control, and the corresponding variation in the enforcement of government policies, is an important source of information about the activities of different levels of government actors in China. Contrast this system of decentralized, territorial control with that of a more hierarchical, sectoral system (as in the Soviet Union). When the workers in a system where all levels of government authority are integrated into a hierarchy of planning, they can directly know the local situation or the central situation, but rarely both. In such a hierarchy those working for units at the local level cannot know if their relationship with their monitoring agency is the norm for the entire system. Likewise, the center must also wonder if the reports it is receiving from below accurately reflect the real situation. In China, because many localities have both central, provincial and locally-owned enterprises near each other -- and often working together -- the Chinese people are capable of finding out more about the strengths of the various levels of government.

The second important historical feature of business and government relations in China is the persistent variation in the structure of ownership within the enterprise. Work units have varied not only in terms of the level of ownership by their governmental "parents" but also by formal-legal ownership form: state-owned enterprises (SOE), urban collectives and cooperatives, rural township and village enterprises (TVEs) and cooperatives, private enterprises, foreign-invested and joint-venture enterprises, and finally, Chinese multinational corporations. From 1949 to 1958, the "socialist transformation of capital" period, the Party only gradually nationalized China's many forms of private property. Land Reform in the early 1950s redistributed the large and medium tracts of land held by landlords or traditional communal associations (e.g. clans), but the large-scale socialist communes of the Great Leap Forward were constructed step by step in the 1950s. Peasants were induced to join distribution networks as the new state sought to guarantee a steady supply of food to urban areas. Then they were lead to form producer cooperatives in order to guarantee the public ownership of machinery and infrastructure investments made by the state to the countryside. Finally, with the establishment of long-term distribution contracts, and of collective ownership over the infrastructure of a more modernized agricultural sector, the Party was able to facilitate the establishment of communes in the late 1950s (Kelliher 1992).

The same was true in China's urban areas, as the state first sought to control the political cost of free markets. China's tumultuous, war-torn capital and commodities markets fell first, but the Party only gradually nationalized most industrial and commercial enterprises. Moreover, it did so through formal plans to "buy out" China's entrepreneurs, creating "joint stock" enterprises in which the State would gradually purchase majority ownership. Up until the Great Leap Forward, the State actually compensated these private entrepreneurs, but afterward it simply stopped paying them. And although these entrepreneurs had the formal right to demand compensation in the 1960s, undoubtedly few risked doing so for fear of political persecution and imprisonment.

The new state also created urban collectives to control the economic activity of those previously beyond the reach of the Chinese state: artisans, handicraft workers, small-scale retailers. Collectives were also used to induce China's urban women, particularly housewives, to become economically productive. Many health clinics, day-care centers, and small-scale handicraft factories or stores were set up as collectives by neighborhood or district governments offering some form of initial state investment in return for collective contractual obligations to provide services or goods to the local government (Tang & Ma 1985). Although urban collectives were the "children" of the new Socialist state, they were considered the "bastard children" when it came to inclusion within laws and regulations protecting the rights of workers or in terms of access to state capital investments and loans from the nationalized banks. When successful, they were taxed heavily, and when they failed they were largely ignored. The 1960s saw the nationalization of large, successful collectives -- a transformation into full state-owned enterprises -- but most urban collectives simply tried to eke out an existence in the shadow of the plan. It is also important to note that unlike the SOEs the urban collectives were administratively placed outside the sectoral-based planning agency system. Regardless of the type of economic activity, and despite the fact that they were the most pervasive form of property in some sectors -- especially the retail sector -- most collectives were simply lumped together under a "collective economy office" by whichever level of government happened to "own" them: municipal, district, or neighborhood.

The incrementalism of the nationalization program is historically significant because it created a set of laws and regulations by which the new Socialist state shared ownership with China's private entrepreneurs. And although these laws and regulations have never had the de jure power backed up by an independent judiciary, they have existed "on the books" as a set of blueprints, or salient rules, for joint state-private ownership. Reformers in the 1970s and 1980s had only to turn back the pages to find a reform model. And such a model was politically feasible because these sets of laws and regulations also contained legitimate ideological arguments for a "socialist market economy". The legitimacy of these arguments need only have been traced to the authority of statements made in the 1950s by deceased central Party leaders -- Mao Zedong, Liu Shaoqi, Zhou Enlai -- who supported the gradual nationalization of capital. But in case there was any doubt in the minds of reformers in the 1980s as to what was ideologically possible, they could also have turned to similar statements made in the 1950s by China's remaining veteran leaders ruling in the 1980s: Deng Xiaoping, Chen Yun, Bo Yibo, Peng Zhen. These cadres were also "on record" as supporting these semi-private forms of property. The power of history is not such that these statements had the force of law, but they were certainly used to strategic advantage in the 1980s by local reform-minded governments and local entrepreneurs as they sought to protect themselves ideologically while creating privatization experiments (Lewis 1997b).

The persistent variation in the forms of property of China's socialist enterprises has meant that by the 1980s production and distribution networks not only comprised *danwei* owned by all levels of government, but also a patchwork of property forms as well. Again, consider the implications for the oil and gas sector. Oil may be pumped out of the ground by a collective production team under contract to the central-government-run state-owned enterprise that manages or "owns" the oil field, and from there it might be shipped via a provincial-government-run, share-holding pipeline enterprise to a traditional, municipal-government-owned oil depot. It may then be loaded on to trucks and moved under contract by a nearby rural township and village enterprise to a joint-venture refinery set up by central and local government authorities as a cooperative technological venture with a foreign company. The refined petroleum might then be transported via an urban collective transportation team to a district-government-owned stock-cooperative gas station -- itself leasing the station from a municipality-owned enterprise -- or perhaps to an export depot owned by Sinochem, a large Chinese multi-national corporation. As this example illustrates, China's production and distribution networks have become increasingly complex as they integrate the operations of *danwei* owned by various levels of governments and diverse forms of property.

The Challenge to Business and Government
Created by National and International Marketization

The liberalization or marketization of China's economy -- first on a domestic scale and then internationally -- has also had significant impact on these complex networks of production and distribution among *danwei*.

First, the reform period began in the countryside in the early 1970s with the growth of quasi-private township and village enterprises (TVEs) and the de-collectivization of land and commune authority (Naughton 1995; Chai 1997). For a whole host of reasons they were able to compete with and outperform their urban state-owned and collective cousins, such that by the 1990s they were the engines of industrial output and the main exporting property form (Kelliher 1992; Oi 1992; Koo & Yeh 1997; Kwong 1997; Pei 1998). **Table One** and **Table Two** show both the increasing role played by TVEs, collectives and other "non-state" forms of property, and their proliferation as forms.

Table One: Share of Non-State Sector in the Chinese Economy (%)

	1985	1990	1995	1997
Total Employment in Enterprises				
State-Owned Enterprises			35.3	37.6
Urban Collective Enterprises			9.8	9.8
Rural TVE Enterprises			40.3	31.2
Share-Holding Enterprises			0.9	1.5
Foreign-Funded Enterprises			0.7	1.0
Overseas-Chinese Enterprises			0.8	.9
Private and Individual Enterprises			6.4	9.1
Investment:				
State-Owned Enterprises	66.1	65.6	54.4	52.5
Urban Collective and TVE Enterprises	12.9	11.9	16.4	15.4
Joint-Owned Enterprises			0.6	0.5

Share-Holding Enterprises			**4.3**	**5.6**
Foreign-Funded Enterprises			**7.8**	**7.8**
Overseas-Chinese Funded Enterprises			**3.4**	**3.8**
Individual Enterprises	**21.0**	**22.5**	**12.8**	**13.7**
Other Enterprises			**0.3**	**0.7**
Industrial Production (Gross Output Value)				
State-Owned Enterprises	**64.9**	**54.6**	**34.0**	**25.5**
Urban Collective Enterprises	**15.9**	**13.1**	**8.4**	
Township & Village, Joint TVEs	**16.2**	**22.5**	**28.2**	
Share-Holding Enterprises			**3.5**	**4.4**
Foreign-Funded Enterprises			**5.9**	**7.3**
Overseas-Chinese Funded Enterprises			**6.1**	**5.4**
Individual-Owned Enterprises	**1.9**	**5.4**	**12.9**	**17.9**
Other Enterprises	**1.2**	**4.4**	**1.1**	**1.4**

Domestic Trade (Total Sales)				
State-Owned Enterprises			**65.8**	**48.5**
Urban Collective and TVE Enterprises			**26.6**	**21.0**
Joint-Owned Enterprises			**1.5**	**0.8**
Share Holding Enterprises			**4.6**	**5.3**
Foreign-Funded Enterprises			**0.2**	**0.6**
Overseas-Chinese Funded Enterprises			**0.3**	**0.3**
Individual-Owned Enterprises				**20.2**
Others			**0.3**	**0.4**

Source: State Statistical Bureau 1998: pp. 28-29.

Note: May not add up to 100% owing to rounding.

Table Two: Proportion of Loss-Making Chinese Enterprises, 1985-1994 (%)

	1985	**1986**	**1987**	**1988**	**1989**	**1990**	**1991**	**1992**	**1993**	**1994**
All Ent.	10.9	13.2	14.4	11.7	15.9	21.1	18.7	15.9	19.3	20.3
State Ent	9.6	13.1	13.0	10.9	16.0	27.6	25.8	23.4	28.8	n.a.
Collective	11.7	13.2	14.7	11.7	15.7	19.4	16.7	13.7	16.5	n.a.

Source: Lo 1997, page 92.

This created inter-jurisdictional competition between localities in China, and also put pressure on local governments to harden their budgets and cut the losses of state enterprises

(Qian & Weingast 1997b). I argue that it also must have indirectly created -- perhaps for the first time in China's history -- the expectation on the part of urban and rural constituents that both central and local governments were interacting to promote or constrain the formation of national public goods. Although the officially-controlled media has rarely explicitly discussed the politically-sensitive issue of economic competition between the urban and rural populations in China, the Chinese people could easily known this through the changing economic status of their workplace. Employees in TVEs and urban SOEs and collectives need only have compared incomes to have seen the trends toward the decentralization of economic authority. The fact that they knew they were competing against each other -- again, for the first time in China's history -- can only have informed all constituents that they were now part of a truly national economy.

Second, there is a related trend toward the internationalization of the Chinese economy. As **Table Three, Table Four, Table Five** show, foreign investment began in the 1970s as small numbers of high-technology, joint exploration or cooperative production ventures (Sun 1998) and spread by the 1990s to light industry sectors throughout China, and mainly in the coastal areas of South and East China. Initially, all foreign investment had to be approved by the central government, with investment approval authority eventually passing first to the Special Economic Zones (SEZs), and then localities in general (according to restrictions by sector and by amount of invested capital). By the late 1980s the joint equity venture was the predominant property form -- largely as an inroad by foreign entrepreneurs -- with the wholly-owned foreign venture replacing these in the mid-1990s.

