

May 24, 2007

Testimony of Barry Naughton

Professor, Graduate School of International Relations and Pacific Studies
(IR/PS), University of California, San Diego

“China’s State Sector, Industrial Policies and the 11th Five Year Plan”

Before the US-China Economic and Security Review Commission Hearing
on the “Extent of the Government’s Control of China’s Economy, and
Implications for the United States”

China has transformed into a predominantly market economy, but the Chinese government continues to play a prominent and actively interventionist role in that economy. In this paper I assess the economic impact of the Chinese government by looking at ownership and planning. The centrally-run government-owned sector of the economy is substantial, despite years of steady shrinkage, and there are recent signs that this central government-owned sector is stabilizing. This central “core” is important and subject to direct control by the government, but it is also overwhelmingly concentrated on natural resource and infrastructure sectors that are important primarily to the Chinese domestic economy. Separately, the government attempts to shape the overall development of the economy through long-range plans and industrial policy. These plans are ambitious, but they are also marked by conflicting objectives, a lack of consistency between objectives and instruments, and an unimpressive past track record. The recent 11th Five Year Plan (2006-2010) and Medium-Long Term Technology Development Program (2006-2020) lay out impressive visions for the future but continue to display some of the shortcomings of the recent past.

The State-Run Sector of the Economy

The state-run sector has been steadily shrinking since about 1993. From a high point of just over 70 million workers, the total has declined to just under 40 million today. This figure counts workers in joint stock or limited liability corporations in which the government has a controlling stake (17 million workers at the end of 2005). Of this state labor force, about 8.5 million workers are employed by the enterprises that are controlled by the central government SASAC (State Asset Supervision and Administration Commission), which was tasked with exercising ownership responsibilities over state non-financial enterprises in 2002.¹ There were 159 central SASAC enterprises at the end of 2006: with an average of over 50,000 workers per “enterprise,” these are obviously

¹ The labor force figure is a 2002 figure from Lian 2004.

large firms, and this group of enterprises can legitimately claim to be the core of the Chinese state sector. In fact, many of the larger of these 159 enterprises are in fact holding companies converted from the former industrial ministries. They have many subsidiary enterprises, including several hundred corporations that are listed on the stock exchange. Some of the 159, on the other hand, are relatively small research institutes or trading companies without obvious corporate parents. Organizationally, then, this is a very heterogeneous group.

The central SASAC firms are extremely concentrated in a limited number of sectors. As the following table shows, natural resources and utilities predominate. Indeed, five sectors accounted for two-thirds of central SASAC's workers and nearly three-quarters of the capital (2002 data, from Lian 2004).

Central SASAC Enterprises, Concentrated in a Few Natural Resource and Natural Monopoly Sectors

	Firms	Capital Billion RMB	Workers Million	Percent Total Capitalization	Percent Total Workers
Oil and Refining	3	1,321	2.1	19%	24%
Ferrous & Non-Ferrous	6	360	0.6	5%	6%
Electricity	10	1,500	1.2	22%	14%
Telecom	5	1,308	0.9	19%	11%
Military Industry	10	600	0.9	9%	11%
Top Five	34	5,089	5.7	73%	66%

These firms are a very important part of China's economy. They control the energy resources and most of the transportation infrastructure of the country. Moreover the large defense industry conglomerates make up the entirety of China's military industrial complex. However, we should note that they are *not* a very important part of China's export economy. Most of these firms provide intermediate goods and services to China's domestic economy. All central SASAC firms in 2006 provided \$35 billion in exports, only 3.6% of China's total exports (SASAC 2007). By contrast, foreign-invested firms produced over 60% of China's total exports. If we examine the high-tech sectors that are of particular concern to the US, the imbalance is even more extreme. Only a tiny handful of central SASAC firms produce any high tech exports at all, and 87% of high tech exports were produced by foreign-invested enterprises in 2007.

While the state sector overall has been steadily contracting, there is evidence that the central sector is being stabilized. In September 2006, SASAC laid out seven industrial sectors over which the government should retain "absolute control" (meaning more than 50% ownership stakes in the primary firms). The sectors named were coal, oil, electricity, defense, telecom, air transport and ocean shipping. This list merely re-affirms the status quo, although the inclusion of coal is peculiar, since there are many small private coal mines in China. The SASAC declaration may even slightly accelerate the process of selling minority stakes to the public, or privatizing non-core sectors. The main impact is to draw a line around the public sector and express a clear intent to restrain the pace of change within that circumscribed state sector (SASAC 2006; Xinhua 2006).

