State-Managed Marketization: The Role of the Chinese State in the Petroleum Industry

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Abstract

China's phenomenal economic growth has riveted attention on the role of the Chinese state. Several models, such as the developmental state, predatory state, irresponsible state, state capitalism and centrally managed capitalism, have contributed to our understanding of that topic, but none of them can capture the dynamism and complexity of the Chinese state's role. Drawing on two cases in the petroleum industry, this article argues that a state-management approach (SMMA) is in a better position to account for the role of the state and the nature of the state–national oil companies (NOCs) ties.[1] If most countries embracing the market economy can be classified as a state-in-market paradigm, where state interventions in economic activities are subject to market forces, China's SMMA can be regarded as a market-in-state model, where China's state is superior to the market.

Keywords: *state-managed marketization, China, energy security, petroleum industry*

Introduction

The phenomenal growth of the Chinese economy and its remarkable achievement in reducing poverty may be the most significant recent change in the world. Understandably, people are keen on deciphering the causes leading to those sea changes. As state–market relations have an important influence on economic performance and distribution of economic benefits (Block 1994; Lindblom 1997; North 1990), debates arose with regard to the role of the Chinese state. These debates, covering many different topics, can basically be classified into three types.

The first type concerns what role the Chinese state has played in prompting economic growth. This category can be further divided into two types. One is based on value judgments to evaluate whether the role of the Chinese state is positive or negative. While the developmental state model highlights the positive side of the Chinese state, the predatory and irresponsible state models can be regarded as the opposite. The second type is empirical, trying to uncover how the Chinese state intervenes in the economy. In this camp, the state capitalism thesis emphasizes government support to the state-owned enterprises (SOEs) and sovereign wealth funds. While perceiving China's system as state capitalism, the centrally managed capitalism underscores government control and sees further consolidation of state power over both politics and the economy as a general trend (Lin 2010: 92). If both of the above models tend to treat the state and the market as two opposite and competing power arenas, the state–market condominium model is of the view that both the state and the market are reciprocal relations (Underhill 2000; Underhill & Zhang 2005).

The second type of debate is whether the Chinese way of doing things is special or a third way compared to other countries' historical experience in spurring economic growth. Some scholars have borrowed the term 'developmental state' to generalize the way of Chinese development (Nee, Opper & Wong 2007; Bagchi 2000; Baek 2005; Knight 2012). In contrast, Fligstein and Zhang (2009) argue that China may be creating its own model of development. By reference to Western practices, the thesis of state capitalism has asserted that China's way of development differs from the Western market economy system.

The third type concerns whether China's rise will be a challenge to the Western liberal democratic system. In this regard, both state capitalism and authoritarian capitalism contend that China's way of governing the economy is an alternative to the Western model and poses a threat to the liberal democratic system (Bremmer 2010; Gat 2007).

The above competing theses have contributed to our understanding of the role of the Chinese state. Their different views and angles coincidentally illustrate the complexity of Chinese economy and society. Common in these models, however, is their premise to build their arguments. That is, they all presuppose the existence of a monolithic state with super strong capability, which can act at will in both decision making and policy implementation. By contrast, other actors in the market are merely the puppets of the Chinese government. We doubt such preconditions and put forward a new model of state-managed marketization as the alternative.

Two cases in the petroleum industry will be used to set out the state-managed marketization approach (SMMA). One is the 1998 industrial restructuring that has shaped today's market structure since then, and the other is China's oil pricing reform. They are selected because the petroleum industry is deemed an industry of strategic importance that the government needs to control. Despite strong government involvement, marketization of this sector is under way. Hence, this sector has provided a good window through which we can discern what the Chinese government is thinking and how it acts. Moreover, two cases in the same sector are conducive to making inter-case comparisons.

The next section will substantiate the reviews on the role of the Chinese state in spurring economic growth. The third section elaborates on what the SMMA is and why the Chinese government adopts it. With two case studies, the following two sections explore how the SMMA has been used. The concluding section will analyze the implications of such an approach for China's petroleum industry.

The Debate on the Role of the Chinese State

The spectacular three-decades-long economic growth in China has led the intellectual community to contemplate the role that the state has played in that process. Policy debates often revolve around three topics. First, regarding the role the Chinese state has played, there are debates both on a normative and empirical basis. Normatively, the debate has often taken a dichotomous approach. On one side are those who argue for the developmental state, stressing a constructive role of the state in promoting economic growth.[2] For instance, Jean Oi (1999) posits that rural development in China largely resulted from the so-called 'local state corporatism', denoting that local governments acted in an entrepreneurial manner, proactively supporting local collective enterprises, such as setting up township and village enterprises, attracting investments from outside, marketing local products, and so on. Both Nee et al. (2007) and Baek (2005) have argued that China's economic policies resemble core features of a developmental state including control over finance, direct support for SOEs by the government, import substitution industrialization in heavy industry, a high dependence on export markets and a high rate of domestic savings. Bagchi (2000) even asserted that 'several developmental states are alive and kicking in East Asia. The most dynamic among them is the People's Republic of China'. For a state to be developmental, it must possess sufficient autonomy so as to be able to resist myopic interest and rent-seeking activities by various social groups. It should also have the capacity to mobilize national resources and put its economic development plan into practice.

On the other side is the predatory state paradigm. Rather than playing a contributory role in economic growth, the predatory regimes extract economic rents from the citizenry and prey on their own constituents.[3] James K. Galbraith, an economist at the University of Texas, went even farther, defining a predatory state as 'a coalition of relentless opponents of the regulatory framework on which public purpose depends, with enterprises whose major lines of business compete with or encroach on the principal public functions of the enduring New Deal' (Galbraith 2008: 131). In the case of China, sluggish development in rural regions was largely ascribed to the heavy burdens borne by Chinese peasants, which in turn largely resulted from the extractive activities of the government at different levels (Lu 1997: 113-138).

Shleifer and Vishny (1998) call such a developmental–predatory divide the 'grabbing hand' view as opposed to the traditional 'helping hand' view of government. Such a dichotomy, however, has been challenged by Yongshun Cai. He found that in many cases the state makes irresponsible decisions and misuses resources, neither for real development nor for predatory purposes, but to enhance its own image, thus resulting in a waste of public resources (Cai 2004).

If both the developmental and predatory state paradigms have some value judgment inherent to them, the state capitalism and the centrally managed capitalism arguments are built on an empirical basis. Ian Bremmer (2010) argued that China was embracing a state capitalism approach, central to which are policies that champion state-owned firms and sovereign wealth funds, provide state funding to these clients to help them lock in long-term agreements and use the market to bolster the Chinese government's domestic political positions. Hence, state capitalism underscores the Chinese state's strategic intentions and tends to equalize the behaviours of Chinese companies to Beijing's strategic actions.

While acknowledging that China today is a capitalist state, the centrally managed capitalism (CMC) paradigm argued that the Chinese party–state has increasingly tightened control of the economy and economic activities are heavily embedded in social relations (*guanxi*). The CMC, in particular, underscores the state's control over personnel, organization and credits, which are also the three principal mechanisms making the CMC feasible (Lin 2010).