Table Three: Realized Foreign investment Joint Ventures in China by Type of Ownership, 1979-1996

Year	Equity J-V	Contract J-V	All-Foreign	Joint-Explore	Total

	No.	%	No.	%	No.	%	No.	%	No.
1979-1981	65	8.8	353	47.8	1	0.1	318	43.1	738
1982	34	7.9	178	41.4	39	9.1	179	41.6	430
1983	74	11.7	227	35.7	43	6.8	292	46	635
1984	255	20.3	465	37	15	1.2	523	41.6	1,258
1985	580	35	585	35.3	13	0.8	481	29	1,659
1986	804	42.9	794	42.3	16	0.9	260	13.9	1,875
1987	1,486	64.2	620	26.8	25	1.1	183	7.9	2,314
1988	1,975	61.8	780	24.4	226	7.1	212	6.6	3,194
1989	2,037	60	752	22.2	371	10.9	232	6.8	3,393
1990	1,886	54.1	674	19.3	683	19.6	244	7	3,487
1991	2,299	52.7	764	17.5	1,135	26	169	3.9	4,366
1992	6,115	55.6	2,123	19.3	2,520	22.9	250	2.3	11,008
1993	15,348	55.8	5,238	19	6,506	23.6	424	1.5	27,515
1994	17,925	53.1	7,120	21.1	8,036	23.8	678	2	33,767
1995	19,078	50.8	7,536	20.1	10,317	27.5	590	1.6	37,521
1996	20,755	49.7	8,109	19.4	12,606	30.2	256	0.6	41,726
1979-1996	90,716	51.9	36,317	20.8	42,552	24.3	5,191	3	174,885

Source: Sun 1998, page 22.

Table Four: Contribution of Foreign-Invested Enterprises to Chinese Total Employment in 1995 by Sector

INDUSTRIES	FIEs	Total	FIE Percentage

Food & Beverage	**654,000**	**7,676,000**	**8.5**
Textile	**938,000**	**10,140,000**	**9.2**
Clothing, Footwear	**1,350,000**	**6,555,000**	**20.6**
Printing, Paper, Toy	**425,000**	**5,277,000**	**8.1**
Chemicals, Rubber	**649,000**	**9,340,000**	**6.9**
Plastic Products	**391,000**	**2,626,000**	**14.9**
Metal Products	**538,000**	**10,164,000**	**5.3**
Machinery	**423,000**	**10,247,000**	**4.1**
Transport Vehicle	**299,000**	**4,793,000**	**6.2**
Electrical Product	**445,000**	**3,944,000**	**11.3**
Electronics	**631,000**	**2,292,000**	**27.5**
Office Machine	**134,000**	**1,123,000**	**11.9**
Mining, Exploring	**31,000**	**12,479,000**	**0.3**
Furniture	**116,000**	**951,000**	**12.2**
Non-Metal Product	**469,000**	**13,848,000**	**3.4**
Other	**1,443,000**	**42,217,000**	**3.4**
All Industries	**8,936,000**	**143,672,000**	**6.2**

Source: Sun 1998, page 77

Table Five: Contribution of Foreign-Invested Enterprises to Chinese Total Industrial Employment by Locality and Region

Area	**FIE Employment**	**Total Employment**	**FIE Percentage**	**Region**
Guangdong Prov.	**2,730,000**	**11,481,000**	**23.8**	**South Coastal**
Fujian Prov.	**809,000**	**4,118,000**	**19.6**	**South Coastal**

Shanghai City	**571,000**	**4,110,000**	**13.9**	**East Coastal**
Tianjin City	**254,000**	**2,365,000**	**10.7**	**North Coastal**
Beijing City	**244,000**	**2,344,000**	**10.4**	**North Interior**
Jiangsu Prov.	**726,000**	**12,022,000**	**6.0**	**East Coastal**
Zhejiang Prov.	**485,000**	**9,288,000**	**5.2**	**East Coastal**
Hainan Prov.	**18,000**	**387,000**	**4.7**	**South Coastal**
Liaoning Prov.	**280,000**	**8,013,000**	**3.5**	**Northeast Interior**
Hebei Prov.	**219,000**	**6,511,000**	**3.4**	**North Coastal**
Guangxi Prov.	**90,000**	**3,087,000**	**2.9**	**South Interior**
Anhui Prov.	**92,000**	**5,985,000**	**1.5**	**East Interior**
Sichuan	**120,000**	**10,239,000**	**1.2**	**West Interior**
Shaanxi	**33,000**	**3,163,000**	**1.1**	**North Interior**
Total	**8,963,000**	**143,672,000**	**6.2**	

Source: derived from Sun 1998, page 77.

Local and provincial governments then began to compete actively for the location of foreign enterprises, using the establishment of local-level economic development zones -- offering temporary tax incentives, advanced infrastructure, more mechanisms of dispute resolution, etc. -- that successfully competed with those authorized by central authority (Lewis 1997a; Sun 1998; Yang 1997). By the mid-1990s counties and districts in the Shanghai area were competing with each other to set up "economic development zones" catering to the needs of special types of investors -- especially Taiwanese and Overseas Chinese entrepreneurs-- to the extent that even the administrative agencies of county governments were re-zoning land that they controlled (de factor privatization) in order to set up competing zones (Lewis

1997a). In addition, Chinese corporations began to establish overseas subsidiaries that could then re-invest in China's localities in order to enjoy these preferential policies (De Trenck, et al, 1998; Lu & Tang 1997).

Again, as with the nationalization of the Chinese economy that begin with competition between city and countryside in the 1970s, the net result of the internationalization of China's economy was the introduction of new property forms as competitors. Employees and managers of Chinese state-owned enterprises need only have observed how their *danwei* and local governments were struggling to attract foreign investors as partners to know that increased jurisdictional competition and hard budget constraints were replacing the hierarchies of the planned economy. And in some places in China, especially South China, with nearly one in four employees working for a foreign-invested enterprise, popular expectations about the role of central and local government must have changed drastically since the 1970s.

Business and Government

Organizational Responses to Marketization

How did China's *danwei* and governments deal with the new pressures of increased competition from national and international marketplaces?

First, we must ask how did the complex production and distribution networks of *danwei*, controlled by multiple layers of government and including diverse forms of internal control over property, deal with the perils of competition? In order to succeed, the managers of all of these enterprises had to be able to work with their network partners to plan out their role in the industrial production throughput. The diversity of ownership forms must have made this extremely difficult. Research suggests that they tried to internalize both the economic and political costs by merging -- by contract if not by actual ownership form -- with each other into "hybrid" property forms (Nee 1992; Su 1992). A full detailing of the particular forms contained in this trend is a project much greater in length and detail than the goals of this paper, but **Table Six** shows the increasing number of traditional property forms and their hybrid combinations that were formally recognized by local and central authorities.

Table Six: Diversity of Property Ownership Forms in China, Urban and Rural, 1949-1999

TYPE OF PROPERTY	1949-1958	1959-1969	1970-1978	1979-1984	1985-1988	1989-1991	1992-1999
URBAN							
Urban SOE	X	X	X	X	X	X	X
Urban Collective	X		X	X	X	X	X
Urban Private:							
Individual	X	X		X	X	X	X
Private	X				X		X
Joint (Employee)	X				X	X	X
Public Stock	X					X	X
(Public Stock						X	X
(Commodity						X	X
(For. Currency						X	X
(State Asset						X	X
(Central				X	X	X	X
(Local Non-Bank					X	X	X
(Local Private	X					X	X

Urban Foreign	**X**			**X**	**X**	**X**	**X**
Joint-Equity	**X**			**X**	**X**	**X**	**X**
Joint-Contract	**X**			**X**	**X**	**X**	**X**
Joint Exploration	**X**			**X**	**X**	**X**	**X**
All Foreign	**X**			**X**	**X**	**X**	**X**
Chinese	**X**				**X**	**X**	**X**
Urban Hybrids:							
SOE/Foreign	**X**			**X**	**X**	**X**	**X**
SOE/Collective				**X**	**X**	**X**	**X**
SOE/Coop. (Stock		**X**			**X**		**X**
Collect./Coop.		**X**			**X**		**X**
Collect./Coop/For.							**X**
Collective/Foreign							**X**
Private/Foreign							**X**
Chinese							**X**
Chinese							**X**
Chinese							**X**
RURAL							
Rural							
Rural SOE	**X**	**X**	**X**	**X**	**X**	**X**	**X**
Commune		**X**	**X**				
Rural	**X**			**X**	**X**	**X**	**X**

TVE (Hybrid)				**X**	**X**	**X**	**X**
Rural							
Joint-Equity				**X**	**X**	**X**	**X**
Joint-Contract				**X**	**X**	**X**	**X**
All Foreign				**X**	**X**	**X**	**X**
Rural TVE/Urban			**X**	**X**	**X**	**X**	**X**
Rural TVE/FI				**X**	**X**	**X**	**X**

Systematically-derived data do not yet exist, but exhaustive case studies show how the "hybridization" of China's *danwei* has only made the complex production and distribution networks even more complex. A case study of a large, 3,000-person factory in Shanghai reveals that managers and workers have created 15 hybrid property forms or "subsidiary enterprises" since the late 1970s: "peeling off" various parts of the original SOE into collective, stock-cooperative, share-holding, joint-venture and leased private enterprises (Lu 1999). The first ones were collectives formed to help employ their share of the millions of urban youth -- often the children of employees -- returned from China's countryside at the end of the 1970s, or to help staff faced with early retirement or impending unemployment. Shanghai's Yanzhong Electric, the first company to sell stocks to employees and outsiders, in 1985, was developed by returned youth, coming home to work in the collectives set up by their mothers. Later ones in the case study drew upon the particular skills -- especially research and design functions, marketing and distribution knowledge -- of groups of small groups of employees. Each was able to draw upon some asset of the "parent" *danwei* -- land-use rights, a distribution or export quota or certificate, machinery, or even intellectual property -- to set up a potentially lucrative enterprise. Some were tightly controlled by the parent SOE managers, others were simply "set free". All kept several types of accounting books created for specific readers: SOE parent managers, local and central government auditors, banks and financial institutions, prospective and current joint-venture partners. One subsidiary kept six types of parallel accounting records. Not surprisingly, few have reported any profits, as there is no incentive to do so (Lu 1999). Moreover, by the late 1990s many of these subsidiaries had set up their own subsidiaries, adding yet another layer of complexity to China's industrial structure.

Central and local authorities have been struggling since the 1970s to re-invent governmental authority in a way to best control and capture rent from the China's hybridizing enterprises (Naughton 1995; Huang 1996; Chai 1997; Ma 1997; Lo 1997; World Bank 1997; Steinfeld 1998; Broadman 1999). **Table Seven** shows some of the range of these institutional changes.