The SASAC System

The firms owned by central SASAC are organized in a distinctive fashion. First, most of the firms are engaged in limited market competition. There are usually two or three firms that compete with each other, but are protected from new entrants, domestic or foreign. SASAC sometimes tries to moderate competition (to keep profits up), but tries not to let any single firm establish a monopoly position. This pattern is evident in all of the seven sectors designated for continued state ownership. The institutional setup of the “SASAC system” includes not just SASAC itself, but also the characteristic network of holding companies and subsidiaries that links together corporate entities in the state sector. The essence of the SASAC system is that there are usually three tiers of ownership, and sometimes more. At the top is SASAC itself, the “ownership agency,” with the formal powers of ownership, including personnel and financial authority.² At the bottom are hundreds of joint stock corporations, many of them listed on the Chinese stock market. In the middle is a layer of holding companies which possess controlling stakes in the base-layer corporations. This middle layer is heterogeneous. In some cases, the middle layer companies are simply empty shells, grouping together the worthless and money-losing assets that bureaucrats tried to keep out of the corporations that were being listed on the stock exchanges. In other cases, though, the middle layer consists of wealthy and powerful corporations, descended from the industrial ministries. The middle layer companies own their subsidiary corporations, although they themselves are owned by SASAC.

Two characteristics of these middle tier companies are of direct interest. First, they are non-transparent. In general, these middle layer corporations are intertwined with their subordinate enterprises. They may share managers and boards of directors. Related party transactions are common. Listed companies loan money to their parents, and borrow from them. Assets are injected, and reclaimed. The middle layer companies are generally 100% owned by the government, at least in theory. Many do not have formal Boards of Directors, and they are not required to disclose information or publish annual reports. Much of SASAC’s activity is directed toward changing this state of affairs. SASAC would like to institute Boards of Directors in most of these middle layer companies, and steadily convert them into regulated and transparent corporations, and preferably list them on the stock exchanges. A few firms—such as Baosteel—have already taken this step, but every company is different, and progress has been slow.

Second, these middle tier companies have a lot of money. State enterprise profitability began to increase strongly after 2000. Central SASAC firms have shared strongly in this rebound in profitability. The global shift toward higher prices for natural resources (itself significantly influenced by the integration of China’s labor intensive production system into world markets) has been of particular benefit to the SASAC firms, which are concentrated in those areas. Most crucially, though, is the fact that these firms operate in protected sectors in the midst of China’s booming economy. By 2006, SASAC firms,

² In actuality, top personnel decisions for the 50 largest firms is exercised directly by the Organization Department of the Communist Party, and ratified by the Standing Committee of the Communist Party Politburo. Personnel decisions at the second tier for the largest 50, and all personnel decisions for the remaining 100 firms, are made by SASAC itself.

which include the profitable telecom firms, as well as trading and transport firms, were pulling in profits equal to 3.6% of GDP.³ The remarkable and surprising fact about this large sum of money is that the middle tier companies are not required to remit this money to SASAC, or to the Chinese government at all. Under a temporary regulation approved in 1994—at a time when state enterprises were scarcely making any profit at all—state firms were relieved of the obligation to remit profits. Today, SASAC is trying very hard to re-institute the payment of dividend to the government (owner). Indeed, an agreement in principle was reached at the end of 2006 to begin doing this, but so far, it has not been implemented. Although there are many reasons why we would expect implementation to be slow, it is unclear when a serious beginning will be made to this new institutional arrangement.

The middle layer corporations in the SASAC system dispose of substantial investment resources, which are channeled primarily into domestic economic development. Each of the large middle tier corporations disposes of their own investment capital under conditions of limited competition, in its own interests but in ways that are generally consistent with the government mandate to improve infrastructure and grow the economy. Retained funds—profit but also depreciation—have a relatively low cost to these firms. While firms pursue their own interests, the safest and most effective way to pursue those interests is through large-scale investment. Thus, the high investment development strategy is in practice intertwined with a nominally state-owned oligopoly of large corporations, which pursue separate and sometimes conflicting interests.