Second, regarding whether the Chinese way of developing the economy is unique and whether it will defy the Western liberal democratic system, scholars embracing the developmental state model tend to put China into this category, and thus China's policy model is akin to other East Asian newly industrialized countries (Nee et al. 2007: 20). By contrast, Fligstein and Zhang (2009) argued that China is creating its own model of development. Similarly, proponents of state capitalism contend that China's way of development, underscoring the overriding role of the state and being sceptical over free markets, is quite special when compared with the market-driven Western economic system, which upholds the value of democracy, liberties and individual rights. With the rise of China and the 'shrinking of Western appeal as a politicoeconomic brand', state capitalism, or what some called 'authoritarian capitalism', is undermining Western capitalism, resulting in the risk of 'the end of the free market' (Bremmer 2010; Halper 2010). But Bremmer (2010) was of the belief that over the long term, authoritarian capitalism will prove a poor rival to the Western version.

These empirical findings have significantly enhanced our understanding of the role of the Chinese state in promoting reform. The developmental state at least provides some prescriptions on what a government should do in order to spur economic growth, whereas the predatory state has uncovered the side of the exploitative nature of the Chinese state, notwithstanding the rapid economic growth in the past decades. It is liable to envisage that a state's predatory intent excludes the likelihood of public goods provision by the 'grabbing hand'. However, according to Olson, instead of a short-lived 'roving bandit', the ruler, or the 'stationary bandit' may come to realize that it is in its long-term interest to provide the necessary public goods and 'cultivate' the private economy so that it has more to be extracted (Olson 1993: 567–576).

Contradictory to common views on China, both the state capitalism and the centrally managed capitalism theses are very insightful to regard the Chinese state as a capitalist. What the state capitalism view has incisively discerned is the Chinese state's strategic concerns and how it renders support to the SOEs. What deserves mentioning is the CMC's in-depth analysis of the specific mechanisms through which the state puts organizations within China under its control.

Yet, the above paradigms are based on the impact of state intervention on the Chinese economy, which, however, cannot always remain so clear-cut and encompass the complex reality in China. In particular, a simplified development or predatory or irresponsible state cannot help us comprehend the state's calculations and its interactions with other relevant actors. As will be illustrated by what happened in the petroleum industry, the Chinese government does not rigidly adhere to a particular scholarly convention. Although the state capitalism thesis highlights the Chinese government's political intentions and the CMC underscores government control, it is problematic to presuppose the state organs as a unitary entity. In fact, authoritarian as it is, the Chinese state is not so strong that it is immune from particularistic interests. Nor is the state 'staffed by agents of change who are unified by a common purpose and technical orientation' (Chan et al. 1998: 2). Indeed, predatory intent can be found in its management of the sector, but apparently neither the predatory state nor the irresponsible state theses can account for what has been unfolding in China. Moreover, the above models, though having different emphases, are common in presuming a state-versus-market dichotomy, which is problematic. Drawing upon Chinese state involvement in the petroleum industry, this article aims to explore how the Chinese state intervenes in the petroleum industry and how it interacts with the state-owned oil companies. It is argued that a 'state-managed marketization' approach (SMMA) has been taken to manage this sector.

A Third Way of Involvement: State-Managed Marketization

According to international political economy, there are two basic modes (market and state) running the economy and allocating resources for each nation state. Accordingly, the ways countries promote economic growth can be classified as either a market-dominated approach (MDA) or a state-controlled approach (SCA). MDA is defined as 'one which relies to a significant degree on the use of flexible economic, fiscal and regulatory instruments which seek to achieve stated policy objectives through market signals rather than on the use of the rigid regulations or ''command-and-control'' type measures which mandate market outcomes' (IEA 1996: 21). SCA denotes greater government involvement in the energy sector characterized by a panoply of measures such as 'setting detailed, quantitative targets for the energy sector, subsidies and other financial incentives including support for mega projects, price controls, government deals for the purchase of oil and other barriers to free trade' (IEA 1996: 14).

In the petroleum sector, the SMMA is defined as a process wherein the state has recourse to a set of mixed means to divert the oil sector from state control to market operation, but in that process it is up to the state to decide and adjust the extent and scope of market activities. On the one hand, more and more market ingredients have been ushered in, particularly into the refinery and distribution chains. The Chinese government has to introduce more market mechanisms into the whole economy including the oil sector and even let the market play a crucial role to decide who wins and who loses for the sake of improving economic efficiency.[4] It has to accommodate market forces due to the impact of globalization (Zheng 2004: 29-31), its own concerns of conserving energy, reducing its fiscal burdens or enriching its own coffers, negotiated obligations with international institutions, and the need to transform people's 'public action' (demands for political reform) to 'private interest' (economic activities) for the purpose of ruling legitimacy.[5] Moreover, the government is aware that overprotection is not conducive to the growth of the national oil companies (NOCs), as evidenced by its woeful experience in the car industry. This entails market openness, such as lower or no tariffs, no quota constrictions, fewer or no entry/exit barriers, no policy discrimination, no subsidies, price formation after complete market competition, hard budget constraint,[6] and more autonomy for oil firms in business operations, profit allocation, pricing and investing decisions, as well as a set of laws and regulations preserving market order.

On the other hand, the marketization process has been initiated and is under the control of the government because of concerns about the possible destructive effects on national security, socio-political stability and economic development resulting from disruptions of the oil and gas supply and price fluctuations. When perceiving that energy problems may engender chaos, the government will use any means available, including instruments of the command economy, to prevent and curb crisis. Hence, it is unlikely that state control would be loosened overnight. Sometimes state control may be resumed in those deregulated areas, particularly when a crisis is at hand.

How does the SMMA work in practice? The principal mechanisms making the SMMA feasible can be summarized as control, autonomy and support.[7] The Chinese government tries to discipline the NOCs in four major ways: regulation, ownership, credit and personnel. Of particular importance among the instruments are the fiscal and taxation means, which directly affect the revenues of the SOEs. A second means is to have direct control of vital economic capital so that the party–state can decide where and how to use the capital. The third means is to directly intervene in the NOCs' pricing and investment decisions. It is up to the NDRC to decide when and how to adjust prices of refined oil in the

Chinese domestic market, notwithstanding the integration of domestic crude oil prices with international ones. Moreover, any Chinese firm's foreign investment larger than US$30 million must be approved by the government. The fourth means that the government can use to exert its influence is with personnel affairs. Besides, to manage its ties with the SOEs, the Chinese government has employed a variety of measures that can directly or indirectly affect the SOEs' revenues, such as launching mega energy projects, imposing import bans and price controls, offering huge subsidies, and so forth.

Despite the government's strong hand, it has granted considerable autonomy to the SOEs as part of the marketization and corporatization efforts. They have to face hard budget constraints, take responsibility for output decisions and are allowed to have more retained earnings (Garnaut & Huang 2001: 263). Furthermore, market monopoly has been vested in the NOCs. The management and employees' welfare is closely associated with the NOCs' performance, and the advent of the market economy has created conditions to pursue their interests. As listed companies, they are accountable to their shareholders. In that sense, the NOCs have a propensity to be market actors with strong incentives to maximize profits. Nonetheless, the autonomy enjoyed by the NOCs has given them considerable influence over the government in pursuit of their commercial interests.[8] As Guthrie argues, 'firms are not passive recipients of top-down policy—rather, they interpret, adapt, modify, and even subvert the formal measures that come from on high' (Guthrie 1999: 5).