Table Seven: Diversity of Government Enterprise Administration Forms, 1949-1999

	1949-1958	1959-1969	1970-1978	1979-1984	1985-1988	1989-1991	1992-1998	1999
CENTRAL AUTHORITY:								
Finance/Economic Committee	X							
Cultural Revolution Group		X						

State Planning Commission	**X**	**X**		**X**	**X**	**X**	**X**	
State Economic Commission		**X**		**X**	**X**	**X**	**X**	
Min. For. Econ. Relate. Trade	**X**	**X**		**X**	**X**	**X**	**X**	**X**
Ministry Finance		**X**		**X**	**X**	**X**	**X**	**X**
Sectoral Ministries		**X**		**X**	**X**	**X**	**X**	
State Property Commission					**X**	**X**	**X**	
State Econ. System Reform Comm.					**X**	**X**	**X**	
State Sectoral Property Admin.					**X**	**X**	**X**	
State Sectoral Holding					**X**	**X**	**X**	**X**
State Develop Planning Comm.								**X**
State Develop Planning Comm.								**X**
State Economic/Trade								**X**
Min. For. Econ. Relations								**X**

Chinese Multi-National							**X**	**X**
LOCAL AUTHORITY:								
Economic/Military Region	**X**							
Communes		**X**	**X**					
Local Cultural Revolution Group			**X**					
Local Sectoral Ministries/Planning		**X**	**X**	**X**	**X**	**X**	**X**	
Local Econ. System Reform Comm.					**X**	**X**	**X**	
Local State Asset Property Admin.						**X**	**X**	
Local Dev. Plan/Econ-Trade								**X**
Local Sectoral Property Admin.						**X**	**X**	
Local Sectoral Holding							**X**	**X**
Urban Collective Enterprise Admin.			**X**	**X**	**X**	**X**		

Urban Collective Property Admin.							**X**	**X**
NEW JURISDICTIONS:								
Central Special Economic Zones				**X**	**X**	**X**	**X**	**X**
Central Econ/Tech Dev. Zones					**X**	**X**	**X**	**X**
Central Open Cities						**X**	**X**	**X**
Central Foreign Trade Zones						**X**	**X**	**X**
Local Economic Dev. Zones							**X**	**X**
Hong Kong Spec. Econ. Region							**X**	**X**

In China's countryside hybridization has meant the formation of corporatist-style informal arrangements between government, management and labor (Oi 1992), and even the odd village charter or compact (Anagnost 1992). For enterprises owned by the central and local authorities it has meant the shift from planned economy grandparents -- planning and economic commissions, along the lines of Gozplan and Gozarbitrazh in the Soviet Union -- to ad hoc commissions and agencies set up to deal with the changing structures of constituent corporations: "economic system reform commissions, " "state property administration agencies," and finally, "state property management and investment corporations" (Lewis 1997b). Meanwhile, planned economy "parents," the sectoral ministries and agencies, have been replaced by sectoral property administrations and, finally, horizontal industry holding companies and enterprise groups (along the lines of the Korean chaebol). The same has been true at the local level for the collective and cooperative enterprises (Lewis 1997b), and also for foreign-invested enterprises (Sun 1998). Although the efficacy of these new organizations of central and local ownership control is an issue much in debate, the important point is that the Chinese people need only look to the institutional ties to the "administrative parent" of their *danwei* to see that government authority is changing to become more responsive to the environment of a market economy: as the Chinese *danwei* has restructured to face competition, so have the government agencies that "own" them.

Planning authorities and sectoral ministries and agencies in the 1970s only had to contend with the accounting standards, asset valuation techniques and operating measures of state-owned enterprises, village and township enterprises, and collective enterprises. By the early 1980s, however, joint-ventures between SOES and TVEs, urban and rural collectives, SOEs and collectives, and so on, proliferated. And by the 1990s the introduction of foreign investors, domestic and international public corporations and multi-national corporations as possible joint-venture partners for all of the above property forms must have increased the complexity of monitoring exponentially. As also seen in **Table Seven**, government agencies responded by creating particularistic or idiosyncratic agencies designed to deal with the changing forms of state property.

Bucking the general trend toward the decentralization of the nomenklatura and the government cadre system (Manion 1985; Burns 1987; Manion 1993; Burns 1994), and thereby the authority to appoint management over state enterprises, central authorities have been successful in centralizing control over some large state-owned enterprises. These have mainly been the large SOEs that have been the product of the socialist period: oil and gas extraction and processing, steel manufacturing, aviation, electronics, automobiles, investment and credit corporations (Nolan 1998; Hannan 1998; Ji 1998). Through a combination of favorable price subsidies and tax policies, and even at the cost of obstructing the liberalization of China's trade regime, the central government has come to nurture these "cash cow" SOEs since the 1970s (Naughton 1995). The real influence of these enterprises can be seen in their ranking in China's nomenklatura system: most are on an administrative level equal to those of State Council ministries. This often effectively places them in a position equal to or above their nominal oversight authority. Or in other words, the leadership of the large SOEs directly under the State Council must be approved by the Politburo and Central Committee in the same way as the leadership of the commissions, ministries and agencies under the State Council (Burns 1987; Burns 1994). As will be discussed later, this is especially true for China's oil and gas companies. The heads of the two large oil and gas companies, CNPC and Sinopec, have nearly the same nomenklatura ranking as the heads of the oversight agencies -- the State Development Planning Commission and the State Economic and Trade Commission -- that formally oversee these corporations.

The hybridization of enterprises as a strategy for China's work units and corporations can only have shaped popular expectations about the weakness of government monitoring capabilities. Although the extent of this weakness is likely not popularly known, the monitoring abilities of central and local planning authorities have always been much weaker in China than in other central planned economies. As recent research has shown, whereas Gozplan in the USSR comprised a vast bureaucracy of thousands of planners and statisticians, in China the central state planning and economic commission cadres have only numbered in the hundreds (Huang 1994; Wang & Fewsmith 1995). In 1987, there were 41,000 employees in the Soviet Union's Statistical Administration (about 40% of total central government employees). In China in 1988 there were only 580. By way of contrast, the U.S. federal government employed about 13,000 statisticians in the early 1990s (Huang 1994: 125). Due to the purges of the Cultural Revolution, the State Planning Commission was reduced to fewer than 50 employees in the early 1970s. And with recent restructuring efforts under Premier Zhu Rongji in 1998, the new State Development Planning Commission has less than 500 full-time staff members. Even China's new MITI-like "super-ministry," the State Economic and Trade Commission is not much larger in personnel (Personal Interviews, December 1998). The diminished role of information-gathering in China's CPE institutions is also reflected in the nomenklatura status of the State Statistical Bureau, an agency that ranks below all other commissions and ministries. In the former Soviet Union, however, the Statistical Administration ranked as an equal to Gozplan and Gozarbitrazh (Huang 1994).

The situation is much the same in China's localities. In order to understand the depth and pervasiveness of organizational restructuring the Shanghai Statistical Bureau has on several occasions deployed its several hundred staff members with the goal of surveying several hundred *danwei* (of more than 13,000 industrial enterprises in the city). The complexity of unraveling these dense networks of multiple levels of government ownership and diverse forms of property is reflected in the fact that one such survey in the mid-1980s took more than two years to complete. According to the official gazette of the State Statistical Bureau, there have been few surveys in the 1990s, leaving municipal authorities to rely on the enterprises themselves for information (Shanghai Statistical Bureau 1997). State Statistical Bureau officials have recently acknowledged these problems and are currently proposing both a modernization of equipment and the establishment of a new national enterprise survey system (Xu 1999). The creation of a new national network of economic information gathering on which accurate planning and investment policies may be based will not happen overnight, however, as the start-up costs are very high (Huang 1994). And until such a system is in place, however, the compilation of national-level statistical data will be more of a collective-action problem than a statistical, technical exercise. Consider the fact that the State Statistical Bureau has reported an average growth rate of 7.8 percent for 1998, but only one of China's regions has reported growth below that figure (See **Table Eight**).

Table Eight: Reported 1998 GDP Growth for China by Region (%)

Region	Growth (%)
Beijing	9.7
Tianjin	9.3
Hebei	10.7
Shanxi	9.1
Inner Mongolia	9.6
Liaoning	8.3
Jilin	9.0
Heilongjiang	8.5
Shanghai	10.1
Jiangsu	11.0
Zhejiang	10.1
Anhui	9.0
Fujian	11.4
Jiangxi	8.2

Shandong	**10.8**
Henan	**8.7**
Hubei	**10.3**
Hunan	**9.1**
Guangdong	**10.1**
Guangxi	**10.1**
Hainan	**8.3**
Chongqing	**8.5**
Sichuan	**9.1**
Guizhou	**8.6**
Yunnan	**8.0**
Tibet	**10.0**
Shaanxi	**9.3**
Gansu	**9.2**
Qinghai	**9.0**
Ningxia	**8.5**
Xinjiang	**7.3**

Source: China Economic Times, reported in Xu 1999

Clearly the Chinese government is much more dependent on the information supplied by local authorities and constituent enterprises than other marketizing central planned economies. This dependency must be an important feature of the credibility of central and local government authority. In continuing to rely on an antiquated and inadequate monitoring system, and in developing new organizational forms of oversight authority that only deal with problems in the reform process in an ad hoc and idiosyncratic fashion, the

Chinese state is signaling that it is either unwilling or incapable of re-centralizing authority over local governments and subordinate enterprises.

Again, in conclusion, it is important to note that all of these problems and relationships have remained largely out of the public media and public discourse. In looking at the organizational structure of Chinese society, however, and seeing the role that the firm plays in shaping expectations about the future actions of government authority we can understand why privatization has become credible.

In order to predict the actions of central and local authorities, the average Chinese person need look no further than government responses to the strategic behavior of his or her work unit in the context of the marketization and privatization of the economy. The growing nationalization and internationalization of the economy, as felt by the average Chinese through interaction with TVEs and foreign-invested enterprises in the work place, has shaped expectations about the hardness of budget constraints imposed by central and local authorities. The ad hoc organizational changes to China's central and local government oversight authority, in conjunction with the growing complexity of inter-corporation ties and the failure of these governments to increase the monitoring sophistication and capabilities of their authority as a response, must also have very effectively and directly communicated the increasingly decentralized nature of China's new economic regime. Through strategic interaction with government authorities, the corporations or work units of China provide the necessary information about the actions of government authorities that are lacking in the popular media or available through competing political organizations. I argue that this information is very likely the source of popular expectations about the continued credibility of privatization in China.

Enterprise Hybridization, Government Restructuring and a New Credibility for Privatization and Reforms

China's government has effectively tied its hands: the cost of reversing the privatization through hybridization and the growth of informal networks of property forms is very high. And although China is still controlled by a Socialist, one-party state, the course of reforms has credibility among the stakeholders in the privatization process, including foreign investors. Unlike the CPEs of Eastern Europe, however, this credibility comes not from the creation of democratic political institutions or the establishment of the rule of law, but from the simultaneous emergence of three trends: (1) the construction of dense networks of ties between Chinese enterprises internalize both market costs and political risk; (2) the withering away of the central government's capacity to monitor the gradual privatization of Chinese companies by their employees, (3) the growing economic authority of fiscally autonomous local governments that compete with each other to provide market environments suitable for investment.

The role of networks and the diminished monitoring capacity of government authority has been demonstrated in the previous sections, so it is necessary here to explain the importance of inter-jurisdictional competition among fiscally autonomous local governments. As a growing political-economy literature and research enterprise has argued, China's business and government relations are very much like those in a federalist system. Lacking the political institutions of federalism, however, this system can be accurately described as a market-preserving federalist (MPF) system.