At the same time, these firms have privileged access to bank credit. Most household and corporate saving, which is robust, is channeled into the banking system, creating a bank-dominated financial system, one that is “deep but narrow.” (Naughton 2007: 449-60). Government influence on this system, still predominantly state-owned, has been strong. Since the mid-1990s, an effort has been made to concentrate government influence on three policy banks, in order to free the other state-owned commercial banks to make decisions on a more strictly commercial basis. The policy banks today play a substantial role. As of November 2006, the three policy banks accounted for 8% of total banking system assets, or about 3.5 trillion RMB.⁴

The result is that investment by government-controlled entities has continued to be important. State entities accounted for more than half of all fixed investment up until the turn of the century, even after two decades of reform. Since that time direct state investment has fallen to a third of the total. Even today, while spending by traditional SOEs has continued to decline, when that spending is combined with the spending of joint stock corporations in which the government has a controlling interest, the total is still very substantial. Indeed, since the share of GDP devoted to fixed investment has increased to over 40%—a historically unprecedented figure—and investment by all state-

³ In the interests of full disclosure, it should be pointed out that this is a pre-tax figure, and that 8 or 10 firms, including the oil companies, account for the bulk of the profit.

⁴ “Woguo yinhangye zichan jiegou [Composition of assets in our banking industry]” at <http://www.cbrc.gov.cn/chinese/home/jsp/docView.jsp?docID=20061230032C22A68FC318CCFFB45C1E5790A800>.

controlled entities has remained relatively stable at almost 20% of GDP. Obviously, this is a huge sum of money, giving the government strong direct influence over the development path.

Ownership Shares of Fixed Investment

	State	(Urban State & State-Controlled)	Collective	Mixed Corporate	Private	Foreign-Invested
1985	66%		13%	n.a.	21%	0%
2002	43%		14%	20%	15%	8%
2004	39%	(48%)	14%	25%	11%	10%
2005	33%	(44%)	13%	27%	16%	9%

TJNJ 2005: 205; 2006: 189-190, 207.

Thus, the SASAC system is an extremely important part of China’s development strategy, because it ensures that domestic investment is high, and domestic infrastructure development rapid enough to support China’s rapid growth. However, the actual implementation of this investment policy is in fact compartmentalized and subject to capture by organizations over which the government may have only limited supervisory capacity. The SASAC system ensures that China has enough power, roads and telecommunications capacity. It underpins the military industrial complex (Cheung 2008). But it is not a very effective system for shaping the future development of the Chinese economy.

Industrial Policy and the NDRC

China began to experiment with industrial policies in the 1980s, with policies that were designed to strengthen larger firms and grow “national champions” that could reap economies of scale. In general, these policies could be seen as attempting to offset the bias toward small firms created by the early stages of “bottom up” economic transition. At various times, they sought to shore up Chinese state-owned enterprises, emulate Japanese and Korean national champion firms, and facilitate technology transfer from developed country firms. These efforts were not very successful, and they pretty much succumbed, at the end of the 1990s, to two extraordinary events. The first was the withdrawal from the state sector in China after 1994. The second was the impact of the Asian Financial Crisis, particularly on Korea. The collapse of a number of Korean *chaebols* (combined with Japan’s decade-long stagnation) led to the evaporation of near-at-hand models for the objective of industrial policy. As the dust settled, and China prepared to enter the WTO, industrial policy was less relevant to the Chinese economy than ever before. Past attempts at industrial policy had generally failed; there were no clear models of success to emulate; and the attention of policy-makers was largely taken up by preparations for WTO membership. Moreover, technology policy—an important strand in overall industrial policy—took a sharp turn toward a more small-firm, open, and market-friendly approach in about 1999 (although the support given for high technology firms did not diminish). By the turn of the century, it seemed as if China had given up on industrial policy, except for across-the-board support for high technology industry.

