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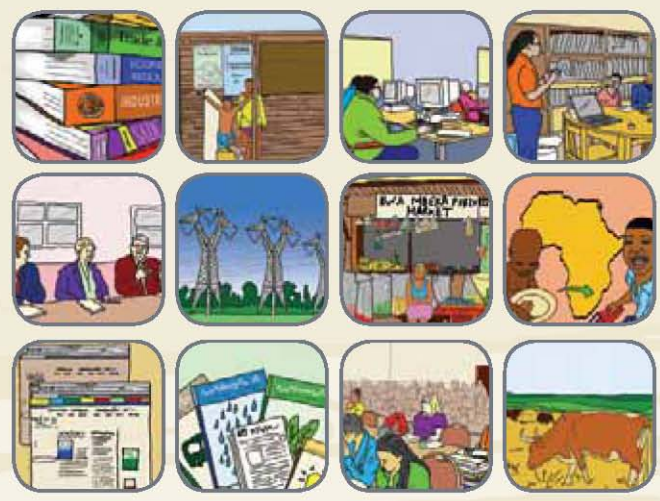
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# TIPS

TRADE & INDUSTRIAL POLICY STRATEGIES



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### China's Evolving Industrial Policy Strategies & Instruments: Lessons for Development

Daniel Poon

November 2009



indigenous growth

# CHINA'S EVOLVING INDUSTRIAL POLICY STRATEGIES & INSTRUMENTS: LESSONS FOR DEVELOPMENT

By

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## Abstract:

This paper argues that perspectives characterizing the trajectory of China's economic reforms as "reversing course" are misleading by not recognizing the current stage of Chinese industrial development and the policy initiatives adopted to steer the country towards widely-stated national objectives. As such, the paper aims to contribute to the growing analysis of lessons learned from China's development experience by highlighting the evolving nature of institutional mechanisms and policy instruments in banking and finance, industry and technology to promote learning and to deepen independent national productive capacities as part of a concerted "big push" by domestic firms up the economic value chain in strategic sectors.

The paper begins by first analyzing the key lessons learned (positive and negative) from China outlined by three recent World Bank working papers, before addressing the key oversight of these works, in setting out China's institutional 'toolbox' of policy instruments behind its ambitious, yet evolving, WTO-tailored industrial policy strategy.

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## TABLE OF CONTENTS

I.	Introduction .....	5
II.	The World Bank Lens .....	7
III.	China's Big Push .....	11
1.	Grasping the Large .....	12
2.	Industrial Policy Framework, Institutions and Tools .....	20
2.1	Financial Institutions and Capital Markets .....	23
2.2	Industry .....	30
2.3	Technology .....	40
3.	Chinese Industrial Policy and WTO Compliance .....	45
IV.	Conclusion .....	51
V.	References .....	54

## LIST OF CHARTS

Chart 1.	State-owned and State-holding Enterprises, number and profits/GDP, 1998-2008 .....	13
Chart 2.	Evolution of Ownership Structure of Top 10 Firms, Strategic Heavy Industries, 1996, 2001, 2004 .....	15
Chart 3.	Evolution of Ownership Structure of Top 10 Firms, Pillar Heavy Industries, 1996, 2001, 2004 .....	17
Chart 4.	Evolution of Ownership Structure of Top 10 Firms, Electronic Industries, 1996, 2001, 2004 .....	18

## LIST OF TABLES

Table 1.	Inbound FDI and M&A flows in China, 1998-2006 .....	30
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## LIST OF BOXES

Box 1.	Strategic Partners and Civil Aviation – “Orderly Competition” Case Study .....	22
Box 2.	ArcelorMittal in China – Foreign Investment Case Study .....	38
Box 3.	Danone-Wahaha Joint Venture – IPR Judicial Enforcement Case Study .....	50

## LIST OF FIGURES

Figure 1:	Techno-Industrial Policies in Advanced Industrialized Nations .....	47
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## ABBREVIATIONS AND ACRONYMS

AMC	Asset Management Company
AML	Anti-Monopoly Law
ATP	Advanced Technology Product
AVIC	China Aviation Industry Corporation
BoC	Bank of China
BoCom	Bank of Communications
CAAC	China Administration of Civil Aviation
CAD	Comparative Advantage-Defying
CAF	Comparative Advantage-Following
CBRC	China Banking Regulatory Commission
CCB	China Construction Bank
CDB	China Development Bank
CDMA	Code Division Multiple Access
CHINALCO	Aluminum Corporation of China
CIC	China Investment Corporation
CNOOC	China National Offshore Oil Corporation
CNPC	China National Petroleum Corporation
CSG	China Southern Power Grid
CSRC	China Securities Regulatory Commission
EITL	Enterprise Income Tax Law
FDI	Foreign Direct Investment
FIE	Foreign-Invested Enterprise
GDP	Gross Domestic Product
GSM	Global System for Mobile Communication
HKD	Hong Kong Dollar
HPIC	Huadian Power International Corporation
HSBC	Hong Kong and Shanghai Banking Corporation
ICBC	Industrial and Commercial Bank of China
IPR	Intellectual Property Right
IR	Implementation Rules
JV	Joint Venture
M&A	Merger & Acquisition
MII	Ministry of Information Industry
MLP	Medium to Long-Term Plan for Development of Science & Technology

MoC	Ministry of Commerce
MoF	Ministry of Finance
MOST	Ministry of Science and Technology
NDRC	National Development and Reform Commission
NPL	Non-Performing Loan
PBoC	People's Bank of China
QFII	Qualified Foreign Institutional Investor Programme
R&D	Research & Development
RMB	Renminbi (Chinese currency)
SAFE	State Administration of Foreign Exchange
SAIC	State Administration for Industry and Commerce
SASAC	State-Owned Asset Supervision and Administration Commission
SAT	State Administration of Taxation
SCB	State-Owned Commercial Bank
SEZ	Special Economic Zone
SGC	State Grid Corporation
SINOPEC	China Petroleum and Chemical Corporation
SOE	State-Owned Enterprise
SPCC	State Power Corporation of China
SWF	Sovereign Wealth Fund
TD-SCDMA	Timed Division Synchronous Code Division Multiple Access
USCC	US-China Economic and Security Review Commission
USTR	US Trade Representative
WB	World Bank
WTO	World Trade Organization

## I. Introduction

With Western markets mired in financial and economic crisis that has left no country in the world unscathed, the search is on by policy-makers, scholars and other observers for less conventional policy frameworks, interventions and institutions through which to orient and structure economies towards sustained growth rates, employment, improved records of poverty reduction and, hopefully, less glaring disparities in wealth. As David Rothkopf, senior Commerce department official under the Clinton Administration, stated in no uncertain terms: “This is a watershed. This is the end of 25 years of Reagan-Thatcherism, ‘leave it to the market, less government is better government’. That is over – period.”<sup>2</sup> Left unanswered, however, is the question: if not free markets as conceived by Western countries, then what?

Commensurate with China’s spectacular development record in past decades, interest to learn from the state-led ‘China model’ has been heightened with many commentators alluding to a pragmatic policy approach embodied in a ‘Beijing Consensus’.<sup>3</sup> Held in stark contrast to the decades-honed free-market conventions of the ‘Washington Consensus’, within the span of about a year, the pendulum-like public debate between the adequate roles of state and market seems now decidedly swinging towards the former.<sup>4</sup> Generally speaking, through crisis, the economic policy world has been turned upside down as the policy mantra of economic deregulation and financial liberalization once preached eventually brought economic turmoil, and the ensuing practices to deal with the downturn go far beyond what was accepted as orthodoxy. Western governments have been forced into more intrusive intervention through support measures and whole/partial ownership of flagship banking, financial and industrial companies. For instance, even Lord Peter Mandelson, former EU trade commissioner and now a senior British minister, recently voiced concerns that, in the long term, foreign ownership of British firms could put the country at a “disadvantage”, a rather striking admission from a well-known leading international proponent of open markets.<sup>5</sup>

Whereas once US officials and representatives, say, could routinely lecture and cajole other countries to emulate American policy practices to achieve lasting growth, it is now Chinese authorities, based on their own experiences, that have begun offering advice<sup>6</sup> as part of an overall rethink of economic, financial and development policy conventional wisdom.<sup>7</sup>

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<sup>2</sup> Beattie, Alan (2008). “Washington’s waning way: How bail-outs poison a free market recipe for the world”, *Financial Times*, September 28.