In the meantime, the government renders various forms of support to the SOEs in the form of policy support, diplomatic support, financial support and market strategy support. Policy support is the most straightforward form. The government often draws upon central regulations to serve its political and economic purposes, such as imposing import bans, changing tax refunds on exported products and adjusting oil prices. Diplomatic support includes incorporating securing natural resources abroad into China's foreign strategy and the personal involvement of national leaders to facilitate business deals with foreign countries. In particular, China's permanent membership in the UN Security Council is another card that it can capitalize on for its oil interests. Market strategy support is used, given that its tremendous energy market has been a tool that China employs to achieve its political and economic objectives. As Andrews-Speed, Liao and Dannreuther (2002: 80) argued, 'China's energy market has been used as a carrot to influence countries to adopt policies which are favorable to China's perceived national interests'.

Hence, the SMMA differs both from a state-controlled approach, where every business is under stringent state control, and from the market-dominated approach, where the market plays a deciding role in running the petroleum sector. With the SMMA, the state intervenes in the oil market for social stability, economic security and state asset increment, rather than merely for complete government control or for market efficiency.

The SMMA indicates that the state has a Janus-face character, at different times playing constructive or detrimental roles that are emphasized by the developmental state and predatory state respectively. As state capitalism argues, the SMMA admits that government support is part and parcel of the Chinese way of development, but unlike state capitalism, state support is not only found in China. It also exists widely in other countries, including Western countries. In fact, each successive US administration, for the sake of energy security, has taken a firm grip on the principal energy producing regions by whatever instruments available including military means (Chen 2008). Hence, state support can hardly be used as a benchmark to distinguish the Chinese way from others. Likewise, the SMMA shares with the CMC that government control is core to the Chinese way of development, but unlike the CMC, it acknowledges the emergence of marketization as an important trend in China. Moreover, it would be misleading if we only highlight government control over SOEs without realizing the SOEs' great autonomy and strong influence on the state. For a comparison between the SMMA and other competing models, see Table 1.

If most countries embracing a market economy can be classified as a state-in-market paradigm, where state interventions in economic activities are subject to market forces, China's SMMA can be regarded as

TABLE 1: A Comparison between the State-managed Marketization Approach and Other Competing Models

	State-managed Marketization Approach	
	Similarities	Differences
Developmental State	The state can play a constructive role	The state may play a detrimental role
Predatory State	The state can play a detrimental role	The state can play a constructive role
State Capitalism	State support prevalent	State support not alone in China
Centrally Managed Capitalism	Existence of state control: regulation, ownership, credit and personnel	Marketization being a trend and the SOEs not puppets of the state. SOEs enjoy great autonomy and exert considerable influence on the state.

a market-in-state model, where China's state is superior to the market. A state-in-market paradigm means that the whole economy including trade, pricing, investment, production, etc. is organized in light of market principles and each actor in the market should have equal rights. The state may intervene in economic operations but it has to abide by market laws. In contrast, in the market-in-state model, the market is created by the state and market structure is shaped by the state. Hence, the state has the power to affect or even disrupt market operations in an abrupt manner. Within the market, not every actor has equal rights. The state may endow more power to some while discriminating against others, and it may extract rents from market participants.

Although China is moving towards a market economy and the petroleum industry is no exception, notwithstanding its strategic implications, transforming the command economy, including the petroleum industry, is not a goal that can be reached with one step. In fact, tracing Chinese oil policy reform, it is easy to find that the reform presents the attribute of 'one step forward, two steps back' (Manning 2000: 84). As Downs (2004: 4) argues, the strife between market activism and state control features Chinese energy security rhetoric and practice. Both the state and the market are brought into play, and a mix of both state regulation and market operations coexists in the Chinese oil sector. The SMMA is typical of transitional economies embracing gradualism in the sense that market mechanisms are allowed into the oil sector, not in an abrupt 'big-bang' way but in a step-by-step manner. In general, the Chinese state intervenes in a select few 'strategic industries' with crucial fiscal or developmental contributions; more specifically, state intervention focuses more on certain 'core' segments with overall controlling or influential capacities within those selected industries,[9] while other 'periphery' zones have gradually been left to the market.

Apparently, the transformation process is not without turns and twists, implying that some *ex ante* marketized zones might be returned to state control. This is mainly because in its effort to drive the oil sector towards the end of marketization, China also bears socioeconomic security in mind. In great measure, marketization in this regard is just a means to attain the goal of a higher degree of oil security. As such, the quality of state 'management' is ostensibly associated with state capacity. However, a strong state[10] is not a sufficient condition for good performance in 'managing marketization' in that the latter correlates with other factors, such as the uncontrollable nature of the market, bounded rationality[11] and power abuse. Moreover, it is true that the government endeavours to reduce oil dependency, but it remains a question mark whether China is a strong state in every respect regarding energy security. On and off, the government encounters considerable resistance in pushing its policies downwards, as discussed below.

It is true that China's use of SMMA reflects gradualism, the overall guiding principle of Chinese reform epitomized by 'groping for stones to cross a river' (*mozhe shitou guohe*), but should we go no further, we might lose sight of the strategic thinking of the Chinese government, the opportunities and constraints it has confronted and the ongoing competitions in the Chinese oil market. We cannot understand why deregulations or re-regulations came about at certain junctures, nor can we tell the future direction of China's approach. The following will examine two cases or policy areas, namely industrial restructuring and oil pricing reform in the petroleum industry to account for China's use of the SMMA.

SMMA through Industrial Restructuring

Selecting the 1998 restructuring as a case study is based on the following considerations. First, it was the largest restructuring so far in China's petroleum industry history in the sense that it involved not a regional but a nation-wide industry. Second, it has fundamentally shaped today's petroleum and petrochemical structure in China. The two oil giants, China Petroleum and Gas Corporation (CNPC), and China Petrochemical Corporation (Sinopec), are undertaking their major business in China primarily based on the geographic divisions set in the 1998 revamp. Third, it took place in special settings. At that time, most neighbouring countries were dealt a heavy blow due to the Asian financial crisis and the Chinese petroleum industry was also negatively affected. During that year, mergers and restructures swept large Western oil companies. For instance, BP and Amoco merged into the world's third largest oil company in 1998. What is more important, this restructuring can help readers perceive the strategic thinking of the Chinese leadership.

Before the 1998 overhaul, the petroleum industry was dominated by four enterprises in the 1980s, and then five from December 1996 (see Figure 1). Meanwhile, the Petroleum Industry Ministry and the Ministry of Energy were disbanded in September 1988 and March 1992 respectively. Consequently, some administrative functions were assigned to the NOCs. Such an admixture of both business and administrative functions, however, brought about a variety of problems. First, it hindered the sound development of a market economy as firms were not playing on a level playing field. Second, it negatively affected the establishment of a modern enterprise system. With direct government involvement, employees of these firms had no incentive to pay close heed to their market performance, making it difficult for enterprises to be independent market actors responsible for their own profits and losses. Third, it became a hotbed of bribery and corruption. To fulfil the goal of building a socialist market economy, a goal that has been advanced since 1992, China needs to take measures to address the above problems.