As noted elsewhere, market-preserving federalism explanations for the emergence of political systems that provide the public goods and market incentives that are beneficial for economic growth are different from other economic theories (Hayek 1945; Tiebout 1956) in that they try to explain why state actors have an incentive to support public goods and market incentives (Qian and Weingast 1997a). The defining characteristic of MPF systems is the decentralized allocation of authorities and responsibilities across different levels of government (North & Weingast 1989; Weingast 1995; Montinola, Qian and Weingast 1997a). These systems require a set of five conditions:

> 1. A *hierarchy* of governments with a *delineated scope of authority* (for example, between the national and subnational governments) exists so that each government is autonomous within its own sphere of authority.
>
> 2. The subnational governments have primary *authority over the economies* within their jurisdictions.
>
> 3. The national government has the authority to police the *common market* and to ensure the mobility of goods and factors across subgovernmental jurisdictions.
>
> 4. Revenue sharing among governments is limited and borrowing by governments is constrained so that all governments face *hard budget constraints.*
>
> 5. The allocation of authority and responsibility has an *institutionalized degree of durability* such that it cannot be altered by the national government either unilaterally or under the pressures from subnational governments. (Montinola, Qian & Weingast 1995: 55)

Conditions 1, 2, and 3 maintain "positive market incentives" by providing valuable public goods. First, the central government has an incentive to provide national public goods that should not be handled by local governments, such as monetary policy and the policing of a common market. Without these local governments would merely become miniature versions of central governments, and the central state would have no role. Second, the local governments have an incentive to provide local public goods: infrastructure development, secure property rights for constituents, etc. Local governments in an MPF system know that constituents will try to move economic activity to localities where such public goods obtain. Overall, with this inter-jurisdictional competition there are strong incentives for central and local governments to provide the public goods they alone can best provide. These conditions also require them to be less "predatory" in terms of revenue extraction. Constituents in an MPF system have the potential to shop around among jurisdictions and thereby punish the more "predatory" governments.

Condition 4 in particular maintains "negative market incentives" by punishing local governments that waste scarce fiscal resources on loss-making investments. Consider the constraints on state and local governments in the United States (Qian & Weingast 1997a). The federal government has exclusive authority to use the money-issuing authority of the central bank to issue bonds at preferential rates, but state and local governments have no way to access this authority. They can issue bonds, but these can mainly only be used for infrastructure development projects. The result is that state and local governments face hard budget constraints that punish them for wasting scarce fiscal resources.

Research into the fiscal and investment relations between levels of government in China does indeed demonstrate that local governments face hard budget constraints. They are on their own and must seek out new forms of economic activity in order to increase their revenues and meet their social obligations (esp. education, sanitation, basic infrastructure development) (Naughton 1995; Wong, Heady & Woo 1996; Huang 1996; Qian & Weingast 1997a; Lardy 1998). Moreover, local governments have the incentive to fashion new, experimental property forms -- such as "stock cooperatives" (Lewis 1997b) -- and to establish local development zones attractive to domestic and foreign investors alike (Lewis

1997a). Interviews with municipal officials from Shanghai suggest that they are offering more favorable rules of incorporation for China's large, publicly-traded enterprises in exchange for legal incorporation within the municipality (Personal Interviews 1999). Although largely intended to increase revenues -- perhaps only from incorporation fees, as with Delaware (Romano 1985) -- it has the effect of adding more competition between localities in China, as it has in the United States.

But note that the fiscal autonomy of local governments, resulting in hard budget constraints, and the creation of favorable investment environments is not enough for sustainable development in an MPF system. Condition 5 is the most problematic condition here. How do these relations between central governments, local governments and constituents become stable and credible over time such that governments maintain these public goods and constituents freely invest in economic activity?

This is where the role of enterprise networks and hybridization comes into play. Reforms are credible because the average Chinese person need look no further than government responses to the strategic behavior of his or her work unit in the context of the marketization and privatization of the economy. The growing nationalization and internationalization of the economy has shaped expectations about the hardness of budget constraints imposed by central and local authorities. Furthermore, the ad hoc organizational changes to China's central and local government oversight authority, in conjunction with the growing complexity of inter-corporation ties and the failure of these governments to increase the monitoring sophistication and capabilities of their authority as a response, must also have very effectively and directly communicated the increasingly decentralized nature of China's new economic regime. Through strategic interaction with government authorities, the corporations or work units of China provide the necessary information about the actions of government authorities that are lacking in the popular media or available through competing political organizations. Or in other words, the hands of the Chinese government appear to be tied. And the Chinese people know that by seeing what they, their *danwei*, and their *danwei* network partners have effectively privatized.

Recreating Central Authority for the Oil Giants: Credibility and Privatization for Large SOEs

China's state-owned oil and gas companies want to have their cake and eat it too. They want to enjoy the benefits of this informal process of privatization, particularly when it provides a means to shed the surplus labor and the less-economically productive aspects -- social welfare functions, including education, medicine, service industry enterprises -- of their own traditional *danwei*. And at the same time they want to fight the trend by working with central government authorities to re-centralize authority over the oil and gas industry sector's fields and refineries. They hope to create modern multi-national corporations capable of competing with the largest, integrated oil and gas companies in the world. They also hope to decrease China's vulnerability as a net oil importer through direct competition for diversified sources of crude: across Northeast Asia, the Caspian area, the Middle East, Southeast Asia and Latin America. As such, this strategy is rational in the sense that it has potentially very positive implications for the sustained development of China's economy. **Table Nine** shows the formal size of the two large oil giants, CNPC and Sinopec, and their two more specialized cousins, CNOOC and China Star.

Table Nine: Comparison of China's Four State Oil and Gas Production Companies

	CNPC	**Sinopec**	**CNOOC**	**China Star**
Total Staff	**1.6 million**	**650,000**	**30,000**	**31,000**

Staff in "Diversified Operations" 1996	**430,000**	**160,000 (est.)**	**N.A.**	**N.A.**
Total Subsidiaries	**14 fields** **15 refineries** **20 sales co.**	**8 fields** **31 refineries** **23 sales co.**	**4 co.**	**8**
Total Assets 1998	**US $57.8 bln.**	**US $46 bln.**	**US $3.8 bln. (1997)**	**.373 bln (1997)**
Total Sales 1998	**US $24.2 bln.**	**US $39 bln.**	**US $1.8 bln. (1997)**	**N.A.**
Tax Contributions 1998	**US $3.1 bln.**	**N.A.**	**US $1.2 bln. (1997)**	**N.A.**
After Tax Profit 1998	**US $.48 bln.**	**>US $ .530 bln.**	**US $.38 bln. (1997)**	**N.A.**

Sources: CNPC 1998b; Sinopec 1998a; FBIS, China Daily.

This dual-track strategy, however, also sets the large oil SOEs on a collision course with the most powerful stakeholders in China's informal privatization program, the local governments, and the most powerful stakeholders in the industrial privatization programs of many countries, the enterprise employees. To understand the hurdles that CNPC and Sinopec face in this restructuring, consider that they will be trying to do what the central government has been trying to do to them over the last several decades: control local governments and the employees of local subsidiary fields and refineries. And although these giant holding companies certainly have better information about the local subsidiaries than the central government agencies have had, in doing so they are creating their own, unique credibility problem.

In order to succeed they must "untie the hands" currently binding central authority. How can they demonstrate to local governments and employees -- and their foreign contractual and joint-venture partners -- that their restructuring will be successful in the long-term and will stop at the boundaries of the stated goals? If they do so they will succeed in creating large multi-national, integrated oil sector companies. Counter-intuitively, untying the hands of central authority in order to restructure the oil and gas sector may hurt the credibility of China's economic reforms in general. History matters. The credibility achieved over several decades of privatization in China has come from the decentralization of fiscal and ownership authority, the coterminous development of dense, complex networks of production and distribution across property forms, and a resulting diminished monitoring capacity of the central state. CNPC and Sinopec are trying to change all of that, and the institutional weight of history is against them.

In this section I first demonstrate that CNPC and Sinopec have themselves used restructuring to benefit from the informal privatization process described in the previous section. I then show that central administrative authorities have continuously restructured as well in order retain ownership and regulatory authority over these large oil and gas SOEs, but have achieved little success. The result is a privatization program on two tracks: informal privatization via property form hybridization to get rid of surplus labor, and formal privatization to re-centralize central holding company authority over local subsidiaries. I argue that these two strategies work against each other and the general trend of privatization outlined in the previous sections of this paper. To effectively complete the informal privatization process they need the collaboration and cooperation of local governments and employees, but to successfully transform themselves into something like centrally-owned multi-national corporations (as with Korea's chaebol) they will have to deprive these important actors of their rights as stakeholders. If they succeed in the latter task they may re-centralize authority in such a way that the entire privatization program will have lost its local sources of credibility.

Informal Privatization in China's Oil Fields and Refineries since the 1970s

Although surveys of SOE restructuring in China are few and far between -- see World Bank 1997 for an important exception -- case studies and data supplied by CNPC and Sinopec reveal that these large SOES are indeed beneficiaries of the informal privatization process described above. First, consider the growing pervasiveness of multiple property forms in subsidiary enterprises, usually referred to as "diversified operations" or "peeled off" *danwei* (Gong & Jiao 1996; Li 1996; CNPC 1998a; Wang, et al, 1998). **Table Ten** shows the growing number of "diversified operations" enterprises at one of China's largest oil fields, Dagang, throughout the 1980s and early 1990s. The euphemistic title of "all-people enterprise" (quanmin qiye) and "household enterprise" (jiaceng qiye) suggests that the employees and managers of Dagang have been struggling to find ways to employ surplus parts of the workforce. Faced with formal obstacles to "privatization" of state assets and yet the desire to "peel off" unproductive parts of the workforce, the books record the growth of new forms of property with titles suggesting continuing public ownership. The growth of collective enterprises after 1989 is important here, because the presence of these more formally "private" forms of property suggests that privatization has become the norm at Dagang.

Table Ten: Dagang Oil Field Privatization and Restructuring, 1981 to 1993

	Number of Factories in "Diversified Operations"	Total Workers in "Diversified Operations"	"All-People" Enterprise Workers	Collective Enterprise Workers	Household Enterprise Workers
1981	53	6512	741		5771
1982	93	6755	931		5824
1983	67	5808	768		5040
1984	81	8052	535		7517
1985	86	9602	534		9068
1986	68	10472	482		10233
1987	265	14362	1443		12919
1988	544	17108	2642		14466
1989	469	19829	2959	1507	15363
1990	542	23161	2837	1738	18586

1991	**397**	**23029**	**3343**	**1344**	**18342**
1992	**554**	**23695**	**4373**	**1310**	**18012**
1993	**847**	**27496**	**7740**	**1711**	**18045**

Source: Dagang Oil Field Administration 1997: pg. 183

We must wonder if these forms are pervasive across the oil and gas sector SOEs. The total number of employees working for the Dagang Oilfield Administration during this period is not clear, but if it as large as other fields that are comparable in terms of production, then the nearly 28,000 employees working in "diversified operations" in 1993 represent at least 25 percent of the total workforce (Dagang Oilfield Administration 1997). Statistics from the Zhongyuan Oilfield show that leaders there formed all of the "diversified operations" companies into the "Daming Enterprise Group," itself comprising 56 subordinate "all-people," collective, joint SOE-collective, "youth contract" and "household" enterprises in 1995. Nearly half of the total Zhongyuan workforce has been employed in this fashion, with most of them in collectives, and most of them being women (75% of total workers in "diversified operations"). The fact that women are over-represented in the "diversified operations" enterprises suggests that privatization is much like that in China's urban SOEs, in which collectives were first formed by women (Tang & Ma 1985; Lu 1999). Nearly a third are industrial enterprises, with the rest scattered across construction, transportation, commercial and catering sectors (Zhongyuan Oilfield Administration 1998)

Now consider their pervasiveness in CNPC and Sinopec as a whole. **Table Eleven** shows that these privatized or "diversified operations" enterprises were very common throughout the CNPC oilfields at the end of 1996, on the eve of restructuring plan formulation in 1997.