<sup>3</sup> Goldstein, Andrea (2007). “A tempting foreign role model”, *South China Morning Post*, February 14; Foroohar, Rana (2009). “Why China works”, *Newsweek*, January 19. See also, Gill *et al.* (2007), Rodrik (2006), and Cooper Ramo (2004).

<sup>4</sup> See, for example: Engardio, Pete (2008). “Forget Adam Smith, whatever works”, *BusinessWeek*, October 16; Meacham, Jon and Evan Thomas (2009). “We are all socialists now”, *Newsweek*, February 16; Kurlantzick, Joshua (2008). “Central command”, *Time*, October 16; Stephens, Philip (2008). “Broken banks put state back in the driving seat”, *Financial Times*, November 17; Economist (2009). “The return of economic nationalism”, February 7.

<sup>5</sup> Macdonald, Alistair (2009). “Minister’s remarks suggest growing scrutiny of country’s policy on open markets amid rising protectionist sentiment”, *Wall Street Journal*, September 28.

<sup>6</sup> Dyer, Geoff and Kevin Brown (2009). “China says Fed policy threatens global recovery”, *Financial Times*, November 15; Anderlini, Jamil (2008). “China rebukes west’s lack of regulation”, *Financial Times*, May 28; Anderlini, Jamil (2009). “China urges west to establish ‘bad banks’”, *Financial Times*, February 19; Anderlini, Jamil (2009). “China urges switch from dollar as reserve currency”, *Financial Times*, March 24.

<sup>7</sup> See, for example: Wolf, Martin (2009). “How mistaken ideas helped to bring the economy down”, *Financial Times*, October 27; Wolf, Martin (2008). “Keynes offers us the best way to think about the financial crisis”, *Financial Times*, December 23; Wolf, Martin (2007). “The brave new world of state capitalism”, *Financial Times*, October 16; Rodrik, Dani (2007). “The cheerleaders’ threat to global trade”, *Financial Times*, March 27; Lynn, Barry C. (2006). “Globalisation must be saved from the radical global utopians”, *Financial Times*, May 30; Lee, Keun, John Mathews, and Robert Wade (2007). “Rethinking development policy: a new consensus”, *Financial Times*, October 19.

As with any other country, in looking to China to scour for policy lessons it is important to get this analysis as accurate and contextualized as possible, lest the wrong, or somewhat skewed, 'lessons' be learned and detrimentally applied in practice. Building on a growing body of research in this area, various research departments within the World Bank have published working papers as part of a larger effort to help synthesize the relevant lessons from China's development experience for other developing countries, particularly in Africa. These recent works offer significant insights into key learnings and factors, decision-making approaches and institutional mechanisms, and overall strengths and weaknesses found throughout China's 30 years of reform experience, as well as addressing the adaptability of these lessons to the African context.

However, given that China's reform process is still a work in progress, this paper will argue that missing from the World Bank's otherwise impressive overview is the thorough inclusion, rather than passing remarks, of past and ongoing state reform processes in banking, industry and technology sectors to establish a line-up of internationally competitive domestic firms in strategic areas of the economy. These 'national champions' act as vehicles with which to accumulate independent productive and technological capabilities in strengthening inter-linkages within the domestic economy and propelling the country up the economic value chain. While the end-results remain to be seen, this represents the next key stage of China's ongoing reform experience that is ultimately aimed at 'catching-up' to the technological frontier in laying the foundations for future growth and the attainment of a higher-wage society comparable to that of advanced industrialized economies.

For African and other developing country nations at an earlier stage of economic development, these considerations may seem remote, premature, and of little relevance. However, a partial appreciation of China's development approach could lead to only a partial understanding, if not misrepresentation, of the critical lessons and dynamic policy mechanics from this reform experience, such as familiarity with the overall direction and instruments of reform and, ideally, the laying of adequate groundwork as a country shifts through different stages of a development strategy in moving up the economic value chain.

For instance, after making several carefully constructed arguments, Justin Yifu Lin, chief economist at the World Bank, appears to revert back to neoclassical economic orthodoxy in concluding that China's success derives primarily from economic specialization that is consistent with the country's existing factor endowment structure – ie. comparative advantage (Lin and Wang 2008:30). Other interpretations, putting more weight behind China's and the East Asia region's interventionist efforts, come to a remarkably different set of lessons-learned which entails a more nuanced analysis of policy sequencing and coordination. As Wade (2003) contends:

In fact, the central challenge of national development strategy is to combine the principle of comparative advantage with the principle of import replacement in a way that generates pressure for upgrading and diversifying national production. This does not always imply protection. Strategic economics prescribes free trade, protection, subsidies, or some combination, depending on a country's circumstances and level of industrialization. In some sectors and at some times, a country should give little weight to import replacement and a lot to comparative advantage; and vice versa. (Wade 2003:636)

Different interpretations of the 'China story' reflect perhaps a still simmering debate over the lessons to be learned from other East Asian so-called '*miracle*' economies, particularly the experiences of Japan, South Korea and Taiwan, during their respective development periods. Increasingly debated in the 1990s, prior to the onset of the Asian financial crisis later on in that decade, the World Bank published its definitive analysis of the East Asian experience, the *East Asian Miracle: Economic Growth and Public Policy*, in 1993. The landmark report, which recognized strong government intervention in strategic sectors but denied the effectiveness of

such efforts, was hotly contested shortly after its release and much thereafter.<sup>8</sup> Perhaps due to timing considerations or simply out of convenience, the report did not include China in its core analysis, leaving the distillation of lessons-learned for future research and debate, as we are seeing today.

Similar to the East Asian Miracle report, the World Bank's neglect of the Chinese state's continued influential role in industrial development perhaps portends to a prevailing general attitude towards measures adopted by China, particularly in recent years, often portrayed as counter-intuitive to the country's presumed acquiescence to liberal, free market-based economics.<sup>9</sup> For instance, in releasing the US-China Economic and Security Review Commission's (USCC) annual report to Congress, Chairman Carolyn Bartholomew remarked that China's reforms were "reversing course" (Bartholomew 2007). Following the third meeting of the US-China Strategic Economic Dialogue in December 2007, then-US Treasury Secretary Henry Paulson Jr. was quoted saying that the US had made significant progress in opening up the Chinese economy despite some "backsliding" in some areas.<sup>10</sup> For its part, the US Trade Representative's (USTR) annual report to Congress on China's World Trade Organization (WTO) compliance added:

China continued to pursue industrial policies that seek to limit market access for non-Chinese origin goods and foreign service providers and offer substantial government resources to support Chinese industries and increase exports. In some cases, the objective of these policies seems to be to promote the development of Chinese industries that are higher up the economic value chain than the industries that make up China's current labor-intensive base. In other cases, China appears simply to be protecting less competitive state-owned enterprises. (USTR 2007:7)

This paper argues that such assessments of China's reform trajectory are misleading by not recognizing the current stage of Chinese industrial development and the policy initiatives adopted to steer the country towards widely-stated national objectives. As such, this paper aims to contribute to the growing analysis of lessons learned from China's development experience by highlighting the evolving nature of institutional mechanisms and policy instruments in banking and finance, industry and technology sectors to promote learning and to deepen productive capacities. The paper begins by first analyzing the key lessons learned (positive and negative) from China outlined by the three recent World Bank working papers, before addressing the key oversight of these works, in setting out China's institutional 'toolbox' of policy instruments behind its ambitious, yet evolving, WTO-tailored industrial policy strategy.