The lack of a special administrative institution overseeing the petroleum sector not only often led to fragmented and inconsistent policies and regulations, but also resulted in random exploitation due to the poly-governance problem. Local governments often turned a blind eye to such chaotic operation activities. After the removal of the Energy Ministry, administration of national oil and gas resources was taken over by the State Planning Commission and later transferred to the National Resources Commission. Yet, the latter was merely a commission for discussion and coordination with little administrative power over national resources. In fact, administrative power over the petroleum industry, such as output, pricing, investment, credit use, product distribution, foreign trade and other matters, rested with different ministries, but there was no special government agency to look after the overall and long-term development of this industry. To promote local economic development, local governments often issued exploration and exploitation licenses to local firms, in defiance of the law that all petroleum resources within Chinese territory are owned and administered by the state. Consequently, casual mining activities were rampant (Yan 1998: 24-26). This severely impaired the interests of those upstream NOCs, which petitioned the central government to stop such contravening acts. Facing such a situation, however, the central government could hardly put an end to the locals' collusions. It had to wait for some opportunity to make a radical change: 'Contrary to the simple and static image of authoritarianism under the Chinese Communist Party, the preference of central bureaucrats often defer to local initiatives before staging an intervention' (Lin 2003: 88).

Pressures from the NOCs to exclude local firms from the petroleum industry helped prompt the government's reform actions, but the government's perception of the developing trend of this industry and its security concerns played a decisive role leading to the 1998 restructuring. In the 1980s, CNPC and China National Offshore Oil Corporation

(CNOOC) were the only two entities empowered to cooperate with foreign investors, in onshore and offshore areas respectively. In 1996, the Star Petroleum Limited Corporation was established and entitled to such a right both onshore and offshore. Nonetheless, even without permission from Beijing, local governments also jumped on the bandwagon to allow local enterprises to cooperate with foreign investors in petroleum exploration and development within their jurisdictions. In the eyes of the Chinese government, a variety of players from China competing to collaborate with foreign oil giants would not be good for China; on the one hand, not a single Chinese petroleum company could compete with the multinationals, and on the other hand, over-competition among Chinese NOCs substantially undermined their bargaining power, resulting in the Chinese side becoming the biggest loser. Moreover, such a multi-player structure made it more difficult for the Chinese government to exercise effective supervision and administration, which consequently could hardly ensure reasonable utilization and effective protection of natural resources.

The Chinese leadership tended to perceive expansion of an oil company as a global trend. Compared with their foreign counterparts, Chinese oil companies were so weak that the total annual sales revenues of the three largest ones (CNPC, Sinopec and CNOOC) was less than half of Exxon's (Yan 1998: 63). Considering that Western countries did not strictly enforce their anti-monopoly law but endorsed the mergers of their globally competitive oil and gas giants, Beijing felt it imperative to follow suit so that the Chinese companies would not be further edged out of the global market in the future. Also, the leadership posited that it was necessary for the government to help build up some Chinese company giants so as ultimately to construct China as a rising power. As the then vice premier Wu Bangguo put it, 'Our nation's position in the international economic order will be to a large extent determined by the position of our nation's large enterprises and groups' (CNPC 2000).[12]

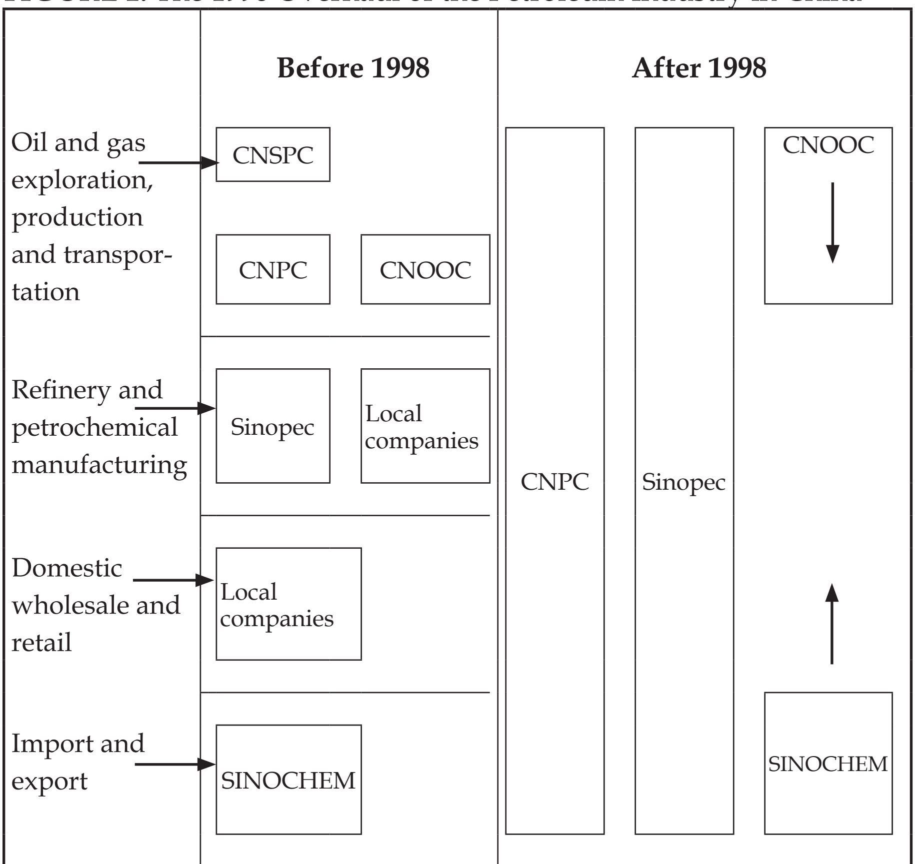
Lin (2003: 88) has expounded the three conditions for launching such a large-scale industrial reform, 'expected gains from further decentralization; financial strength of the central treasury vs. the local state; and demonstration of feasible organizational options'. He further explained why 1998 was an appropriate time to initiate such an overhaul. According to Lin, obstacles against reform were reduced to a large extent due to the structural change from an economy of shortage to one of surplus in 1996 and oil price distortions, which led to further interest divisions among different parties concerned. This division provided opportunities for the central state to create a new reform coalition, while new trends in the domestic capital market increased the central government's expectation of higher returns from corporate restructuring.

The attitudes of CNPC and Sinopec, both of which braced for the overhaul, deserve mentioning. Before the reform, the price ratio between crude oil and refined oil products in China was artificially unreasonable in that crude oil prices had long been kept much lower. As a result, companies in the upstream had less incentive to conduct more exploration and production (E&P) activities owing to the substantial investments and high risks required. However, in order to meet the production targets set by the government, they had to enhance production by tapping into the existing oilfields. In so doing, the percentage of water and water bearing compounds in the oil extracts shot up rapidly. The average rate in oilfields onshore reached 80 per cent, with some major oilfields even approximating 90 per cent (Yan 1998: 28). The government realized the serious consequences and eventually raised the prices of crude oil.[13] Hence, it was comprehensible that CNPC was constantly very active in restructuring the industry as the reform would enhance its autonomy and market share. Sinopec had long enjoyed a preferential status since it possessed the largest refining power, but when the government raised the crude prices, its erstwhile glory passed away. It also wanted to embark on the upstream business to make up for the refining losses. Furthermore, vertical integration would help them to avoid risks of a sharp profit decline since their upstream and downstream businesses could supplement each other.