However, despite expectations as recent as the year 2001, industrial policy is by no means dead in China. Indeed, in the past five years, the Hu Jintao-Wen Jiabao Administration has resuscitated a broad array of industrial policies. There have been many different strands to overall industrial policy that, taken together, represent a clear increase in economic nationalism. However, whether these will have a coherent effect on the economy's actual development path remains in doubt. Industrial policies have generally been rolled out by the National Development and Reform Commission (NDRC), the latest incarnation of what was once the State Planning Commission. Such policies have been promulgated periodically since the early 1990s, but they have been scarce and largely irrelevant. Recently, the pace at which such documents are issued has stepped up, and they have become more assertive. NDRC industrial policies are typically not issued for those sectors dominated by central SASAC firms—these need no such policy since they are governed by the decisions of government firms, sometimes coordinating and sometimes competing. Industrial policies, then, attempt to lay out guidelines for sectors that are already characterized by diverse ownership forms, and over which the NDRC does not have direct authority. In some cases (such as steel), the NDRC has forbidden foreign majority ownership (Feng 2003; NDRC 2005; NDRC 2007). Moreover, the NDRC has intervened in take-over efforts by foreign firms involving Chinese enterprises in the machinery and cement sectors. The roadblocks set up before the Carlisle Group's proposed buy-out of Xugong Heavy Equipment have served as a well-publicized bellwether for this type of policy-making. These policies can be protectionist, but the NDRC disposes of few instruments to make the developmental objectives of their industrial policies a reality.

Overall, these industrial policies should be seen as part of the process of the NDRC clawing its way back into a position of prominence. Sidelined during much of the 1980s and 1990s, the NDRC has absorbed personnel from a variety of different institutions, achieved a higher average quality of personnel while shrinking in absolute size, and broken away from the extreme parochialism of the old Planning Commission. However, it has also seized on multiple opportunities to re-assert an interventionist role in the economy. Economic nationalism has become popular in China. The NDRC has also seen opportunities in the need to impose administration controls to offset macroeconomic overheating (in 2004 and 2006), and in regional development programs, such as the Western Development Program (beginning in 1999) and the Northeast Revitalization Program (beginning in 2004) with each have Offices under the NDRC. There is even, since 2007, an office for the Revitalization of Central China in the NDRC as well.⁵ Clearly, the NDRC is attempting a major expansion of NDRC of its own influence. The current head of government, Premier Wen Jiabao, has demonstrated two characteristics that feed into the NDRC's plans. One is a fondness for conceptual blueprints and long-run plans; the other is a willingness to entrust subordinates with a high degree of responsibility, and to require a high degree of consensus to overrule or change direction. Both these tendencies give encouragement to planners and advocates of industrial policy. However, the NDRC lacks instruments to impose its will directly on an increasingly marketized economy. Whether the resulting plans will actually have an impact on the trajectory of development is not yet clear.

⁵ http://en.ndrc.gov.cn/newsrelease/t20070410_128098.htm

The 11th Five Year Plan

Since 2005, two important new additions have been made to the Chinese government's efforts to steer the overall economy. The first of these was the 11th Five Year Plan, designed to lay out a vision of economic growth from 2006 through 2010. The 11th Plan itself is not really a plan, since it has few targets or directives. At its core, the 11th Plan lays out a vision of China's future development that is innovative, useful, and quite positive. Stripped down to its bare essentials, the plan called for a shift of the development model away from its over-concentration on resource- and energy-consuming industry, and towards a more knowledge-intensive and environmentally-friendly growth path. Improvements in education and social services, particularly in rural areas, are an important focus of the plan. Recognizing that centrally-set plan targets frequently produce counter-productive strategic responses among local governments and enterprises, the Plan specifically refrained from introducing sectoral targets.⁶ Moreover, the Plan gave specific attention to the fact that the incentive structure for local government officials over-weighted investment and GDP growth, and that innovative incentive mechanisms would be required in order to carry out the shift to a more environment-friendly growth path (these terms were actually used). Thus, the 11th Plan represents a kind of innovative thinking about what is wrong with the existing pattern of Chinese growth. It has immediate and important implications in two main areas: the environment and the development of knowledge-based economic sectors.

The major shortcoming of the 11th Plan is that it generally fails to lay out any practical instruments to achieve the desirable aims that it lays out. This is most obvious in the discussion of environmental objectives. While the recognition of the problems is acute, there is little practical thinking about how to resolve those issues. The same shortcoming is evident with respect to development of knowledge-intensive service and industries. While these are seen as desirable, the most concrete measures the Plan calls for involve increased investment in education and research and development. Thus, the 11th Plan is certainly not an industrial development plan of the type familiar under socialism.