## II. The World Bank Lens

While the three World Bank (WB) working papers authored respectively by Lin and Wang (2008), Dollar (2008), and Ravallion (2008) do not agree on all the finer points of China's developmental lessons, there does appear to be a rough consensus. Beyond the mutual admiration shown towards China's record of growth, trade, investment and poverty reduction rates, the authors converge on one basic policy level: the ability of Chinese leadership and governing institutions to move away from a strict Communist ideology-based policy-making approach, towards one that was pragmatic and ultimately more fluid and effective in nature. Lin and Wang, for instance, describe this approach comprehensively:

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<sup>8</sup> For example, see Amsden (1994), Lall (1994), Perkins (1994), Singh (1995; 1996), Pack (2000), Stiglitz (2001), Lall (2004), Pack and Saggi (2005), Perkins (2007).

<sup>9</sup> Dyer, Geoff, Tom Mitchell and Sundeep Tucker (2006). "Forbidden country? How foreign deals in China are hitting renewed resistance", *Financial Times*, August 8; Otteman, Scott (2007). "Investment rules increasingly favor domestic firms", *Inside US-China Trade*, June 20.

<sup>10</sup> Weisman, Steven R. (2007). "Rough patch in U.S. relations with China", *International Herald Tribune*, December 15-16.



China's incremental and experimental strategies for economic reform and pragmatic and gradual liberalization have been unique and unorthodox. This approach has been piecemeal, partial, incremental, and often experimental. It has not been guided by a well-founded theory or followed a pre-determined blueprint. In the late 1980s, many observers predicted that reforms in China would lead nowhere. The success of China's approach to transition so far has produced many challenges to conventional wisdom in economic theory. (p.3)

Ravallion (2008:15) adds: "At its core was the simple idea that public action should be based on evidence: 'the intellectual approach of seeking truth from facts'. In looking for facts, a high weight was put on demonstrable success in actual policy experiments on the ground." Dollar (2008:21), for his part, takes slight exception: "Chinese reform is sometimes characterized as gradual, but I do not think that this is an accurate characterization. ... Rather than gradual, I would call Chinese reform pragmatic and experienced-based." As all the authors refer, or allude to, for the Chinese, the policy approach is more eloquently summed up as "crossing the river by groping the stones beneath the surface", as former President Deng Xiaoping once put it.

Despite this very broad policy-consensus, the authors come to the question of China's reform experience from different analytical approaches, naturally overlapping in some areas, but generally carving out their own niche analytical approaches. Lin and Wang (2008) focus on China's determined efforts to accumulate knowledge through policy learning, capacity building and institutional innovations in a dynamic process of industrial upgrading. Dollar (2008) highlights four features of China's reform process, two of which are generally less widely discussed: infrastructure finance and pricing, as well as agricultural development and rural-urban migration. Analyzing China's uneven record of poverty reduction, Ravallion (2008) emphasizes China's early reform focus on agricultural sector growth and productivity as a key initial stepping-stone to achieve sustained poverty reduction in current-day African countries, as well as the need for the emergence of strong leadership and a capable public administration in forging sound policy-making and implementation practices.

To delve further, the remainder of this section will layout and evaluate the key argument made by each paper on the issue of China's climb up the economic value-added and technological ladder and key lessons outlined for African countries from this experience.

Of the three World Bank working papers, Lin and Wang's work contains the widest analytical scope in examining the dynamic institutional mechanisms of China's pattern of reform and its proclivity for policy experimentation, learning and innovation. As noted by the authors, Chinese reforms adopted a micro-first approach, as opposed to a macro-first approach, whereby the transition to a market economy started with improvements in incentive structures at the firm/household level, such as the de-collectivization of agriculture, selective establishment of special economics zones (SEZs), expansion of enterprise autonomy in the state sector, and the promotion of non-state enterprises that face hard budget constraints. These measures were later complemented by reforms of complex macro-level policies and the continued use of dual-track strategies in gradually liberalizing the commodity price system, pushing forward fiscal reforms, and setting a unified competitive exchange rate, for example.<sup>11</sup> In all of these instances a 'dual-track' policy strategy was applied, whereby the traditional planning system was pragmatically kept intact while changes were made on the margin and implemented only in experimental fashion, first in a few regions and then scaled-up once proven successful; sowing into the traditional planning structure selective traits of modern market-oriented institutions, and the necessary groundwork for further reforms. (Lin and Wang 2008:7-12)

For Lin and Wang (2008), this gradual approach to reform "followed the logic of learning and innovation to explore its comparative advantage" (p.7), as China emerged as "an integral part of

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<sup>11</sup> The authors also note that other macro-level reforms remain much less affected by market-oriented reforms. These include: interest rate policy, energy, utilities and land prices. (p.12, 24)

the global supply chain, and the manufacturing center of the world.” (p.23) Key to this process is what the authors refer to as China’s transformation from a “comparative advantage-defying” (CAD) to a “comparative advantage-following” (CAF) economic orientation, whereby a country’s comparative advantage and industrial structure is purely determined by its current endowment structure (labour, capital, technology) and any changes to this over time (p.4, 30). In going on to explain China’s dramatic pattern of trade expansion and the apparent rapid upgrading of its industrial and export structure, the authors ultimately argue that such trends are consistent with the CAF strategy because of China’s massively deliberate efforts at capital accumulation to augment the economy’s endowment structure intensively, both through investment in human and, particularly, physical capital. In growth accounting terms, “[c]apital has accumulated at a faster pace than growth of labour and natural resources, which allows the factor endowments to be upgraded.” (p.18)

Lin and Wang, however, are careful to inject a number of critical caveats to these arguments. The most important of these regards the “myth” of China’s export sophistication, where the authors rightly point out that China’s upgraded export structure is much less impressive than at first glance. This is due to the “debatable” role of processing trade in China’s overall upgrading of skills and production processes. Processing trade, the practice of importing duty-free imports (key technologies, parts and components) for simple assembly and re-export, has grown in recent years to represent over half of China’s total exports. The authors contend that this kind of trade inflates China’s export prowess in more sophisticated high-technology sectors, such as computers, electronic devices, telecommunications equipment and machinery, because these tend to have an especially low share of domestic content. For instance, the authors cite figures showing that between 1995 and 2006, more than 95% of China’s advanced technology product (ATP) exports were processing trade exports, and 90% of ATP exports to the US market were produced by foreign invested enterprises (FIEs) using China as a low-cost assembly platform. For these reasons, the authors underline the fact that “all the skill upgrading observed in total exports was due to the high skill content in the processing trade” and stress that “China has yet to become competitive with industrial countries in high-tech sectors ... [it] still has a long way to go in climbing the technological ladder.” (p.26-7)

Another important and related caveat is found in the observation that China’s economic growth continues to be capital-intensive, unsustainable, and in need of a rebalancing away from excessive-reliance on investment and exports towards greater domestic consumption to ensure longer-term growth. China’s low interest rate policy largely funnels cheap loans to the state sector, which remains capital intensive. This, the authors point out, raises the levels of investment by subsidizing a capital-intensive industrial structure, possibly creating excess capacity in certain sectors, which could lead to price wars and an unhealthy accumulation of nonperforming loans within the banking sector and the increased likelihood of economic and financial disruption. Moreover, focusing on capital-intensive industries has increasingly polluted the natural environment, while creating fewer jobs and contributing to elevated income inequality as state support is bestowed to owners of capital, rather than labour.