The restructuring was based on the *State Council Organization Reform Scheme* approved in the First Session of the Ninth National People's Congress. The scheme had two goals: one was to merge the administrative functions of the Chemical Industry Ministry, CNPC, and Sinopec into the State Petroleum and Chemical Industry Bureau under the State Economic and Trade Commission. The other goal was to overhaul the industrial structure at that time to turn the newly restructured corporations into vertically integrated giants, as the multinationals are doing. Thus, as shown in Figure 1, before the 1998 overhaul, CNPC had focused only on oil and gas E&P and transportation, and Sinopec had barely concentrated on oil refinery and petrochemical manufacturing. There were other actors competing with them, whereas neither of them had engaged in the distribution business including domestic marketing and foreign trade. After the 1998 reform, both CNPC and Sinopec not only were able to embark on a series of business ventures concerning oil and gas, but also successfully excluded many other actors from the oil and gas industry, although they could not exclude CNOOC and Sinochem, both of which remained intact.

The 1998 overhaul of the oil and gas industry employed an SMMA. On the one hand, the restructuring was led and organized by the central government and reflected its strategic thinking. On the other hand, the government expected competition in the domestic petroleum industry would be orderly and manageable. Hence, while divesting the administrative functions from the NOCs and turning them into market actors responsible for their business operations, it granted more autonomy to the NOCs and encouraged them to compete with each other.

FIGURE 1: The 1998 Overhaul of the Petroleum Industry in China



Source: Mai (2001)

SMMA in Oil Pricing Reform

The oil price not only has a profound impact on the national economy, but involves interest distribution among upstream producers, downstream refiners and consumers. Price liberalization, often the first step in establishing a market economy, means that 'prices had to be decontrolled and subsidies eliminated, in order to establish a demand-and-supply driven system of price determination' (Sachs and Lipton 1990: 55). This case study aims to analyze why the oil pricing mechanisms intertwine regulation with deregulation by focusing on the government's considerations as well as the NOCs' motivations. Emphasis is put on the oil pricing systems since 1993, when China turned into a net oil importer.

Before 1998: Pre-Integration Phases

Before 1998, there were three different types of oil pricing systems. In the first stage, from 1949 to 1981, oil was sold at a single, state-controlled price, regardless of quality. The government often defined oil prices according to its political objectives. The second stage followed a 'three-tiered price system', wherein market elements were introduced from 1981 to 1994. During this period, 1993 saw a large number of state-deregulations, but the state re-regulated its oil pricing policy in the third stage, signalled by the two-track system that began in 1994.

(1) The Three-Tiered Price System

The 'three-tiered price system' was created in 1981 primarily to address the capital constraints that the NOCs faced for oil E&P. Basically, under this system oil companies could sell their surplus crude oil at market prices only after they fulfilled the centrally mandated quota of 100 million tons (MT). For crude oil, the three different prices were (1) 'in-quota' low prices; (2) 'in-quota' high price; and (3) market prices (Wang 1999: 56). The surplus crude oil could be exported through Sinochem or sold domestically at market prices.

In terms of refined oil products, since 1982 the pricing system had two levels: 'in-quota' low prices and market prices for those products beyond the quota set by the state. The 'in-quota' prices mainly served the military, agriculture, and some large SOEs. The central government also relaxed control over oil trade in some provinces with surplus hard currencies and in the special economic zones (Pietz & Ellsworth 2000: 12-13). However, because oil prices were under strict state control while most of the raw materials that the oil industry relied upon had to be acquired through the market, many oil firms were at a loss, and the whole industry registered in the red from 1988 to 1994.

To help the petroleum industry out of the conundrum, the central government took two steps. One was to raise oil prices several times. As of 1994, domestic crude oil prices were approximately equivalent to 77 per cent of international prices (Yan & Huang 1995). The next step was to give the NOCs more autonomy. In the late 1980s and early 1990s, both CNPC and Sinopec were entitled to distribute 9 per cent refined oil products and 5 per cent crude oil respectively. However, these measures did not turn the oil industry around by 1993. Consequently, cash starvation not only stranded oil production in the existing oilfields, but also resulted in sluggish discovery of new oilfields. Yet the government was still saddled with subsidizing this sector with RMB 4-5 billion (Bi 1994). It had to resort to more radical measures.

After Deng's Southern Tour in 1992, the government undertook a series of decentralization measures. 'The number of production goods regulated by the State Price Administration was reduced from 737 to 89 and price ceilings were removed for many goods' (Garbaccio 1994: 1-34). Among them, oil prices were also deregulated in great measure.

(2) Price Deregulation

In 1993 the government let the market play a decisive role in determining the prices of most crude oil and refined oil products. It removed the low-price quotas and allowed two-thirds of crude oil to be sold at deregulated rates close to or above international levels (Andrews-Speed 2004: 69). Also, except in a few sectors such as agriculture and the military, subsidized prices of oil products were phased out and the proportion of market-priced refined oil products rose to about 65 per cent in 1993, from less than 10 per cent in 1983 (Wang 1999: 57). Hence, the 'three-tiered' pricing system *de facto* changed into a 'two-track' system.

The oil pricing reform can be regarded as a building block to construct the 'socialist market economy'. Nonetheless, government concerns over the long-term faltering operation of the petroleum industry, coupled with the pressures from the NOCs, prompted the central government to change policy tack. The marketization tide followed by Deng's Southern Tour provided an excellent opportunity to deregulate the oil sector. Moreover, it was the first large-scale experiment on oil price release in the oil industry. As Goldstein (1992: 53) argued, the 1993 deregulation was a 'shock treatment on oil pricing' whose policy goals were: first, reducing the waste of energy resources; second, giving greater weight to market forces than administrative powers; and third, pumping funds into China's cash-starved oil producers.

Nevertheless, such 'shock therapy' seemed unworkable in China because it was only the oil price levels rather than the pricing mechanisms that were integrated with the world prices. Moreover, only part of the oil prices rather than entire products were merged with the world prices. Consequently, the system left loopholes for oil smuggling.

(3) 1994-1998: Price Re-regulation

While the decentralization boosted rapid economic growth, it also engendered serious economic problems. Inflation skyrocketed to 26 per cent in February 1994, from 23 per cent in January (Goldstein 1994: 66-67), much higher than the alert baseline of 5 per cent.[14] The serious inflation led to high prices, which not only affected people's lives, but also increased costs of production. Protests emanated from those sectors that had to absorb the steep rise of input costs (Garbaccio 1994: 1). For instance, Sinopec used to enjoy 'in-quota' low-price crude oil for its refineries. When the state abolished the 'in-quota' prices in January 1993, the costs for 35-40 per cent of the crude oil Sinopec required to feed its refineries rose up by 134 per cent (Goldstein 1993: 50-52). However, Sinopec could not make up for the rising costs through marketing its refined oil products because most downstream profits went to the pockets of provincial oil companies. They bought most oil products from Sinopec at controlled prices but could sell them at much higher market prices. Hence, Sinopec strongly protested the high prices it was suddenly forced to pay for its inputs (Goldstein 1993).