Technology Development

The aspect of the 11th Plan that relates to knowledge-based activity was quickly picked up in an important effort, the Medium and Long-term Development Program (MLP) for Science and Technology Development (2006-2020), promulgated at the beginning of 2006. The MLP is a type of industrial policy that is also infused with economic nationalism. The S&T Program represents a significant increase in government funding and centralized direction for research. It places great emphasis on research that is economically and nationally "strategic." It describes an essentially zero-sum relationship among nations for control of core technologies (even as it acknowledges that technological benefits China derives from economic and scientific openness). The MLP declares: "Experience shows us that we cannot buy true core technologies in the key

⁶ Indeed, one of the few specific targets in the overall plan was the plan to reduce the energy intensity per unit of GDP by 20% by the year 2010.

fields that affect the lifeblood of the national economy and national security.” (State Council 2006: II.1 Guiding Principles). The way government research expenditures are planned and allocated has provoked criticism both from those who feel that it neglects basic science, and from those who argue that it is too centralized and bureaucratic (Hao and Gong 2006; Cong, Suttmeier and Simon 2006). The MLP represents a significant projected increase in the resources put into developing national standards and China’s own autonomously controlled intellectual property.

The key provision of the MLP that marks it off from immediately previous policy is that it commits the government to significant expenditures directed at creating market-viable products and enterprises. To be sure, this has always been part of operational planning in China, but after a period of moving away from direct government involvement in product innovation, the MLP represents the beginnings of a movement back toward it. Thus, it is not simply a matter of the government investing in knowledge creation, a pure public good whose benefits will spill over into a range of related activities. Instead, the government is to step up its investment in particular high-technology projects. A slightly more detailed outline of activity is described in the “11th Five Year Plan for High Technology Sector Development” promulgated in April 2007 (NDRC 2007). The Sector Plan includes a number of targets for the year 2010, some of them unrealistic, and none of them specifying a clear set of actionable measures by the government. For example, by 2010, there should be a “batch” of large high-technology enterprises with sales over 10 billion RMB; value-added of high-tech sectors should increase from 4.4% of GDP in 2005 to around 10% in 2010; and 15% of high tech exports should be produced under indigenous property rights and with Chinese brands. In addition, there is a long list of sectors with the general developmental priorities of each sector. In some cases—such as semiconductors, first on the list—there is reference to a concrete set of research goals, funded by government labs; in other case, only vague aspirations.

However, the MLP and the High Technology Sector Plan do provide some specific policy instruments. These begin with a number of engineering “Projects” (*Gongcheng*). One of the most specific projects relates to the development of civilian passenger aircraft. Beginning with the domestic development of the regional ARJ21 jet, the project proceeds through cooperation with Brazil on the ERJ145 regional jet, and then progresses to the assembly in China of the Airbus A320 in conjunction with EADS. Instruments include preferential support from Policy Banks to those high-tech products that have commercial potential. Governments at the central and provincial levels may designate specific projects as “High technology projects” and then allocate money directly, subsidize interest rates, or provide repayment guarantees in order to encourage commercial banks to support projects. Acknowledgement is also given to the need to develop venture capital funding and a diverse and broad capital market, although details are sketchy. Government agencies are encouraged to use procurement policy more aggressively to support targeted technologies; to offer corporate profit tax breaks to 15% rates and to rebate VAT on high tech exports. Mention is also made of the need to strengthen intellectual property rights enforcement and increase investment in education.

The most important emphasis, by far, in both the high technology plans is on the need to increase direct government allocation for research, development, and education. As China's economy has grown, and as the government's budgetary position has improved, it is increasingly logical and beneficial for China to do this. Moreover, funds are to be invested through a variety of different channels. Generally speaking, the technology plans do not try to manage the actual manufacturing process, or expand the government direct control over high tech industry (currently, rather small). Instead, the government seeks to expand the pace of knowledge creation at the beginning (research, development and design) and end of the process (making markets through preferential procurement and tax breaks). The plan emphasizes the need to "increase international cooperation" and clearly envisions a continuing large role for foreign companies in China. Nevertheless, this plan may well be a step backward. The sections on international cooperation have a strong flavor of being more selective and shaping the types of international interchange, rather than increasing technological exchanges across the board. The government intends to pick and develop a number of core technologies. In that sense, the document has a strong "techno-nationalist" orientation. This is unfortunate, since in recent years, investment by firms from foreign countries, Taiwan and Hong Kong have been by far the largest sources of production technology in China. Moreover, an important movement to outsource research and development and hire knowledge workers in China is reshaping the global competitive landscape. That Chinese planners turn a blind eye to such positive trends in order to emphasize the need for autonomy in technological development could be a major mistake. However, it is too early to expect that planners will actually be able to translate such ideas into effective policy.