On the face of it, Lin and Wang’s arguments are defensible, but follow the flow of logic using their own arguments (caveats included) and it remains unclear what policies the authors are actually espousing in the name of development “as a process of learning and industrial upgrading”. The flow of logic and its implicit message is as follows: first, gradual reforms and institutional innovations spurred learning and exploration of China’s existing comparative advantage at the time; second, foreign direct investment and heavy domestic investment in physical and human capital helped upgrade China’s economic endowment structure and the types of skills, goods and equipment used and produced by such a structure; third, the extent of knowledge accumulation and industrial upgrading is actually “only partially successful” given that a large majority of higher technology/skill exports have very low domestic value added and are often produced by foreign companies residing in China – ie. China has a long way to go in moving up the economic value chain; fourth, rather than continue upgrading its industrial structure and the *dynamic* learning process that it entails, China should rebalance economic growth away from its emphasis on

capital-intensive accumulation towards the service sector and greater domestic consumption, despite the apparent weaknesses found in its industrial structure to supply this increased consumption, particularly for finished and intermediate products, components, core technologies, and intellectual property at the higher-end of the value chain.

This interpretation is not to discount the serious issues raised by Lin and Wang, and widely recognized in the international policy community, over worrisome trends in environmental degradation, income inequality (lack of a social safety net) and their likelihood in reaching a 'tipping point' impact on social stability and welfare. However, given the broad consensus found between the WB authors mentioned earlier recognizing China's tendency for pragmatic, incremental reform policy approach, it should not come as a surprise that China's pursuit of national economic goals, and handling barriers towards achieving them, should be seen in a dynamic and inter-related context as China's governing institutions experiment with "evidence-based policy making" (Ravallion 2008:24), built up and adjusted over time. Therefore, to witness change in China is to pay close attention to trends in this experimental process as it unfolds. To this extent, recent measures to, for instance, ramp up a basic universal health care system by 2011<sup>12</sup>, or to increase the political clout of its environmental watchdog<sup>13</sup>, possibly signify important, but still cautious, steps in these respective reform directions.

Lin and Wang's efforts to clarify China's "only partially successful" performance in knowledge accumulation and industrial upgrading also raise a number of critical questions on, simply put, the nature of learning that has *actually* taken place throughout China's reform period. The authors appear to suggest that learning occurred most remarkably in industrial sectors where the liberalization of prices and barriers to entry/exit are reduced, "so that private sector firms can select the right subsector and products where they have true comparative advantage." (2008:30) Focused primarily on labour-intensive light industries during the early stages of reform, new private and (not-so new) semi-private firms expanded rapidly in these sectors, quickly challenging the remaining respective state-owned enterprises (SOE), many of which that were later also either largely privatized, restructured or shutdown as they became nonviable. (p.10, 19-20, 23, 30) In also stressing China's "vibrant" private sector and its impressive performance in industrial output, rate of return and employment growth, Dollar would seem to concur, noting that "The Chinese economy is now largely based on the Chinese private sector." (2008:5)

At the same time, Lin and Wang (2008) also hint that key learning opportunities initially emanated from capacities and assets built up by SOEs and the joint ventures often imposed by state regulation on foreign direct investment (p.20, 23). Within heavy and capital-intensive infrastructure-related industries, the authors go as far as to suggest, albeit ambiguously, that investment and learning in these areas has been partially market-driven and partially government driven (p.22). Dollar (2008), in discussing infrastructure financing and pricing, also recognizes a state role in briefly suggesting that, "Another lesson from China is that the government has been pragmatic about ownership. State firms play an important role in power generation, rail, and water." (p.13) On China's activist role in regulating foreign investment to create greater linkages with the domestic economy, Dollar is vaguely succinct: "There are interesting lessons here for other developing countries to study." (p.9)

At this juncture, Ravallion (2008) stakes out the clearest position about the role of the state in economic development: "But China's success was not just a matter of letting markets do their work. That success would not have been possible without strong state institutions implementing supportive policies and public investments." (p.17) From the 'lesson-learned' perspective, he insightfully adds: "Relative to Africa, history and geography have made for stronger state institutions in China, and it has no doubt helped that China did not make the mistake of believing

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<sup>12</sup> Neumann, Dan (2009). "New Chinese health care spending lauded as significant investment", *Inside US-China Trade*, February 4.

<sup>13</sup> Batson, Andrew and Shai Oster (2008). "Beijing Reorders Priorities – New Attention Given to Environment, Services", *Wall Street Journal*, March 12

that freer markets called for weakening of those institutions.” (p.24) Although most of the focus of his paper surrounds China’s record of poverty reduction, the dynamics of growth and equity, and the importance of early reforms involving agriculture and rural areas, Ravallion (2008) is also careful to recognize different phases of development: “Just as has happened in China, there will be a time when emphasis in Africa will naturally shift to secondary and tertiary sectors. But ... an agriculture-based strategy must for now be at the center of any effective route out of poverty, just as it was in China during the early 1980s.” (p.20)

Perhaps most glaringly absent from Lin and Wang’s scoping discussion of China’s evolving industrial structure and strategies for further upgrading is in their brief mention of the SOE privatization process of “grasp the large, release the small”, or 抓大放小 (zhuada fangxiao) (2008:10). Interestingly, the authors detail the ‘release the small’ aspect in giving rise to the emergent private and semi-private (more on this later) sector, but fail to pay any attention to the ‘grasp the large’ portion of the state initiative that envisioned the fostering of China’s own ‘national champion’ firms and independent core technologies. Officially promulgated in the late 1990s to push for modernization and consolidation of the still sprawling state sector, the movement eventually gave rise to a much clearer delineation of strategic areas of the economy that would remain either under absolute state control or kept within strong state influence. The Chinese leadership refers to these industries as the ‘lifeline’ of the economy, or 经济命脉 (jingji mingmai). In short, China is not stopping at making Chinese firms an integral part of larger global supply chains coordinated and directed by foreign companies, but carries ambitions to build the foundations and assets for global supply chains led by Chinese firms.

Thus, despite engaging in a timely and interesting lessons-learned analysis from China’s economic reform experience, for one reason or another, leading policy-makers at the World Bank provide only a partial account of the dynamic policy processes at work. Under-playing such processes threatens to misrepresent China’s developmental trajectory and sabotage the lessons-learned policy exercise, particularly as the country moves into a more difficult stage of deepening its industrial base and productive capacities in ascending the economic value-added chain – an objective often held by many developing countries with similarly a “long way to go in climbing the technological ladder”. This overlooked, yet unfinished, critical next stage of China’s ‘learning and industrial upgrading’ development story will be further explored in the following section.

### III. China’s Big Push

This section makes plain the ongoing efforts of the Chinese leadership at improving industrial strategy and implementation in pursuing national economic objectives of: moving up the economic value chain, establishing Chinese national champion flagship firms, and acquiring independent science and technology capabilities and core technologies. In South Korea in the 1970s, this crucial stage of economic development was known as the Heavy and Chemical Industry Drive, known for its “big push” to broaden and deepen the country’s industrial base into the production of medium technology industrial intermediates and capital-intensive industries such as in steel, petrochemicals, nonferrous metals, shipbuilding, electronics and machinery, that would feed into exporting and service industries.