They not only represent large amounts of the workforce, they also represent significant amounts of asset stripping. The workers in the original SOE -- here those engaged in crude oil extraction -- utilize much more of the fixed assets than their "diversified operations" brethren, although the asset valuation of these spin off enterprises is much lower than the SOE overall. Comparable figures are not completely available for Sinopec, but **Table Twelve** shows "diversified operation" enterprises are common in China's refineries and chemical factories. It also shows that, as with the CNPC oil fields, the amount of assets claimed to be tied up in the SOE parent enterprises is quite substantial: representing, on average, an amount equal to about 30 years worth of wages to the average worker. This is particularly true for the newer refineries (Ningxia), and also for those set up as stock-holding enterprises: Shanghai Petrochemical, Zhenhai Petrochemical and the Fujian Refinery.

Table Eleven: Privatization via "Diversified Operations" in CNPC Oil Fields, 1996

CNPC Field Administration or Company (1996)	Total Workers	Total "Diversified Operations" Workers	Percent of Total Workers in "Diversified Operations"	Fixed Asset per Total Worker (RMB)	Fixed Asset per "Diversified Operations" Worker (RMB)	Number of "Diversified Operations" Enterprises
Daqing	**276,995**	**76,075**	**27.4**	**197,187**	**43,035**	**1,210**
Jilin	**67,000**	**14,238**	**21.2**		**11,563**	**291**
Liaohe	**129,399**	**42,501**	**32.8**	**207,497**	**26,064**	**723**
Dagang		**22,766**	**n.a.**		**18,177**	**532**
Huabei	**111,155**	**31,538**	**28.3**		**16,740**	**467**
Shengli	**192,442**	**75,419**	**39.1**	**253,011**	**50,852**	**615**

Jiangsu	**20,930**	**6,222**	**29.7**		**44,707**	**94**
Zhongyuan	**19,973**	**9,166**	**45.8**		**33,183**	**53**
Henan	**40,227**	**19,752**	**49.1**		**23,283**	**291**
Jianghan	**115,000**	**21,106**	**18.3**		**15,921**	**484**
Sichuan	**107,379**	**18,038**	**16.7**	**125,164**	**28,872**	**402**
Dianqiangui	**13,188**	**1,714**	**12.9**		**28,693**	**65**
Chongqing	**57,678**	**15,310**	**26.5**		**21,220**	**492**
Yumen	**19,033**	**5,020**	**26.3**		**38,641**	**119**
Qinghai	**60,000**	**5,086**	**8.4**		**16,004**	**96**
Xinjiang	**119,488**	**29,961**	**25.0**	**271,491**	**29,639**	**399**
Tuha	**18,659**	**2,896**	**15.5**		**63,877**	**62**
Jidong	**4,802**	**2,153**	**44.8**		**19,953**	**67**
Anhui	**2,800**	**132**	**4.7**		**2,121**	**5**
Zhejiang	**929**	**366**	**39.3**		**3,989**	**9**
Oil World Explore	**26,400**	**2,936**	**11.1**		**40,871**	**101**
Oil Pipeline	**49,581**	**15,586**	**31.4**		**44,912**	**163**

Total or Average	**1,452,129**	**430,289**	**29.6**	**211,696**	**32,745**	**6,908**

Source: CNPC 1998b

Table Twelve: Privatization via "Diversified Operations" at Sinopec Major Facilities, 1996

Sinopec Refinery, Chemical Facility (1996)	Location	Total Workers	"Diversified Operations, Peeled Off" Workers	Percent of Total Workers "Diversified"	Per Worker Sales (RMB)	Per Worker Fixed Asset (RMB)	Per Worker Salary (RMB)	Number of Spun Off Subsidiaries
Yanshan Petrochem	**Beijing**	**47,930**			**338,827**	**282,912**	**11,099**	
Tianjin Petrochem	**Tianjin**	**24,001**			**300,404**	**316,236**	**10,616**	
Fushun Petrochem	**Liaoning**	**30,781**			**460,348**	**563,334**	**11,412**	
Jinzhou Petrochem	**Liaoning**	**10,723**	**4,527**	**42.2**	**392,614**	**318,940**	**10,407**	**39**
Dalian Petrochem	**Liaoning**	**15,624**			**429,467**	**282,258**		
Liaoyang Petrochem	**Liaoning**	**33,037**			**149,832**	**210,370**	**9,828**	
Gaoqiao Perochem	**Shanghai**	**16,373**	**350**	**2.0**	**568,008**	**364,624**	**10,529**	
Jinling Petrochem	**Jiangsu**	**21,048**			**563,949**	**298,365**	**14,500**	
Yangzi Petrochem	**Jiangsu**	**17,464**	**7,000**	**40.0**	**469,537**	**758,131**	**14,601**	

Qilu Petrochem	**Shandong**	**50,550**			**290,603**	**333,728**	**9,950**	
Baling Petrochem	**Henan**	**39,200**	**4,000**	**10.2**	**210,969**	**194,387**	**9,571**	**20**
Maoming Petrochem	**Guangdong**	**27,644**	**7,628**	**27.5**	**338,590**	**192,857**	**12,563**	**10**
Lanzhou Chemical	**Gansu**	**32,670**	**1,658**	**5.0**	**92,745**	**104,683**	**10,817**	**39**
Daqing Gen. Petrochem	**Heilongjiang**	**39,452**			**285,663**	**338,385**	**10,645**	
Shanghai Jinshan	**Shanghai**	**17,221**				**69,682**		
Lanzhou Refinery	**Gansu**	**17,683**	**3,700**	**20.9**	**362,495**	**275,405**	**9,630**	**12**
Jinxi Refinery	**Liaoning**	**10,041**	**5,280**	**52.5**	**502,937**	**367,509**	**8,983**	**17**
Anqing Petrochemical	**Anhui**	**13,389**			**377,175**	**320,412**	**9,672**	
Guangzhou Petrochem	**Guangdong**	**10,725**			**575,291**	**332,867**	**16,242**	
Urumqi Gen. Petrochem	**Xinjiang**	**14,104**			**299,914**	**440,300**	**11,911**	
Jingmen Refinery	**Hebei**	**13,492**	**4,200**	**31.1**	**289,060**	**181,589**	**9,138**	**18**
Sichuan Vinylon Plant	**Sichuan**	**11,549**	**2,600**	**22.5**	**90,051**	**170,577**	**10,936**	**31**
Luoyang Refinery	**Henan**	**8,387**			**504,351**	**346,965**	**9,824**	
Jiujiang Refinery	**Jiangxi**	**6,592**	**1,800**	**27.3**	**514,259**	**203,276**	**10,452**	**18**
Shijiazhuang Refinery	**Hebei**	**5,354**			**545,386**	**399,701**	**10,048**	
Linyuan Refinery	**Heilongjiang**	**6,456**	**2,602**	**40.3**	**333,023**	**182,775**	**7,109**	
Ji'nan Refinery	**Shandong**	**4,001**			**834,791**	**522,369**	**9,947**	
Wuhan Petrochemical	**Hubei**	**4,375**			**921,142**	**246,857**	**15,040**	

Hubei Fertilizer	**Hubei**	**3,335**	**665**	**19.9**	**188,905**	**200,899**	**8,545**	**10**
Ningxia Petrochemical	**Ningxia**	**2,183**			**297,755**	**632,157**	**12,597**	
Harbin Refinery	**Heilongjiang**	**2,548**			**765,306**	**404,238**	**12,009**	
Cangzhou Refinery	**Hebei**	**3,855**			**409,857**	**194,552**	**8,741**	
Qianguo Refinery	**Jilin**	**2,951**			**511,690**	**318,536**	**11,995**	
Chongqing Oil Works	**Sichuan**	**1,368**			**87,719**	**73,099**	**10,599**	
Changcheng Oil Works	**Beijing**	**1,267**			**449,881**	**189,423**	**10,655**	
Shanghai Petrochem	**Shanghai**	**38,314**			**302,500**	**383,671**	**17,492**	
Zhenhai Petrochem	**Zhejiang**	**10,344**	**4,200**	**40.6**	**892,304**	**335,460**	**23,414**	**10**
Fujian Refinery	**Fujian**	**2,802**			**1,213,418**	**992,148**	**15,560**	
Total or Average		**618,833**			**343,582**	**311,214**	**10,962**	

Source: Sinopec 1998a.

CNPC has a plan to separate all "diversified businesses," special technology services, and social services from oil production sectors. In total, CNPC plans to "lay off" 250,000 workers -- from its more than 1.5 million workforce -- over the next three years by transferring them to the construction, agriculture and service sectors (FBIS 1998a). Sinopec undoubtedly has similar plans, but being much smaller in size, CNOOC and China Star are not faced with these difficulties. The history of informal privatization in China, and the comparative study of privatization programs in Eastern Europe and the former Soviet Union suggest that CNPC and Sinopec will only succeed in these efforts if they can work with employees and local governments.

The employees -- even those officially "laid off" -- have direct and indirect means of obtaining compensation from any future privatization program. First, because Party and state policies still forbid full-scale lay-offs and bankruptcy -- these may result in large demonstrations against government authority -- officially-employed workers have a direct say in ongoing restructuring efforts, even those "peeled off" into subordinate enterprises of all property forms. CNPC has stated it plans to "lay off" some 250,000 workers, but it has already "peeled off" over 400,000 into new property forms and subsidiaries. The discrepancies are important because they suggest that many of those already spun off into these new enterprises actually retain the rights of employees.

Second, they have a more indirect stake in that many workers share common property rights with either the corporations themselves or other workers. Even those who might be laid-off should be able to retain their housing, and perhaps even land-use rights (for those in agricultural subsidiaries). Because the oil and gas sector *danwei* truly were "small kingdoms," or "corporate towns," they built the housing for their employees and contracted out the land to be used by peasants. This created large areas of common property, in which current employees, past employees and the corporations themselves are stakeholders. The fact that these "small kingdoms" guaranteed employment for all members of a family -- especially those in remote rural areas -- also creates strong indirect ties between laid-off workers and the corporations. One member of a family might be "peeled off," but the others may still retain their jobs in the corporation. Inheritance rights, housing regulations and other more indirect means thus tie even the unemployed to future privatization programs. In fact, the high proportion of women in the "diversified operations" collectives suggests that CNPC and Sinopec may be trying to spread the risk of unemployment across families by "peeling off" women employees first.