Nevertheless, the government was confronting a policy dilemma: on the one hand, China needed to curb rising prices to avoid compromising economic growth and social stability; on the other hand, if China maintained prices of refined oil lower than international prices, the petroleum industry could hardly recover from the monetary loss.[15]

How did China cope with such a policy dilemma? In 1994, the central government took a command approach to resume control over price setting. Not only did the state abolish the two-track pricing system, but it again controlled the prices of both crude oil and refined oil products in each city and province, as well as the differences between wholesale and retail prices. Therefore, the market was abolished. After the reform, the prices of the previous 'in-quota' low- and high-priced crude oil were increased from RMB 205/t and RMB 535/t respectively to a unified price of RMB 700/t, which was the first grade crude oil. In the second grade, the surplus crude oil under the three-tiered system and the crude oil from four small oilfields with operational difficulties were sold at a uniform price of RMB 1250/t (Bi 1994). Moreover, the average crude oil price reached RMB 1020/t after state adjustments from May 1994 to December 1996, thus ending the history of long-term, low-priced crude oil (Fan 1999: 23). However, as shown in Table 2, the domestic crude price was still below the international price.

Refined oil pricing was also revised after the reform. The ex-plant prices (prices after refining) and retail prices of the 'in-quota' and 'outside-quota' refined oil in the 35 central cities were merged respectively and defined by the state. The central government only stipulated the pricing principle on the wholesale prices in 35 cities, and the wholesale and retail prices in other regions, whereas it was up to each provincial pricing authority to decide the specific retail prices. In general, the average price of domestic refined oil products was higher than the international one (see Table 2).

TABLE 2: Price Comparison between Domestic and International Crude and Refined Products in 1994

Type of oil	International			Domestic
	US$/b	US$/t	RMB/t	RMB/t
Crude oil	18.00	129.24	1,124.39	818.00
Gasoline	23.40	197.20	1,715.64	2,350.00
Diesel	20.20	151.50	1,318.05	1,900.00

Source: Yan & Huang (1995)

The state put stringent controls on oil flows. The State Planning Commission carried out uniform allocation over domestic oil production as well as imports of crude and refined oil. Except for self-use, reasonable wear and tear, and state-planned exports, crude oil produced by CNPC must be delivered to the refineries or petrochemicals of Sinopec for processing. Oilfields were not permitted to exchange oil for electricity or other utilities; nor did they need to supply crude oil to their localities. The oil refineries were forbidden to process crude oil supplied by clients in various forms and sell refined oil products directly to the market (Chu & Li 2004: 71-72). In addition, oil import and export businesses were assigned to certain companies, while other entities without a state license were forbidden to conduct trade in oil.

To cope with the glut of imported oil in the domestic market, the state directly imposed a temporary import ban on both crude and refined oil in early 1994. Compared with 1992, the imported refined oil products in 1993 more than doubled, from 7.68 million tons (Mt) to 17.41 Mt, while crude oil imports rose from 11.35 Mt to 15.64 Mt (Li 1996). As a result, Sinopec suffered a lot as coastal regions preferred purchasing the cheaper imported oil of better quality than the oil from northern China. What is more, the import surge made China a net oil importer and forced China to pay a bill of US$ 2.3 billion in 1993 (Goldstein 1994). That was why Sinopec strongly pressured the government to intervene.

In sum, the government assertively imposed an import ban to protect the domestic oil industry and increased prices of both crude and refined oil, thus alleviating to some extent the capital-starvation problem in the oil industry. The state's re-regulation also straightened out the oil market and effectively beat oil speculation. However, due to the disjuncture between domestic and foreign energy markets, a price gap emerged every time international oil prices fluctuated, which still left loopholes for illegal oil smuggling. Further, price setting by the state brought about new problems. On the one hand, it reduced market actors' autonomy and strangled the fledging competition among petroleum firms, thereby making them rely on the government when they went into the red. On the other hand, according to the new pricing mechanism, crude and refined oil prices were different between different provinces but the same within each province, which could not fully incorporate transport costs since each province is so large. Also, oil prices could hardly reflect the supply and demand fluctuations due to changes of climates and seasons, considering that the price of some refined oil products, such as low-freezing-point diesel oil, was kept unchanged for a whole year (Research Group 1995). Therefore, oil prices could hardly function appropriately for resource allocation.

Why did the state take such a command approach in 1994? The major reason was the Chinese leadership was afraid that high inflation and rising prices would jeopardize social stability. Nonetheless, after the reform, the serious inflation problem had not been resolved but persisted. Inflation became so serious in the 1990s that the central government had to secure a 'soft landing' solution.[16] The government expected to protect the domestic market, but it adopted a radical way to remove all market oil prices. Moreover, in those areas where it was necessary for the government to regulate, such as oil industry policies, overseas development strategies and oil market construction, state regulation was not in place. Hence, 'the oil price controls appear to have only one obvious beneficiary: the state oil monopoly' (Wang 1999: 60).

1998–Present: Price Integration

In the fourth stage comes the era of oil pricing in line with world oil prices, from 1998 to date. This pricing reform started in June 1998 after the State Council promulgated the *Plan of Crude Oil and Refined Oil Product Pricing Reform*, which stipulated that the prices of domestic crude and refined oil products should be in line with international oil prices.[17] It is clear that integrating with international oil prices might expose China to foreign risks. In view of the strategic implication of oil, oil price volatilities and China's concerns about national security, why is Beijing willing to expose itself to foreign impacts?

This is mainly because oil pricing reform was part and parcel of the overall petroleum industry overhaul in 1998. According to Han Huifang, vice director-general of the Department of Prices, State Development and Planning Commission (SDPC), such integration has been determined by China's oil resource endowment and the *status quo* of the oil industry. As China has to count on foreign oil imports, price integration could instruct domestic firms to make full use of the international market. This in turn could not only ensure oil supplies to China, but also be conducive to protecting domestic resources. Also, with its entry into the WTO, the Chinese energy market is set to be connected with the global one. Hence, only integrating with the international market could boost the development of domestic firms so that they could compete with the oil multinationals (*Price Theory & Practice* 2000: 10-12).

Another factor that spurred this reform was that the differences between the domestic and foreign prices provided opportunities for illegal oil trafficking, thereby exerting greater pressure to dismantle the artificial price distortion and integrate domestic prices with international ones. Due to the sharp price gap in the first half of 1997 (the average domestic price was US$ 34.2 per barrel (/b) and only US$ 17/b in the international market in March 1997), China's customs seized 62,000 metric tons of smuggled refined oil, valued at RMB 133 million (US$ 16 million) (*China Business Information Network* 1997).

The 1998 oil price reform had pushed the NOCs closer to the market, in tandem with some protective measures.[18] Overnight, domestic oil companies had been compelled to accept the price pressures and increasing competition from foreign oil giants. While this demonstrates the determination of the Chinese government to persist in its reform and opening up, such a move did shock the long-protected NOCs. They had to pay close heed to production cost reduction and market changes. Nonetheless, it was not a fatal blow for the NOCs, because they have strengthened their monopoly in the Chinese market. As Kennedy (2003: 3) suggested, the NOCs are not merely price-takers; rather, they try to influence state policy making, either through intermediaries such as business associations or through direct lobbying. As a result, China's retail market for refined oil was inaccessible to private investors until December 2005 and the whole market in December 2006, and the NOCs have *de facto* gained more power to set oil prices.

While China's deeper involvement in the global market has increased international competition, it has been exposed to foreign impact more frequently. The government still has misgivings for fear that foreign influence might imperil social stability. Hence, Beijing found itself in a predicament: while it had to integrate the domestic oil market with the outside, it expected that foreign impacts could be under its control. The government 'was reluctant to completely deregulate product prices out of a desire to maintain prices that are not "too low" to protect the domestic oil industry and not "too high" to prevent social instability and to curb inflationary pressures' (Downs 2004: 180-181). By the same token, the SDPC also underscored that domestic crude oil should be sold at a slightly lower price than overseas crude for the purpose of encouraging Chinese refineries to purchase domestic crude (*Oil & Gas Journal* 1998). This was perhaps a conciliatory carrot for Sinopec in order to reduce obstacles against the price reform considering that Sinopec had to pay a higher bill for feedstock and that most of its refineries were uneconomic in scale and uncompetitive vis-à-vis foreign counterparts.