To detail the “big push” process unfolding in China, this section is divided into three parts: first, the ‘grasp the large’ portion of China’s industrial reform strategy will be further explained to show the increasing concentration of state assets in sectors of strategic importance as part of an evolution in China’s conduct of industrial policy; second, as Chinese firms have “a long way to go in climbing the technological ladder”, rather than take a hands-off approach in this process, China’s increasingly elaborate institutional orientation will be discussed to show the state’s continuing ability to nurture domestic firms by making use of policy instruments in banking, financial, industrial and technology sectors of the economy; third, as WTO membership is believed to severely restrain industrial policy initiatives, this subsection presents evidence that

Chinese governing institutions are learning from industrialized country counterparts in adopting binding international agreements on its own terms by using flexibilities that already exist, or by deliberately carving out flexibilities through legal finesse and the judicious exploitation of apparent loopholes in these agreements. For these reasons, China is often criticized for acting within the letter but not necessary the spirit of international economic agreements and norms.

## 1. Grasping the Large

At the onset of economic reform and opening in the late 1970s, when state ownership pervaded virtually all the productive facets of the economy, the extent of government ownership and intervention admittedly had nowhere to go but down. In that sense, the road to 'reform' was relatively clear. Faced with uncertainty on how to engender greater industrial productivity without unleashing mass unemployment and thus social and political instability, China's leadership initiated industrial reforms pragmatically, as the World Bank authors note, through greater enterprise autonomy and the liberalization of prices and entry/exit barriers in light industry labour-intensive sectors such as textiles, garments, agro-processing activities, simple consumer electronics like radios, refrigerators, watches, clocks and toys, and basic metals and machinery products. With entry barriers inherently lower in these technologically less-demanding industries, a competitive non-state sector outcome could plausibly be expected, thus allowing for productivity gains and ensuring social stability through continued job growth as labour relocated from the state to the private sector.

Through the 'grasp the large, release the small' initiative of the late 1990s, the state further expressed its intention to retain direct ownership over only the largest of SOEs, mostly in strategic, heavy and 'upstream' sectors of the economy, where the state modulated support mechanisms in light of the substantial entry barriers commonly associated with capital-intensive industries, that require larger amounts of capital, larger plant sizes, imported equipment, more complex technical skills and much longer gestation periods than found in light industry. With losses mounting in the state sector, the 'zhuada fangxiao' initiative was characterized by a drive in late 1997 to return a great majority of SOEs to a healthy profit within three years, aided by a package of state support in the form of lower interest rates, government-arranged mergers and buyouts and massive debt-for-equity swaps (Nolan 1999, 2002; McNally 2002; Ma and Fung 2002; Shen 2008).

Also prominent in the initiative was a three-pronged strategy to raise the efficiency of SOEs by closing some and merging others, reducing government ownership by selling shares on domestic and international stock markets, and allowing state-owned firms to shed redundant labour. The number of SOEs fell precipitously during 1997-1998 – from about 110,000 in 1997 to 64,700 in 1998.<sup>14</sup> By 2006, the number of industrial SOEs was down to 24,961 state-owned and state-invested firms, according to official statistics. Between 1998 and 2004, more than 30 million employees were laid off in the rush to "release the small" (EIU 2007).

Chart 1 shows this dynamic situation, whereby the number of SOEs has gradually declined since the late 1990s, while profits have grown to four percent (as a proportion of GDP) in the remaining mostly large state-owned and state-holding enterprises.<sup>15</sup> As the privatization process gathered

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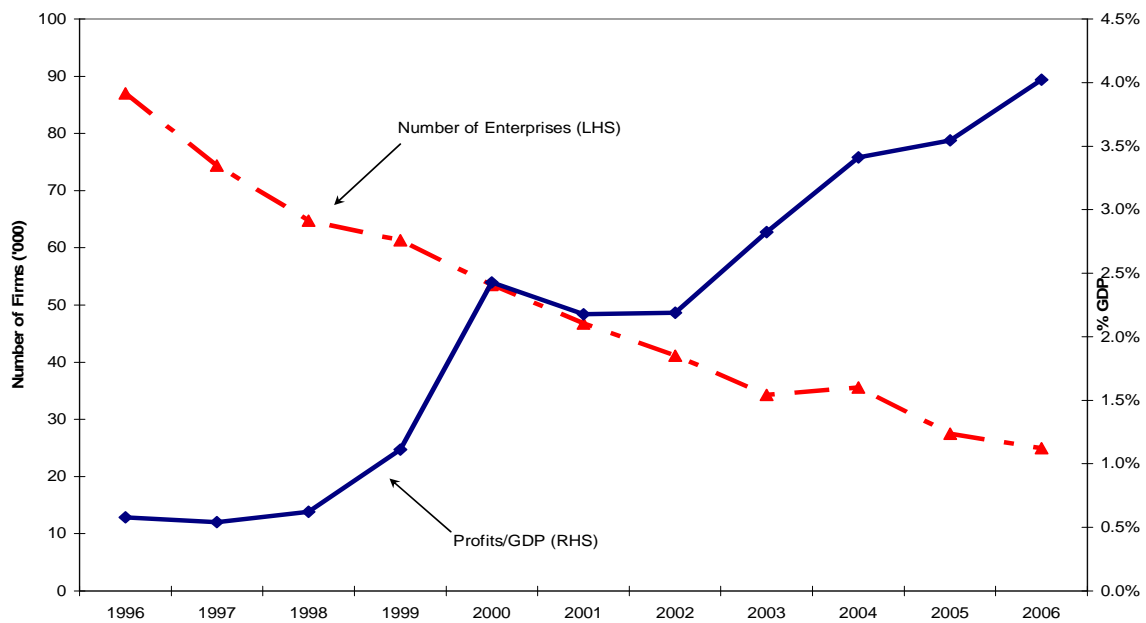
<sup>14</sup> Jefferson, Gary H. (1999). "China's State-Owned Enterprises Did Their Job – Now They Can Go", World Bank Transition Newsletter. See, <http://www.worldbank.org/html/prddr/trans/so99/pgs31-32.htm>

<sup>15</sup> It was not until 2005 that SASAC, as the main shareholder, made headway in receiving dividends paid by unlisted SOEs. The remittance dividend income was waived by central authorities since 1994, thus allowing unlisted parent holding companies of the listed SOE subsidiaries to retain and reinvest these earnings. By May 2007, the State Council decided to move forward with the SOE dividend policy, also known as the "capital management budget" (CMB) policy. In mid-December 2007, SASAC officially announced that 18 monopolies and oligopolies in the oil and gas, power, coal, telecommunications and tobacco sectors have to pay the highest dividend of 10% of their post-tax profits. A further 99 firms in the metals mining, construction material, pharmaceutical, chemicals, property, transport,

pace past the year 2000, concerns grew over management-led buyouts of SOEs and the likelihood of fraudulent stripping of state assets (Naughton 2005a). This eventually led to the formation in 2003 of an ad-hoc body directly under the State Council, the State-owned Asset Supervision and Administration Commission (SASAC), with the mandate to own and oversee management over clearly delineated state assets at the central level, while providing guidance for SASAC bureaus established in local governments.

From its inception, SASAC also sought to better articulate the rationale for continued state ownership and its removal from competitive sectors, which was deemed appropriate in five categories: **national security sectors, natural monopoly sectors, sectors that provide public goods or services, important national-resource sectors, and key enterprises in “pillar industries” and high technology sectors** (Mattlin 2007; Naughton 2003). Fleshing out this concept further, in December 2006 the State Council and SASAC formally announced for the first time seven strategic industries where the state-owned economy should keep absolute control, as well as areas to retain strong influence over market structure. With the country’s largest firms among the 196 enterprises originally under central SASAC supervision, this number should be roughly halved by 2010, leaving only 80 to 100. (SASAC 2006)<sup>16</sup> As of May 2009, central SASAC either closed, merged or privatized 58 firms, leaving only 138.<sup>17</sup>

**Chart 1. State-owned and State-holding Enterprises, number and profits/GDP, 1998-2008**



Source: China Statistical Yearbook 2007.

electronics, construction and machinery industries will pay only 5%. Some 32 companies, mostly research institutes, science technology units and military equipment manufacturers, are exempt from the new rule for three years.