Conclusion

China is once again entering a cycle of industrial policy formulation and attempted steering of the development trajectory. Yet Chinese policy-making retains characteristics from an earlier era, of fragmented policy formulation and multiple, inconsistent interests at play. So far, there is no reason to expect industrial policy to have an important effect on the development of China's emerging economic sectors. Development policy incorporates so many different objectives—from increasing primary education to building commercial aircraft to reducing greenhouse gas emissions—that many of the policies adopted will cancel each other out. Certainly, it would be a mistake to reduce Chinese policy to a set of nationalistic economic objectives, and neglect the important social and environmental components. In the meantime, China continues to dispose of extraordinarily strong economic fundamentals. Industrial policy will probably add little to those fundamentals, but it is unlikely to take away much, either, at least insofar as industrial policy is practiced today.

References

Cheung, Tai Ming (2008). *Leaping Tiger, Hybrid Dragon: Nurturing Innovation, Forging Integration Between China's Defence and Civilian Economies*. Ithaca: Cornell University Press, forthcoming.

- Chinese Communist Party Central Committee (2005). “Zhonggong zhongyang guanyu zhiding guomin jingji he shehui fazhan dishiyige wunian guihua de jianyi,” “CP Center Suggestions on Setting the 11th Five Year Plan for National Economic and Social Development,” October 11, 2005, accessed from Xinhuaawang , October 18, report.
- Lian, Yuming, "196 Jia Zhongyang Zhishu Qiye Zichan Zong'e da 6.9 Wanyiyuan [The total assets of the 196 directly centrally controlled enterprises has reached 6.9 trillion]" in *Zhongguo Shuzi Baogao 2004* [China Report in Numbers 2004]. Beijing: Zhongguo Shidai Jingji, 2004. Pp. 525-527.
- Naughton, Barry (2005b). “The New Common Economic Program: China’s Eleventh Five Year Plan and What It Means.” *China Leadership Monitor*, No. 16 (Fall). Available at http://media.hoover.org/documents/clm16_bn.pdf
- Naughton, Barry (2007a) *The Chinese Economy: Transitions and Growth*. Cambridge, Massachusetts: MIT Press.
- Naughton, Barry (2007b). “China’s Left Tilt: Pendulum Swing or Mid-course Correction?” in Cheng Li, ed., *China’s Changing Political Landscape: Prospects for Democracy*. Washington, DC: Brookings Institution Press.
- NDRC [National Development and Reform Commission]. 2007. [The 11th Five Year Plan for High Technology Sector Development],” Fagai gaoji [2007] 911, April 28. Accessed at <http://www.ndrc.gov.cn/zcfb/zcfbtz/2007tongzhi/W020070514615556997089.pdf> on May 18, 2007.
- SASAC (2007). [Transform the Growth Model, Implement Scientific Developmentalism; The Operation of Central Enterprises in 2006 made a good Start for the 11th Five Year Plan].” Accessed at <http://www.sasac.gov.cn/gzjg/xcgz/200702130115.htm> Feb. 13, 2007
- State Council, People’s Republic of China (2006). “Guidelines for the Medium- and Long-Term National Science and Technology Development Programme (2006-2020),” (Beijing: PRC State Council, 2006). Xinhua Domestic Service, February 9, 2006, in FBIS, 9 Feb 2006.
- Xinhua (2006). “Guoziwei: Guoyou jingji ying baochi qige hangye de juegui kongzhili [SASAC: The state-owned economy ought to maintain absolute control over seven sectors]” 18 December 2006. At http://www.gov.cn/jrzg/2006-12/18/content_472256.htm.