Finally, the most indirect means of retaining a stake in the assets of large SOEs undergoing privatization is a common one in the former CPEs: strikes and threats of collective action to ensure inclusion within any formal privatization program. Little systematic work on strikes is possible in China, but it must be noted that industries with corporate towns are particularly susceptible to these more indirect means of asserting property rights.

Local governments are also important stakeholders here. First, many have joint-ownership over fields and refineries that they constructed or developed, even though they were later "merged" into the new CNPC and Sinopec systems. Interviews with Chinese oil and gas sector experts, scholars and officials in December 1998 reveals that some of the more successful local enterprises were able to remain autonomous and avoid the forced merger with the new corporations. Shanghai Petrochemical has been able to stay independent of Sinopec, in part because it is a publicly-listed, multi-national corporation (listed on the New York Stock Exchange with a few other Chinese refineries).

Second, because China's emerging health, pension and unemployment compensation systems are the responsibility of local governments alone, municipalities and urban governments are very powerful actors in the privatization/restructuring process. Faced with hard budget constraints and what are surely going to be rising costs for these services, local governments have a strong incentive to take their share of the privatization pie, now or later. Finally, because a modern oil and gas extraction and distribution sector requires the collaboration of all jurisdictions on which it is located -- especially pipelines -- local governments have another strong stake in the restructuring process. The history of extraction, pipeline and transportation regulation in the United States is illustrative here, because federal authority only emerged after states had already created such inter-local agencies as the Interstate Oil Compact Commission. These types of local organizations have not emerged in China. But the breaking up of ownership rights over the component parts of these pipelines and fields -- as with the CNPC and Sinopec restructuring -- creates a strong incentive for local governments to form such organizations in order to oversee this process, if only for safety and environmental reasons alone.

Local governments and employees are important stakeholders, although not necessarily intractable opponents of restructuring and privatization. An important factor in determining the strength of opposition is the ability of CNPC and Sinopec leaders to understand the interests of these actors and to incorporate them into their strategic plans. Interviews with scholars and officials from these corporations in December 1998, however, suggest that they have no such strategy for working with these powerful stakeholders. Official documents and plans for the restructuring make little mention of them either (Wang, et al, 1998; Liu, et al, 1998). Plans and strategies aside, CNPC and Sinopec may find it very difficult to implement the more politically painful aspects of restructuring: shut downs and lay offs. Some of China's oil fields are quite old and require expensive technological investments in order to maintain their output. It may be more economical for CNPC and Sinopec to shut down certain fields and import more oil, with a resulting devastating impact on the economies of some of the more remote and impoverished rural areas in China (Fesharaki & Wu 1998; Wood Mackenzi 1999). In such cases, the two corporations are likely to face a united front of opposition from both employees and local governments. Politically, such shut downs are no less sensitive than military base closings in the United States.

Related to local governments and employees are the subsidiary fields and refineries of Sinopec and CNPC. These subordinates have proven themselves successful in strategically manipulating the privatization process. According to interviews with industry scholars, experts and officials, some fields and refineries actively lobbied central government officials to be included within one group or another. Shengli, the second largest field, was thus able to guarantee a switch to Sinopec ownership, and new prominence within a holding company: it no longer had to be "lao er" ("number two"). Indeed, research on the fields and refineries shows that they actively competed with each other for joint-venture contracts, sometimes even going against the orders of the corporate parents (Christoffersen 1998). Other fields, newly-discovered, sought to attach themselves to local authorities and evade forced merger within the new corporations (Personal Interviews, December 1998), creating an enforcement problem for CNPC and Sinopec that has yet to be resolved.

In order to enjoy successfully the benefits of informal privatization, CNPC and Sinopec will have to adopt strategies that induce cooperation by local governments, employees and the subsidiary fields and refineries. Their intentions to create a formal privatization program that gives them autonomy as a large, multi-national corporation will require going against the interests of these actors.

Incremental Privatization and Diminished Monitoring Capacity of the Central Government: The State Oil and Gas Companies as "Cash Cow" SOEs

China's central planners have had no easy task in constraining the privatization of China's state oil and gas companies. To understand the asset-monitoring problem faced by central government agencies as they try to manage and regulate these *danwei*, consider again the extremely complex nature of the production and distribution networks. Every step of the throughput process involves the cooperation of property forms that are owned directly by various levels of government. Simply setting the production targets brings in the planning agencies from many jurisdictions, each faced with hard budget constraints and strong infrastructure development needs, and thereby potentially conflicting production goals. Furthermore, each step also involves the cooperation of diverse property forms, each with their own internal accounting standards and external, local governmental accounting standards used for incorporation, financial and fiscal relations. There are state-owned enterprises, urban collectives, urban cooperatives, township and village enterprises, foreign joint-ventures, share-holding enterprises, and private and individual enterprises, but these are just the general forms. As the records of CNPC and Sinopec show, there are also forms more specific to their sectors: "all-people" enterprises, "family-level" enterprises, "youth enterprises," and other forms of "peeled off" or "diversified operation" *danwei*. Moreover, by the late 1980s and early 1990s "hybrid" forms of enterprise have been permitted: SOE-collective, stock-cooperatives, TVE-joint-ventures, etc. Simply determining the general nature of ownership of assets within an enterprise requires the collaboration of many levels of state agencies. Finally, by the mid-1990s there are the "grandchildren" enterprises of these hybrid subsidiaries to consider. What are the ownership rights over assets in a stock-cooperative formed from a joint SOE-collective, itself the spin-off enterprise of a large SOE enterprise group? The answer is that such a determination requires the collaboration of many levels of government agencies and the cooperation of many employees and their managers. With governments competing with each other for the revenues from all enterprises, few of these actors have strong incentives to work together.

Not surprisingly, the decentralization and marketization of China's economy has greatly diminished the monitoring capabilities of government agencies at all levels, but particularly at the center. Faced with a growing blindness of oversight authority, central government organs have themselves restructured in order to try to maintain control over SOEs. The rich and varied history of the many agencies that have come and gone as they oversee the oil and gas sectors from the central level has been recorded elsewhere (Johnson 1985; Horsnell

1997; Lieberthal & Oksenberg 1988; Reinganum & Pixley 1998; Christoffersen 1998; Fesharaki & Wu 1998; Yan 1998; Wood Mackenzie 1999). Here, I wish to emphasize a few key problems faced by central actors as they try to constrain the "cash-cow" SOEs engaging in privatization.

First, given the constraints on their ability to determine the pervasiveness of privatization already underway, how do they foster the development of economically-successful oil and gas SOEs? One obvious method is to simply incrementally increase their freedom in the marketplace. In China this has usually happened through the classification of specific SOEs as "experimental enterprises" (shidian qiye), allowing agencies to bestow specific formal privileges upon them. **Table Thirteen** shows the gradual adoption of specific rights of the oil and gas SOEs. As researchers have noted (World Bank 1997; Lewis 1997b; Broadman 1999), this creates an incentive for SOEs to take advantage of lax enforcement and go ahead and do what they think the appropriate government authority will later recognize anyway. **Table Thirteen** illustrates this strategic behavior on the part of the oil and gas SOEs in China by showing the difference between when the rights were adopted de facto and when they were granted de jure. Although based on case studies, it suggests limits on the monitoring capabilities of state agencies who choose to parcel out specific rights in piecemeal fashion in order to preserve their authority in an uncertain policy environment.

Table Thirteen: Progression of Rights Acquisition by Chinese SOE Oil and Gas Production Companies
(Figures in parentheses refer to informal/de facto time of rights acquisition)

	CNPC	**Sinopec**	**CNOOC**	**China Star**	**Sinochem**	**Local Co.**
1.0 Ownership Rights						
A. Choose Top Management	(No): S.C.	(No) S.C.	(No) SETC	(No) S.C.	(No) MOFTEC	(No) locals

B. Choose Management of Subord. Ent.	1988	1983	1982	1996	1953	1990s
C. Set up Joint Ventures with Foreign	1988	1983	(1978) 1982	1996	1953	1990s
D. Set up Joint Ventures with Localities	1988	1983	(1978) 1982	1996	(No)	1990s
E. Set up Cross Sector Enterprises	1988	1980s	1990s	No	No	1990s
F. Set up Onshore Crude Extraction	1988	(1990s) 1998	No	1996	No	(1980s) No
G. Set up Offshore Crude Extraction	(1988) No	(1983) No	(1978) 1982	(1996) No	No	(1980s) No
H. Set up Refineries	1988	1983	No	No	No	(1980s) No
I. Set up Own Distribution Network	(1988) 1990s	1983	(1982) No	(1996) No	No	(1980s) No
J. Set up Internat. Subsidiary/Subord Ent.	1988	(1980s) 1988	(1980s) 1988	(1996)	(1980s) No	(1980s) No
K. Enforce Asset Security	(1988) No	(1983) No	(1982) No	No	No	(1980s) No
I. Force Mergers with Smaller Enterp.	(1994) 1998	(1994) 1998	No	No	No	1980s
J. Borrow Loans Abroad	1988	1983	(1978)	No	No	No
K. Set Accounting Standards	(1988) No	(1983) No	(1978) No	(1996) No	(1953)	(1980s) No
L. Transact Foreign Exchange	1988	(1983) 1988	(1982) 1988	1996	1953	(1980s) No
2.0 Production/Operating Rights						
A. Buy Competitively	(1988) No	(1983) No	1982	1996	(1953) No	(1980s) No
B. Wage/Salary/Bonus Determination	1988	1983 (1988)	1982	1996	(1980s) 1988	1980s
C. Hiring/Firing	1988 (No)	1983 (No)	1982	1996	1953 (No)	1980s

D. Set Product Standards	(1988) No	(1983) No	(1982) No	(1996) No	(1953) No	(1980s) No
E. Industry Location (Incorp. Elsewhere)	1988	1983	1982	1996	No	1980s
3.0 Exchange Rights						
A. Sell at Competitive Prices	(1988) No	(1983) No	1982	1996	(1953) No	(1980s) No
B. Entrepot Trade	(1988) 1996	(1983) 1996	(1982) 1996	1996	1953	(1990s) No
C. Import Quota Exchange	(1990s) 1998	(1990s) 1998	(1982) 1998	No	1953	(1990s) No
D. Import Licensing Exchange	(1990s) 1998	(1990s) 1998	(1982) 1998	No	1953	(1990s) No

Sources: Constructed from Johnson 1985; Lieberthal & Oksenberg 1988; Reinganum & Pixley 1998; Christoffersen 1998; Fesharaki & Wu 1998; Yan 1998; Wood Mackenzie 1999; Sinopec 1998a, CNPC 1998b; Personal Interviews, December 1999, with oil and gas sector companies and government agencies.