<sup>16</sup> Sectors of absolute state control include: armaments, power grid and distribution, petroleum and petrochemicals, telecommunication, coal, civil aviation and shipping. Sectors in which the state should retain influence includes: equipment manufacturing, automobiles, electronic information, construction, iron and steel, nonferrous metal, chemical, prospecting, design and science and technology. [Xinhua (2006). “Nation lists sectors critical to national economy”, December 20. See, [http://news.xinhuanet.com/english/2006-12/20/content\\_5511136.htm](http://news.xinhuanet.com/english/2006-12/20/content_5511136.htm)]

<sup>17</sup> See, central SASAC’s website: <http://www.sasac.gov.cn/n1180/n1226/n2425/index.html>

For this reason, even though state directed investment has fallen from more than half to a third of all fixed asset investment since the turn of the century, when investment expenditure by traditional SOEs is combined with the spending of joint stock corporations (in which the government has a controlling interest), the total represents about half of the 40% share of GDP devoted to fixed investment. Given SASAC's role in providing, intermediate and capital goods, infrastructure services and natural resources, the central government retains a strong direct influence over the economy by ensuring that key inputs keep up with rapid growth, while still exerting influence over firms in downstream demand sectors like automobiles, shipbuilding, defense, electronics, telecom, and other science and technology sectors. Conversely, SASAC's role in China's exports is minor, accounting for only 3.6% of total Chinese exports in 2006, further highlighting its role on primary and intermediate inputs – ie. local content – for the export and service sectors and in meeting demand by growth in the domestic economy. (Naughton 2007)

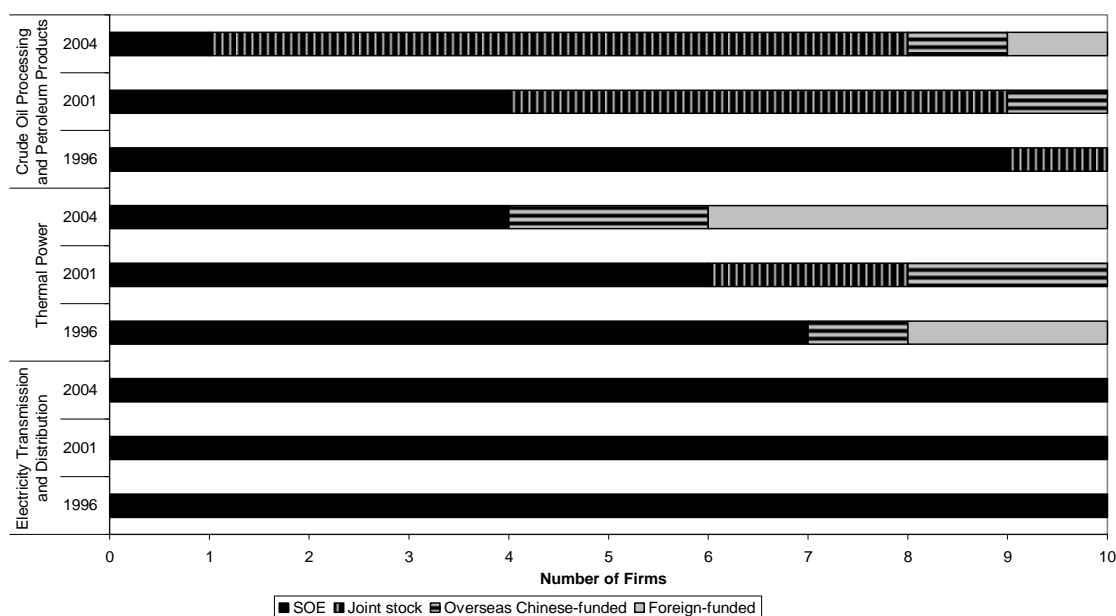
To further elaborate on the effects 'grasp the large'-side of the policy initiative, evidence is provided on the evolution of industrial ownership structures in medium and high technology goods and services. In the interest of time and space, data on only a sample number of sectors has been chosen; among these, a few will be explored in further detail (where information is readily available) to provide a sense of the ownership dynamics. Using data collected from the *China Markets Yearbook* publications<sup>18</sup>, Charts 2, 3, and 4 show the changing ownership composition of the top 10 firms (by revenue) in respective industrial subsectors from 1996, 2001 and 2004. Although the data set does not continue beyond 2004, the 1996-2004 time period captures the core years of the 'grasp the large, release the small' initiative amidst a period of rapid growth, thus providing some insight of the ownership trends during this critical period and the overall momentum of reforms in the years thereafter.

In general, the presence of domestic Chinese firms is far from uniform, but clearly more pronounced in medium-technology heavy sector energy inputs, intermediate/capital goods and some consumer durable goods. In Charts 2 and 3, the state appears to have deliberately maintained its influence while diversifying ownership patterns (domestic/foreign, central/local) in strategic and pillar industries areas of the economy. Chart 4 shows that while foreign ownership has increasingly made headway (to varying degrees) into the top rankings of key electronic subsectors in the last decade, the sustained state presence and support is also clearly evident.

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<sup>18</sup> The *China Markets Yearbook* provides information on 450 industrial sectors in China organized according to China's National Economy Industrial Classification Standard, with all data exclusively provided by the National Bureau of Statistics of China. The 2006 edition was the last year of publication, providing data for the year 2004. According to the publisher, the All China Marketing Research Co. Ltd., newer editions of the *Yearbook* was ruled out due to the sensitive information provided on a wide array of industrial sub-sectors.

**Chart 2. Evolution of Ownership Structure of Top 10 Firms, Strategic Heavy Industries, 1996, 2001, 2004**



**Source:** China Markets Yearbook 中国市场年鉴, 1999, 2003, 2006.<sup>19</sup>

As seen in Chart 2, continued state ownership is most obvious in strategic energy sectors such as electricity generation and transmission, and oil and gas industries. **Electricity transmission** assets remain off limits to private and foreign companies, while electricity production and oil processing have greater degrees of ownership diversification. Like in other major industries, electricity transmission was controlled by a government body prior to the onset of reforms and the breakup of state monopolies into managed oligopolies. In 1997, the Ministry of Power and Industry was turned into the State Power Corporation of China (SPCC), which in turn was dissolved in 2002. SPCC's distribution assets (90% of national total) were divided into two companies, the State Grid Corporation (SGC) in the north and the China Southern Power Grid (CSG) in the South, both owned by central SASAC (Rosen and Houser 2007; EIA 2006). All electricity transmission firms in the *Yearbook's* top 10 list are subsidiaries of either SGC or CSG, thus showing little change in ownership structure in the time period observed. In 2004, for example, nine of the firms were subsidiaries of SGC, with only one, Guangdong Power Grid Co., belonging to CSG.