The 1998 import ban was another typical case indicating the government's eclectic approach. China imposed another ban on gasoline and diesel imports in September 1998 to protect the NOCs, lest they be edged out by the flood of cheaper oil from foreign countries. Before the 1997-1998 financial crises, a continuous price decline enlarged the gap between Chinese domestic and international oil prices. For instance, in the second half of 1998, domestic gasoline and diesel prices were two to three times higher than the comparable products in Singapore (Lu 1999). Lower international oil prices and an oil glut in neighbouring countries had stimulated massive oil imports into China, both legally and illegally. As a result, large quantities of domestic refined products sat unsold. Accordingly, domestic crude oil producers had to cut their production. Moreover, worldwide oil prices declined, adversely affecting Chinese oil exports and foreign exchange earnings. Consequently, the cheaper foreign oil had threatened the viability of the NOCs. Rather than taking advantage of the cheaper foreign oil to fuel the economy, the government opted to fence off the domestic oil industry from international competition by imposing import bans and cracking down on oil smuggling. Were the domestic oil industry to be flooded with foreign oil products, it not only meant the loss of billions of dollars worth of revenues from the oil industry, but it would also lead to unemployment.

The oil pricing mechanism since 1998 exposed a grave deficiency. Because oil prices in China were based on the average price on the Singapore market in the previous month, any oil product suppliers or even consumers could guess the price trend in the next month. The over-transparent pricing mechanism resulted in over-speculation in the domestic petroleum market.

To redress this problem, the central government made two changes on 17 October 2001. First, domestic refined oil prices would not directly be pegged with international market rates. Rather, unless the international refined oil prices fluctuated beyond a range of 8 per cent, domestic oil prices would not be adjusted. Second, domestic refined oil prices would be integrated with the market prices in Singapore, Rotterdam and New York, rather than only use Singapore prices. Accordingly, refined oil prices would be adjusted at unannounced times rather than each month (Chu & Li 2004). It was up to the SDPC to decide when and in what range to frame the domestic prices of gasoline and diesel oil. The crude oil pricing system remains the same, albeit it is composed of a benchmark price and a premium.[19] This mechanism was not so transparent as the previous one, but it was widely regarded as favouring the NOCs and thus a kind of anti-market arrangement (Lin 2003).

Meanwhile, the Chinese government has taken some measures to defend the interests of the NOCs with its accession into the WTO. In October 2001, Beijing stipulated that all gas stations to be built in China must be controlled or fully invested by either CNPC or Sinopec, implying that private investors can invest in gas stations only in the form of a joint venture with either of the Chinese companies. At the same time, the government has formally released control over the fuel oil price and let it float on the market. In 2004, the state further abolished the quotas of fuel oil imports and exports.

In October 2006, the government stopped pegging refined oil prices with prices in the Singapore, Rotterdam and New York markets and decided to use the average price of crude oil in Brent, Dubai and Minas as the benchmark, plus domestic average processing costs and reasonable profits. In May 2009, the government decided not to adjust domestic prices of refined oil unless the range of the average prices of crude oil in the international markets is greater than 4 per cent for 22 working days.

Yet these successive reforms have not resolved the over-transparency, time-lag and rigidity problems of the oil pricing system. This system *de facto* is merely an international integration in oil price levels, but has not fulfilled the goal of integrating price-shaping mechanisms. One pronounced problem is that domestic oil prices passively follow international prices. To some extent, this system could respond to the international oil price fluctuations, but the response comes in a tardy manner. Particularly, domestic oil prices can hardly reflect the supply and demand relations and domestic change of energy consumption structure in a timely fashion, let alone convey the supply and demand information in the domestic oil market to the world market in the form of price signals.

Discussion and Conclusion

The role of the state in driving development has attracted wide attention and most studies focus on the relationship between the state and the market. Initially, scholars focused on whether the state should intervene in the market or not, forming the debate between state minimalists and state interventionists. Later, academia's attention shifted to the question of the extent to which the state should be involved in a modern economy, creating two new opposite paradigms: developmental state versus predatory state. The developmental state model in particular has been widely adopted to explain the economic takeoff in East Asian countries. This model, however, has been subject to criticism by both neo-statists and neo-pluralists. The neo-statists, represented by Peter Evans and Linda Weiss, argue that close public–private networks or business associations, rather than simply state autonomy, are key for effective governance and thus economic growth (Evans 1995; Weiss 1998). The neo-pluralists have gone even further to argue for a state-in-society approach, stressing that states are part of societies and states vary in their effectiveness based on their ties to society. For instance, in developmental states in East Asia, the state is 'strong' because it has few ties to society. The revisionist approaches, like the developmental state model, follow the same logic of 'an essential state–society dichotomy which contrasts with the observable nature of markets as mechanisms of governance' (Underhill & Zhang 2005: 44).

Taking the market as a proxy for 'society', Underhill and Zhang (2005) have developed a state–market condominium model, which sees the state and market as an integrated ensemble of governance where the interests of market agents are integrated into the state. The state–market condominium model only portrays the ideal situation where the state and the market coexist symbiotically and neither competes for the 'commanding highs'. However, as two different kinds of 'authorities' for distributing resources, boundaries do exist between them although the 'line' that sets them apart may differ in different countries. Sustained economic development of a country will be jeopardized if its government tries to fully replace the market to allocate resources, as verified by China's command economy system. Meanwhile, the market per se has an inherent drive for expansion, trying to go across national boundaries and even defy the authority of a state. Although the role of the state differs, most countries embracing the market economy can be classified as the state-in-market paradigm, where state interventions in economic activities are subject to market forces.

China, in contrast, is taking a different way. The measures that China has taken present the attribute of SMMA in that they are in a wide spectrum between market domination and state control. The extent of state involvement differs in different energy policies and projects. In the case of institutional reform, while the state has strengthened its regulatory power and reshaped market structure in favour of a handful of NOCs through the 1998 restructuring, it has started the process of oil price integration and introduced some market competition among the NOCs. It also endowed them with greater autonomy to operate on their own rather than intervening in their routine business through administrative mandates. While carrying out thorough restructuring of the Chinese oil market with the aim of reducing the competition for the newborn oil mammoths, the state does not reject market competition and exchange activities between and within the Chinese firms themselves. Thus, the domestic market has become a powerhouse for the Chinese oil giants.