Another method is to try to retain strong agency control over the leadership of the SOEs. As research on the Party's nomenklatura decentralization program reveals, however, the Party's strategy for maintaining control over the oil and gas sector throughout the 1980s and 1990s has been to focus on appointing the managers of the largest components of these oil and gas SOEs (Burns 1987; Burns 1994). These have included the managers of the largest oil fields -- Daqing, Shengli and Liaohe -- and the managers of the largest refineries built with central government investment -- Yanshan, Shanghai. With the creation of Sinopec as the holding company for petrochemical SOES in 1983, and the birth of CNPC as the holding company for oil fields in 1988, many of the top leaders of these companies have been directly picked by the Central Committee of the Chinese Communist Party. This is also true for the large aviation, steel, shipping and mining companies. Because of their high Party status -- on a par with that of commission or ministry leaders -- it is important to note that CNPC and

Sinopec are not truly formally underneath their parent governmental agencies: the Petroleum and Petrochemical Bureau of the State Economic and Trade Commission, and the State Development Planning Commission.

In 1988 China's reformist leaders tried to transform the nomenklatura list into a list appointed by State Council leaders, but this plan was de facto scrapped with the attempted recentralization of Party authority following 1989. Since 1997 there has been a stated plan by Premier Zhu Rongji that will do so again, but in the context of halving the number of central agencies (and their personnel) (State Council General Office 1998). As interviews in Beijing in December 1998 reveal, this plan has yet to be backed up by the relevant central Party directives. Therefore, as far as the central Party organs are concerned, the leaders of Sinopec and CNPC are still to be directly chosen by the State Council party leaders (the Politburo), and not the party groups in the subordinate commissions. China Star's nomenklatura status is unclear, while CNOOC and a few other, large State Council SOEs are to come under the SETC leadership.

A final method is to deal with the "cash-cow" SOEs the same way the central government has dealt with the "cash-cow" provinces and municipalities: adopting ever-simpler (and thus lower-cost in terms of monitoring) fiscal and investment relations. At the end of the 1970s, the central government switched to a simple flat fiscal fee for Guangdong and Fujian Province, and then the new Special Economic Zones as well (Naughton 1995; Huang 1996). During the 1980s there were no less than five fiscal regimes currently operating across relations between center and locality. By the mid-1990s the central government had switched to simply collecting its share of certain business taxes and then trying to collect a flat fee from the localities. It is worthwhile noting that the stated intention of this fiscal reform was to stimulate investment at the local level by allowing local governments to retain more funds. But the adoption of such a simple system also corresponds with the decreased monitoring capabilities of all levels of government. This includes the fiscal relations among local levels of government. Shanghai also had different fiscal regimes across its subordinate counties and districts, but by the mid-1990s had switched to a more simple flat flee system (Lewis 1997a). The equivalent on the corporate side is the central government's demand -- delivered by Vice-Premier and Politburo member Wu Bangguo at the ceremony establishing Sinopec and CNPC -- that each enterprise achieve a flat figure of profitability for 1998.

Indeed, the restructuring of the oil and gas sectors into CNPC and Sinopec seems to reflect concerns by central leaders about their decreased ability to monitor the sector. As economists have noted (Wang, et al, 1998), the formation of two large conglomerates with the capability to act as monopolies in different territories of China, is not an optimal organizational solution for China's emerging energy market. Many of these economists favored the creation of many regional companies, with several competing in each area. And in fact the Party and government leaders were taking steps up until the end of 1997 to do just that: forming China United Eastern Petrochemical Group around four large refineries in East China's Jiangsu, and another group around the large Qilu Petrochemical refinery in East China's Shandong. Both of these had to be dissolved less than a year later with the birth of the two giants. And since Vice-Premier Wu Bangguo had presided over the ceremonies establishing these mini-conglomerates, he was thus compelled to oversee the ceremony establishing Sinopec and CNPC. If not, the credibility of the restructuring would have been cast into doubt.

Finally, as interviews with strategists and scholars working for the two companies show, neither company had either proposed or intended for the 1998 restructuring plan to result in the creation of two competing giants: they had each presented plans in 1997 that they hoped would allow them to swallow the other. The State Council took their arguments for why integration was feasible (see Wang, et al, 1998) and instead set up two rivals, thereby guaranteeing more agency authority by government leaders. There is no reason why the State Council cannot continue to use this divisive strategy, and it is likely to be an obstacle in future restructuring plans of CNPC and Sinopec.

Conclusion: Credibility, History and the Privatization of China's Oil and Gas SOEs:

Overall, China's market reforms are credible because the Chinese government's hands are effectively "tied" when it comes to reversing the tide of privatization. This credibility comes not from the creation of democratic political institutions or the establishment of the rule of law, but from the simultaneous emergence of three trends: (1) the construction of dense networks of contractual and ownership ties between Chinese enterprises to internalize both market costs and political risk; (2) the withering away of the central government's capacity to monitor the gradual privatization of Chinese companies by their employees and managers, and (3) the rising economic authority of fiscally autonomous local governments that compete with each other to provide market environments suitable for investment.

The result is an emerging political and economic system in which the decentralization of government ownership and regulatory authority and the informalization of corporate structure and ties are the guarantees that the Party and the central state cannot re-establish a central planned economy. Counter-intuitively, central leaders are effectively blind to the many changes in ownership in China's state-owned enterprises, and the Chinese people know this because they can see it themselves in the gradual privatization of their own workplace. Credibility comes from the personal experience of one's own success in privatizing one's own piece of the central planned economy pie, and in observing similar actions by one's partners in these complex enterprise production and distribution networks.

The two new conglomerates, CNPC and Sinopec, face considerable obstacles in their drive to set up major, integrated, multi-national corporations. These include significant opposition from local governments, employees and subsidiary fields and refineries. They also must deal with a central government that wants to preserve their protected regulatory status -- as a "cash cow" SOE -- and to foster their international role in order to meet China's long-term energy supply needs. But central authorities are also likely to create new sources of competition between them in order to maintain their own position. Moreover, the central government's ability or intentions to help CNPC and Sinopec in their goal of reigning in local governments, employees and subsidiaries are by no means clear: the central economic and planning commissions are much reduced in role and capabilities than their predecessors. In the end, the privatization and restructuring of China's oil and gas companies will depend on how these companies reconcile their competing strategies. In order to shed the less-productive social welfare functions of the traditional *danwei* they must work together with local governments and employees. But in order to re-centralize authority over fields and refineries -- especially to shut them down -- they must work against these powerful actors. The prospects for resolving this contradictory set of goals are not promising because these companies have yet to develop strategies for interacting with these important actors over the long-term. Moreover, in confronting the local governments the state oil and gas companies risk undermining the main source of credibility underlying China's incremental privatization: decentralization and informal privatization.

Sources

Anagnost, Ann, (1992), "Socialist Ethics and the Legal System," in Jeffrey N. Wasserstrom and Elizabeth J. Perry, ed., *Popular Protest and Political Culture in Modern China: Learning from 1989*, Boulder: Westview Press, pp. 177-205.

Broadman, Harry G., (1999), "The Chinese State as Corporate Shareholder," paper prepared for the Cultural Foundations of Property Rights in Chinese Societies Workshop, Transnational China Project, Baker Institute for Public Policy, Rice University, March 20, 1999, in Houston, Texas.

Burns, John P., (1987), "China's Nomenklatura System," *Problems of Communism*, September-October, pp. 36-51.

Burns, John P., (1994), "Strengthening CCP Control of Leadership Selection: The 1990 Nomenklatura," *China Quarterly*, No. 138, pp. 458-491.

Chai, Joseph C.H., (1997), *China: Transition to a Market Economy*, Oxford: Clarendon Press.

Christoffersen, Gaye, (1998), "China's Intentions for Russian and Central Asian Oil and Gas," *NBR Analysis*, (National Bureau of Asian Research), Vol. 9, No. 2 (March 1998).

CNPC, (1998a), *Gufen hezuozhi shiwu zhinan* (*A Guide to the Real Affairs of Stock Cooperatives*), compiled by the Diversified Operations Bureau of the China National Petroleum Corporation; Beijing: Shiyou gongye chubanshe.

CNPC, (1998b), *Zhongguo shiyou tianranqi gongye nianjian 1997, (China Petroleum Industry Yearbook 1997)*, compiled by the China National Petroleum Corporation; Beijing: Shiyou gongye chubanshe.

Dagang Oilfield Administration, (1997), *Dagang youtian zhi, (Gazette of the Dagang Oilfield);* Beijing: Shiyou gongye chubanshe.

De Trenck, Charles, and Simon Cartledge, Anil Daswani, Christian A. Katz, David Sakmar, (1998), *Red Chips and the Globalisation of China's Enterprises*, Hong Kong: Asia 2000 Limited, Second Edition.

FBIS, (1998a), "Restructuring Project to Create Oil Colossus Viewed," from *China Daily Business Weekly Supplement*, February 9.

Fesharaki, Fereidun, and Kang Wu, (1998), "Privatizing China's Petroleum Industry Through Reorganization: Will it Work?" *Oil and Gas Journal*, (August 10), pp. 33-45.

Gong, Jun and Jiao Xiangshan, ed., (1996), *Shiyou duozhong jingying guankui* (*A Look at Diversified Operations in the Oil Sector*), Beijing: Shiyou gongye chubanshe.

Hannan, Kate, (1998), *Industrial Change in China: Economic Restructuring and Conflicting Interests*, New York: Routledge.

Hayek, Friedrich, (1945), "The Use of Knowledge in Society," *American Economic Review*, Vol. 35, pp. 519-530.

Horsnell, Paul, (1997) *Oil in Asia: Markets, Trading, Refining and Deregulation*, Oxford Institute for Energy Studies; Oxford: Oxford University Press.

Huang, Yasheng, (1994), "Information, Bureaucracy and Economic Reforms in China and in the Former Soviet Union," *World Politics*, Vol. 47, pp. 102-134.

Huang, Yasheng, (1996), *Inflation and Investment Controls in China: The Political Economy of Central-Local Relations During the Reform Era*, New York: Cambridge University Press.

Ji, You, (1998), *China's Enterprise Reform: Changing State/Society Relations After Mao*, New York: Routledge.

Jinshan County, (1990), *Jinshan xian zhi, (County Gazette of Jinshan)*; Shanghai: Shanghai renmin chubanshe.

Johnson, Todd M., (1985), "The Structure of China's Petroleum Administration," in Fereidun Fesharaki and David Fridley, ed., *China's Petroleum Industry in the International Context*; Boulder: Westview Press, pp. 1-12.

Kelliher, Daniel, (1992), *Peasant Power in China: The Era of Rural Reform, 1979-1989*, New Haven: Yale University Press.

Koo, Anthony Y.C. and K.C. Yeh, (1997), "The Impact of Township, Village and Private Enterprises' Growth on State Enterprises Reform: Three Regional Case Studies," in Joint Economic Committee, Congress of the United States, ed., *China's Economic Future: Challenges to U.S. Policy*, Armonk: M.E. Sharpe., pp. 381-401.

Kwong, Charles C.L., (1997), "Property Rights and Performance of China's Township-Village Enterprises," in Clement A. Tisdell and Joseph C.H. Chai, ed., *China's Economic Growth and Transition: Macroeconomic, Environmental and Social/Regional Dimensions,* Commack, NY: Nova Science Publishers, pp. 491-512.