As for **electricity generation** assets, similar to earlier reforms in the coal, and oil and gas industries in the 1980s, power shortages (or the threat thereof) forced Beijing to loosen its grip on

<sup>19</sup> The *Yearbook* defines different ownership types as follows: SOE: firms owned by different level of governments such as the central, provincial, or local government; Collectively-owned: firms owned by a collective body, such as a village, a township [township and village enterprises (TVEs)], all workers of a firm, or individuals who give up their private ownership. Collective-ownership is considered "public-ownership"; Privately-owned: firms owned by individuals; Domestic joint ventures (JVs): includes firms that are JVs between domestic firms with different ownership types; Joint stock: refers to all companies with limited liabilities, including (1) companies that explicitly issue stock certificates which may be traded publicly and (2) companies that have two or more shareholders with limited liability; Foreign-funded: defined as foreign investors excluding Chinese (including Taiwan, Hong Kong, and Macao), with three kinds: (1) foreign-invested equity, (2) foreign-involved contractual JVs, and (3) foreign wholly-owned firms; Overseas Chinese-funded: includes all Chinese outside China, including Taiwan, Hong Kong, Macao, and other countries. Three kinds: (1) equity JVs by overseas Chinese, (2) contractual JVs by overseas Chinese, and (3) firms wholly owned by overseas Chinese.



the industry, thus deregulation and other reforms have opened the electricity generation sector to local and provincial governments, as well as foreign and private investors, although the pace has varied. The SPCC's assets (80% of national total) were divided among five power producers, all owned by central SASAC.<sup>20</sup> Much of the remainder is operated by independent power producers, often in partnership with the privately-listed arms of the state-owned companies (Rosen and Houser 2007; EIA 2006).

As seen in the *Yearbook* statistics, ownership in this sector has diversified with an increasing role for foreign- and overseas Chinese-funded firms from 1996 to 2004. Upon closer inspection in these cases, however, and the role of the state prevails. For instance, Huadian Power International Corp. (HPIC) placed first on the top 10 list of thermal power generators in 2004 and is classified as foreign-invested. However, HPIC is 49% owned by China Huadian Group Corp., one of the five major state power producers, with roughly 23.7% of HPIC stock owned by public Hong Kong shareholders. The next largest shareholder, at 13.3% is Shandong International Trust and Investment Co, which is state-owned. In another example, Guangdong Zhuhai Power Factory Co., placing eighth on the list and classified as 'overseas Chinese-funded', is 45% owned by Cheung Kong Infrastructure Holdings, part of Hong Kong tycoon Li Ka-Shing's business empire, and the rest by the Guangdong provincial government through Guangdong Yudean Group Co. and the Electric Development Group Co. of Zhuhai Special Economic Zone.<sup>21</sup>

A similar scenario is found in **oil processing**. Despite signs of greater ownership diversification, the *Yearbook's* top 10 list is dominated by subsidiaries of SASAC-owned China Petroleum and Chemical Corp. (Sinopec) and China National Petroleum Corp. (CNPC) in various ownership forms. What were once state-owned became joint stock or limited liability companies wholly or majority state-owned. In 2004, Sinopec subsidiaries account for six of the top 10 firms, CNPC with three. The only foreign-funded enterprise, the Dalian West Pacific Petrochemical Co., is a joint venture between Total, Sinochem and CNPC, where Total owns a 22% equity stake.<sup>22</sup>

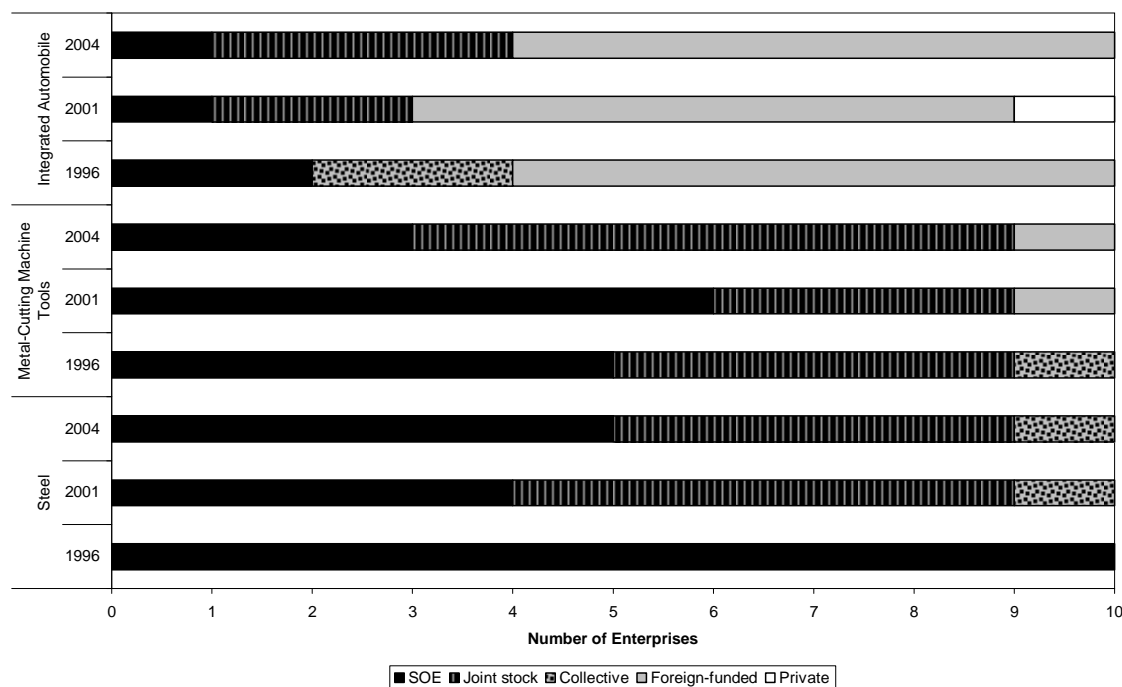
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<sup>20</sup> These are: China Huaneng Group, China Datang Group, China Huadian, Guodian Power, and China Power Investment.

<sup>21</sup> Cheung Kong Infrastructure (2007). "CKI signed agreement for RMB 6.8bn New Zhuhai Power Plant Units", Press Release. October 1. See, <http://www.cki.com.hk/english/whatsNew/2007/20071001.htm>

<sup>22</sup> Total (China website) (2007). "Activities in China: Refining", October 13. See, <http://www.cn.total.com/activities/refining.ip?locale=en>

**Chart 3. Evolution of Ownership Structure of Top 10 Firms, Pillar Heavy Industries, 1996, 2001, 2004**



**Source:** China Markets Yearbook 中国市场年鉴, 1999, 2003, 2006.

Chart 3 examines the evolving ownership structure found in selected heavy pillar industries. Once again the sustained role of the state is pronounced, but not without certain varying efforts at ownership diversification. Much like in Chart 2, China's **steel-rolling sector's** ownership structure remains overwhelmingly state-backed in various forms. In 1996 SOE steel-makers completely dominate the *Yearbook's* top 10 list. By 2004, the number of SOEs is down to five, joined by four limited liability companies, and one collectively-owned enterprise. Although this ownership structure seems diversified, limited liability companies and collectives are often majority- or wholly-owned by different layers and agencies of the Chinese government. For example, the following companies are listed as joint stock firms, but ownership remains with government: Laiwu Iron & Steel, ranked fifth in 2004, is part of Laigang Group that is 91% owned by the Shandong Province SASAC; Baoshan Iron & Steel, ranked first in 2004, is part of Baosteel Group which is directly owned by the central government's SASAC. Jiangsu Shagang, ranked fourth in 2004, belongs to the Shagang Group, which is 55% majority local government-owned (25% by Zhangjiagang City SASAC and 30% by Shagang Labor Union). (Price *et al.* 2007)