By way of an SMMA, the Chinese government embraces market competition to enhance industrial production, improve corporate efficiency and encourage technical injection and innovation. In the meantime, the government tries to get market operation under its control, fearing that wild market competition will disrupt economic order or bring about socio-political turmoil. Hence, within China's policy packages it is easy to find such a Janus-faced character. For instance, while introducing some market competition within and among the NOCs in the petroleum sector, the government tries to empower its SOEs and devise a petroleum market structure, such as determining the number of major market players, delimiting their market share and stipulating what kind of businesses they can embark on. While integrating domestic crude oil prices with the international ones, Beijing still holds the reins over the prices of refined oil products. While allowing the entry of private and foreign investments in some projects, China often sets a limit on the locations and their shares, for instance, foreign investment in offshore E&D in China requires collaboration with CNOOC. Private gas stations have been permitted to embark on the retail business of refined oil products, but they have no other options but to get the oil products from either CNPC or Sinopec. The government will turn to the instruments of a command economy whenever it feels it necessary, such as the direct import bans in 1994 and 1998. Hence, China's SMMA can be regarded as a market-in-state model. In stark contrast with many other market economies where the market is above or at least equal to the state, China's state is superior to the market.

A simple dichotomy of a developmental or predatory model apparently can hardly capture the dynamism of China's approach in running the petroleum industry. First, development is not always the overriding goal in China's political economic ecology. As the government has constantly underscored, 'reform, development and stability are highly correlated, but stability is a prerequisite and guarantee for the other two goals. In the absence of stability, China could hardly make any achievement and what China has achieved would come to nought as well' (Hu 2011). This means that stability cannot be sacrificed for the sake of any reform or development measure. Second, with the emergence of a plurality of interest groups, the society has become more divided and fragmented. As a result, development for some is not necessarily conducive to progress for others. For instance, the import ban in 1998 aiming to preserve the interest of China's NOCs resulted in a surge of energy costs for numerous manufacturers and exporters. Third, sometimes it is hard to tell whether the government's role is developmental or not. On some occasions, the government was reluctant to allow the prices of domestic oil products to fully go with the surging international oil prices for fear that would jeopardize China's exports or push up inflation. On other occasions, the government maintained high oil prices notwithstanding a sharp decline of oil prices on the international market, in an attempt to keep the NOCs' returns high. In a nutshell, drawing on either the developmental state paradigm or the predatory model can hardly reflect the government's complex motives. Thanks to its embrace of a set of different goals under different circumstances, Beijing tends to prioritize different goals, and much depends on the state's perception regarding whether state retreat would jeopardize social and political security or not. Ostensibly it is not merely concerned with the objective of development.

Inherent in the state capitalism model is the implication that state-entrusted actors are instrumental to the state and that they will obediently follow state directives, so that the state can effectively carry out its policies. Indeed, the Chinese government expects that its NOCs will be subject to state will and want to put marketization under its control, but the effectiveness of its management is questionable. Not only does the Chinese general public have growing dissatisfaction with the SOE monopolies as well as growing income disparity aggravated by those monopolies, but ironically, the NOCs, notwithstanding their state ownership, do not align themselves with the government's elaborate plans. In fact, they often have their own priorities and subsequently the role they want to play, which is not necessarily in conformity with the state's view. The NOCs have been deprived of administrative functions in the 1998 industrial reform, but at the same time, that separation does not amount to saying they have detached from the government's energy policy process; on the contrary, by virtue of their monopoly, oil expertise, market information, political clout, close liaisons with the leadership, big largesse to the government, and government's industrial policy of bolstering some large SOEs, they have gained stronger influence in both the Chinese energy policy process and the domestic market. In pursuit of their commercial interests, the NOCs may even shirk their social responsibilities and dodge government mandates.[20] As Naughton and Yang argue:

> Like governments in all transitional economies, China's leaders abandoned crude but powerful tools of government resource allocation before market-friendly indirect and regulatory institutions were available. Inevitably, government effectiveness declined and the central government's financial prowess steadily eroded. The Chinese government simply seemed ill equipped to carry out the tasks demanded of it in the new economic environment. Even more troubling, the Chinese government frequently seemed unable to override particularistic, regional, and sectional interests. (Naughton & Yang 2004: 1-2)

Further studies are called for with regard to why and how the SMMA has been formulated.

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NOTES

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2 See, for example, Segal and Thun 2001: 557-588; Zweig 1994: 253-274.

3 See, for example, Brennan and Buchanan 1980; Rotberg 2004: 6.

4 It is said that successful industrial firms worldwide have some common features: 'first, the overwhelming majority are privately owned. … In addition, competitive firms devote much effort to continuously enhancing efficiency in small and large ways. …' (See Yusuf, Nabeshima, and Perkins 2006: 20-21).

5 See Hirschman 1982. Considering that market openness benefits the society as consumers have more choices and face lower costs, it is also a way to vent social indignation towards the serious social disparity and oil shortages derived from the NOCs' monopolies. The industrial monopoly problem, including the NOCs' monopoly, has been widely rebuked in China because it reduces market efficiency, intensifies social inequality, abuses the monopoly power, etc. See Yu 2006; Cao 2006.

6 'Hard budget constraint' means that firms assume full responsibility for whatever decisions they make and the government will not bail them out for the losses they incur.

7 Parts of the elaborations on the mechanisms are adapted from Chen 2009.

8 To learn how the NOCs exert influence on the state, see Chen (2009) and Chen (2011).

9 In terms of the oil industry, state ownership dominance, the upstream business, pricing power, management personnel, taxing power, etc. are such 'core' zones.

10 According to Weiss (1998: 26), a strong state possesses three core capacities: 'the ability to formulate policy goals and evolve strategies for implementing them independent of societal pressures; the ability to alter the behavior of important domestic groups in order to further its policies; and the ability to restructure the domestic environment (e.g. property rights and industrial structure) in pursuit of its goals.'

11 Simon (1957: xxiv) proposed the notion in 1957 in countering the rational analysis made by Anderson (1991: 1-24). 'Bounded rationality' means that an agent's behavior is *intendedly* rational, but only *limitedly* so'. Rationality basically means to purse an optimal goal with the resources available.

12 Speech at the Inauguration of the Two Largest Corporations, 27 July 1998 (CNPC 2000).

13 One important measure was to integrate domestic crude price with international prices for the first time in 1998.

14 The consumer price index (CPI) is an index to measure the average price movements of various goods and services purchased by households throughout the country. The index shows changes in the total amount of expenditure required to purchase the equivalent goods and services purchased by households in the base year, setting the consumption structure (Source: Statistics Bureau, Ministry of Internal Affairs and Communication, Japan, http://www.stat.go.jp/english/data/cpi/1585.htm#Q01). According to the Chinese economist, Xu Hongyuan, CPI within 5 per cent is normal, 5-9 per cent indicates moderate inflation, and above 9 per cent is serious inflation (Wen 2004).

15 Goldstein has set out these contradictions: 1) raising subsidized energy prices vs fighting inflation; 2) injecting competition and breaking up the state energy behemoths; boosting domestic oil production to minimize import dependence vs ceding control of its oilfields to foreigners. See Goldstein 1994.

16 Soft landing can be defined as inflation reduction without economic growth and employment collapse.

17 For details of the pricing mechanism, refer to *Oil & Gas Journal* 1998.

18 Measures included: excluding the onshore upstream from fully opening to foreign investors; allowing the NOCs to aggressively pre-empt domestic retail stations before the market openness deadlines; and adopting the 'go out' strategy.

19 The benchmark price is in line with the FOB cost plus tariff of comparable crude oil in the international market in the last month. FOB stands for free on board, meaning that the seller pays for delivering the goods to the port of shipment and the loading costs, while the buyer needs to pay other costs such as cost of marine freight transport, insurance, unloading, and transportation from the arrival port to the final destination.

20 For detailed explanations and an example, see Chen 2008 and Chen 2009.

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