Lardy, Nicholas, (1998), *China's Unfinished Economic Revolution*; Washington DC: Brookings Institution.

Lewis, Steven W., (1997a) "Marketization and Government Credibility in Shanghai: Federalist and Local Corporatist Explanations," in David Weimer, ed., *The Political Economy of Property Rights***,** Cambridge, England: Cambridge University Press, pp. 259-287.

Lewis, Steven W., (1997b) "Testing General Theories of Change in Property Rights: Privatization Experiments and Economic Development Zones in China***,"*** unpublished dissertation manuscript, Washington University in St. Louis.

Li, Yeshan, ed., (1996*)*, *Gaige fazhanzhong de shiyoutian diaoyan gongzuo: shengli youtian diaocha yanjiu lunwenji (Oil Field Research in Reform and Development: Collected Research Reports of the Shengli Oilfield Survey)*, Beijing: Shiyou gongye chubanshe.

Lieberthal, Kenneth and Michel Oksenberg, (1988), *Policy Making in China: Leaders, Structures, Processes*; Princeton: Princeton University Press.

Liu, Changming, et al, ed., (1998), *Zhongguo shiyou shichang de zhanlue gouxiang, (Strategic Composition of China's Oil Market)*; Beijing: Jingji kexue chubanshe.

Lo, Dic, (1997), *Market and Institutional Regulation in Chinese Industrialization, 1978-1994*, New York: St. Martin's Press.

Lu, Ding and Zhimin Tang, (1997), *State Intervention and Business in China: The Role of Preferential Policies*, Cheltenham, UK: Edward Elgar.

Lu, Hanlong, (1999), "Wall-Economy and Unit Socialism: Subsidiaries with Danwei as a Characteristic of Chinese Socialism," paper presented at the Cultural Foundations of Property Rights in Chinese Societies Workshop, Transnational China Project, Baker Institute for Public Policy, Rice University, March 20, 1999, in Houston, Texas.

Ma, Jun, (1997), *Intergovernmental Relations and Economic Management in China*, New York: St. Martin's Press.

Manion, Melanie J., (1985), "The Cadre Management System, Post-Mao: The Appointment, Promotion, Transfer and Removal of Party and State Leaders," *China Quarterly*, No. 102, pp. 203-233.

Manion, Melanie J., (1993), *Retirement of Revolutionaries in China: Public Policies, Social Norms, Private Interests,* Princeton: Princeton University Press.

Montinola, Gabriella, Yingyi Qian and Barry R. Weingast, (1995), "Federalism, Chinese Style: The Political Basis for Economic Success in China," *World Politics*, Vol. 48, pp. 50-81.

Naughton, Barry, (1995), *Growing Out of the Plan: Chinese Economic Reform, 1978-1993*, New York: Cambridge University Press.

Naughton, Barry, (1997), "Danwei: The Economic Foundations of a Unique Institution," in Xiaobo Lu and Elizabeth J. Perry, ed., *Danwei: The Changing Chinese Workplace in Historical and Comparative Perspective*, Armonk, New York: M.E. Sharpe, pp. 169-194.

Nee, Victor, (1992), "Organizational Dynamics of Market Transition: Hybrid Forms, Property Rights and Mixed Economy in China," *Administrative Science Quarterly*, Vol. 37, pp. 1-27.

Nolan, Peter, (1998), *Indigenous Large Firms in China's Economic Reform: The Case of Shougang Iron and Steel Corporation*, London: Contemporary China Institute, School of Oriental and African Studies, University of London; Research Notes and Studies No. 12.

North, Douglass C., and Barry R. Weingast, (1989), "Constitutions and Commitment: The Evolution of the Institutions Governing Public Choice in Seventeenth Century England," *Journal of Economic History*, Vol. 49, No. 4, pp. 803-832.

Oi, Jean C., (1992), "Fiscal Reform and the Economic Foundations of Local State Corporatism in China," *World Politics*, Vol. 45, pp. 99-126.

Pei, Xiaolin, (1998), *The Institutional Root of China's Rural Industry and Gradual Reform*, Lund: Lund University Press.

Qian, Yingyi and Barry R. Weingast, (1997a), "Federalism as a Commitment to Preserving Market Incentives," *Journal of Economic Perspectives*, Vol. 11, No. 4, pp. 83-92.

Qian,Yingyi and Barry R. Weingast, (1997b), "Institutions, State Activism, and Economic Development: A Comparison of State-Owned and Township-Village Enterprises in China," in Masahiko Aoki, Hyung-Ki Kim and Masahiro Okuno-Fujiwara, ed., *The Role of Government in East Asian Economic Development*, Oxford: Clarendon Press, pp. 254-278.

Reinganum, Julie and Thomas Pixley, (1998), "Bureaucratic Mergers and Acquisitions," *China Business Review*, (May-June), pp. 36-41.

Romano, Roberta, (1985), "Law as a Product: Some Pieces of the Incorporation Puzzle," *Journal of Law, Economics and Organization*, vol. 1, no. 2; pp. 225-283.

Shanghai Statistical Bureau, (1997), *Shanghai tongji zhi, (Gazette of the Shanghai Statistical Bureau*); Shanghai: Shanghai shehui kexueyuan chubanshe.

Shen, Lisheng, ed., (1988), *Zhongguo shiyou gongye fazhan shi: jindai shiyou gongye, (History of the Development of China's Oil Industry: The Modern History of the Oil Industry, Vol. 2),* Beijing: Shiyou gongye chubanshe.

Sinopec, (1998a), *Zhongguo shiyou huagong zonggongsi nianjian 1997, (Yearbook of the China National Petrochemical Corporation),* Beijing: Zhongguo shihua chubanshe.

Sinopec, (1998b), *Zhongguo shiyou huagong zonggongsi: shiwu nian zhongyao wenjian ziliao xuanbian, 1983-1998, (A Collection of Selected Major Documents and Data Worked Out by the China Petrochemical Corporation in the Past 15 Years),* Beijing: Zhongyan chubanshe (distributor).

Solinger, Dorothy J., (1997), "The Impact of the Floating Population on the Danwei: Shifts in the Patterns of Labor Mobility Control and Entitlement Provisions," in Xiaobo Lu and Elizabeth J. Perry, ed., *Danwei: The Changing Chinese Workplace in Historical and Comparative Perspective*, Armonk, New York: M.E. Sharpe, pp. 195-222.

State Council Research Office, (1997), *Zhongguo haiyang shiyou gaige yu fazhan zhanlue yanjiu, (Research on the Reform and Strategic Development of China's Offshore Oil Sector),* compiled by the Industrial Transportation Section of the PRC State Council Research Office and the Enterprise Policy Research Office of the China National Offshore Oil Corporation; Beijing: Zhongguo yanshi chubanshe.

S**tate Council General Office, et al, (1998),** *Zhongyang zhengfu zuzhi jigou, (The Organizational Setup of the Central Government),* compiled by the Secretariat of the State Council General; Beijing: Gaige chubanshe.

State Statistical Bureau, (1998), *Zhongguo tongji nianjian 1998, (China Statistical Yearbook 1998);* Beijing: Zhongguo tongji chubanshe.

Steinfeld, Edward S., (1998), *Forging Reform in China: The Fate of State-Owned Industry*, New York: Cambridge University Press.

Su, Sijin, (1992), "Hybrid Organizational Reforms in the Mixed Economy in South China: 'One Firm, Two Systems,' and Their Dynamic Process," Paper presented at the Cornell University Symposium on "The Great Transformation in South China and Taiwan: Markets, Entrepreneurship and Social Structure," Ithaca, NY, October 16-18.

Sun, Haishun, (1998), *Foreign Investment and Economic Development in China: 1979-1996*, Aldershot: Ashgate.

Tang, Jianzhong and Laurence J.C. Ma, (1985), "Evolution of Urban Collective Enterprises in China," *China Quarterly*, No. 104: pp. 614-640.

Tiebout, Charles, (1956), "A Pure Theory of Local Expenditures," *Journal of Political Economy*, Vol. 64, pp. 416-424.

Wang, Lixin and Joseph Fewsmith, (1995), "Bulwark of the Planned Economy: The Structure and Role of the State Planning Commission," in Carol Lee Hamrin and Suisheng Zhao, ed., *Decision-Making in Deng's China: Perspectives from Insiders*, Armonk: M.E. Sharpe., pp. 51-65.

Wang, Tianjun, et al, ed., (1998), *Shiyou qiye gaige yu ganli tantao, (Management Research and Oil-Sector Enterprise Reform)*, Beijing: Shiyou gongye chubanshe.

Wang, Xiao-qiang, (1998), *China's Price and Enterprise Reform*, New York: St. Martin's Press.

Weingast, Barry R., (1995), "The Economic Role of Political Institutions: Market-Preserving Federalism and Economic Development," *Journal of Law, Economics and Organization,* Vol. 11, No. 1, pp. 1-31.

Weingast, Barry R., (1990), "Review Article: The Role of Credible Commitments in State Finance," *Public Choice*, Vol. 66, pp. 89-97.

Wong, Christine P.W. and Christopher Heady, Wing. T. Woo, (1996), *Fiscal Management and Economic Reform in the People's Republic of China*, Hong Kong: published for Asian Development Bank by Oxford University Press.

Wood Mackenzie, (1999), *Asia Pacific Energy Markets Service: January 1999, China*, report prepared by Wood Mackenzie consultants Paul Sankey and Gavin Thompson.

World Bank, (1997), *China's Management of Enterprise Assets: The State as Shareholder*, Washington, D.C.: The World Bank.

Xu, Binglan, (1999), "Statisticians Seek Reliability," *China Daily Business Weekly*, February 15, page 1.

Yan, Xuchao, ed., (1998), *Zhongguo shiyou da zhongzu: miandui shichang de jiyu he tiaozhan, (China's Great Oil Restructuring: Opportunities and Challenges in Facing the Market);* Beijing: Shiyou gongye chubanshe.

Yang, Dali, (1997), *Beyond Beijing: Liberalization and the Regions in China*, New York: Routledge.

Zhongyuan Oilfield Administration, (1998), *Zhongyuan youtian nianjian: 1995, 1996, (Yearbook of the Zhongyuan Oilfield: 1995, 1996):* Beijing: Shiyou gongye chubanshe.

Note: I wish to thank the individuals who have contributed ideas and suggestions at various stages in the research behind this paper: Joe Barnes, John P. Burns, David Fridley, Peter Hartley, Xiaobo Hu, Amy Jaffe, William Kirby, Hanlong Lu, Lai Mao, Richard Smith, Ron Soligo, Al Troner, Fred Von Der Mehden, David

Weimer, Andy Whitford, many anonymous scholars and oil industry experts in the United States and in China, and the participants in the "Federalism I" panel of the Public Choice Economics Society Annual Conference, March 12, 1999 in New Orleans. Special thanks is also due to Michael Sew Hoy, Spring 1999 term research intern for the James A. Baker III Institute for Public Policy, for his invaluable assistance. Although any useful or unique insights or conclusions contained in this paper are the collective property of all of the above individuals, the author retains sole ownership over any errors.