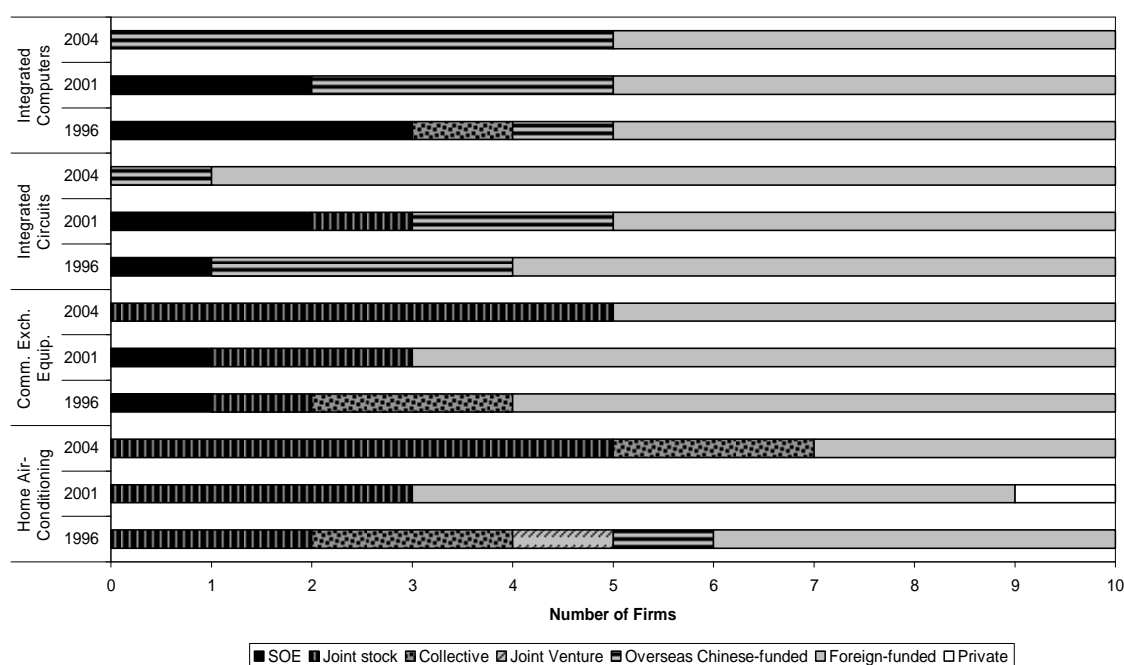
Perhaps more interesting is the evolution in ownership structure in the **automobile industry**, where the *Yearbook's* statistics reveal a higher proportion of participation from foreign investors than the other industries examined thus far. Due to sector-specific guidelines for the development of the industry (issued 1994, 2004), foreign ownership has been initially restricted to 50% and has been combined with a raft of other restrictions, such as phased-in local content performance requirements, joint ventures in key components, and business scope limitations.<sup>23</sup> As seen in the Chart 3, the presence of foreign investors is relatively stable throughout the 1996-2004 period, as China's largest auto groups all rushed to tie up joint ventures (JVs) with foreign auto-makers. In contrast to the steel industry, the top 10 auto-makers in 2004 were often different subsidiaries of

<sup>23</sup> Investment in the manufacture of complete vehicles was "restricted" in the 1997 Foreign Investment Catalogue, but was re-located to "encouraged" in the 2004 and 2007 Catalogue. However, foreign ownership is explicitly limited to no more than 50%.

the same central or local government-backed SOE group enterprise. For instance, Dongfeng Motors Group has a JV with Nissan in Shiyuan, Hubei province, as well as another JV with Peugeot Citroen in Wuhan, Hubei province, both of which made the top 10 list.

While the JV structure is prevalent, there are also signs of evolution in Chinese auto firms. For instance, Chang'an Automobile's JV with Suzuki placed seventh on the top ten list in 1996. By 2004, however, Chongqing Chang'an Automobile Co., a separate joint stock company and now producing its own brand car, replaced the Suzuki JV on the top 10 list, registering eighth on the list. In another example, Geely Automobile, placing last on the top 10 list in 2001 (but absent in 2004), is a privately-owned company supported by the local Zhejiang government that began its history making refrigerators in 1986, moving into the motorcycle sector in 1992, before entering the auto sector in the mid-1990s with its own intellectual property and brand-name. In September 2009, Geely announced it was involved in a bid for Ford Motor Co.'s Volvo brand, distribution channels and technology.<sup>24</sup> In the past three years, it is these kinds of independent automakers that have grabbed roughly one quarter share of China's highly competitive automobile industry.<sup>25</sup>

**Chart 4. Evolution of Ownership Structure of Top 10 Firms, Electronic Industries, 1996, 2001, 2004**



**Source:** China Markets Yearbook 中国市场年鉴, 1999, 2003, 2006.

Chart 4 illustrates the evolving ownership patterns in selected higher-technology electronic industries. Unlike Chart 2 and 3, the role of foreign-funded enterprises is noticeably more significant, revealing the extent to which the capabilities of domestic Chinese firms lag those of international competitors, as well as the incentives and looser restrictions (such as full foreign

<sup>24</sup> Reed, John (2009). "Geely in driving seat to secure Volvo deal", *Financial Times*, September 8.

<sup>25</sup> Dyer, Geoff and Richard McGregor (2008). "China's champions: why state ownership is no longer proving a dead hand", *Financial Times*, March 17; Dyer, Geoff (2006). "Homegrown groups take a larger share", *Financial Times*, December 12.

ownership) bestowed to attract these kinds of foreign investments.<sup>26</sup> The dominance of foreign-funded firms is most stark in the integrated circuits sector, where in 2004 the top 10 firms consisted of nine foreign-funded firms and one overseas Chinese-funded firm. The outcome in the integrated computer industry is similar, with the top 10 firms in 2004 divided evenly between five foreign-funded firms and five overseas Chinese-funded firms.

Despite the contrast with state ownership in heavy and capital goods industries, however, there are signs that state supported domestic firms are making headway into these higher-technology sectors as well. For less sophisticated electronics such as home air conditioning devices, domestic firms are more prevalent in the Top 10 list. Haier Group Co., a collectively-owned firm, and two joint stock companies, Midea Group Co. and Gree Electric Appliances Co., occupy the top three positions on the list. In communications exchange equipment, joint stock state backed firms such as Huawei Technologies Co. and ZTE Communication Co. led the top 10 in 2004. Even in computers, domestic firm Lenovo Co. placed seventh on the top 10 list. Lenovo, however, is categorized as “overseas Chinese-funded” because of its listing in Hong Kong, where 43.1% of its shares are held by public shareholders. Legend Holdings Ltd. holds 41.9% of Lenovo, which in turn is 65% held by the Chinese Academy of Sciences, and 35% held by the Employees’ Shareholding Society of Legend Holdings Ltd.<sup>27</sup>

\* \* \*

Evidence provided in this subsection suggests a reshaping in the Chinese government’s approach in enhancing management over industrial policy. This is reflected in two major lessons in institutional learning seen in the overall reform process: first, China’s leadership learned that less can be more in concentrating the role the state in key intermediate and capital-intensive ‘lifeline’ sectors critical to the continued rapid development of the economy and industrial upgrading; second, as seen in Charts 3 and 4, in fostering domestic firms that are more exposed to competition where technology, design and marketing are crucial factors – ie. in non-natural monopoly or national security areas – China’s leaders have understood that effective learning in different sets of industries requires careful attention to their competitive needs.

For instance, investment in motor vehicles, and other heavy industries, is much more capital-intensive, requiring coordination among complementary investments made by suppliers, and the mastering of well-established manufacturing techniques; all three of which are conducive to large, vertically-integrated firms. Development in electronics and information technology is different, as it requires less capital intensity, less coordination among complementary investments, and more flexible corporate structures and horizontal clustering to keep up with rapid innovations. Working in an environment of this sort, the ideal organizational structure is one that maximizes individual incentives for each individual actor, whereas for the auto sector, the ideal is to establish unifying incentives across the production chain. Moreover, innovation is a key driver for high tech, while for automobiles there is much more emphasis on learning before product and process innovations can occur. (Segal and Thun 2001)

The above explains China’s decision to induce faster learning and ‘catching-up’ by allowing greater liberalization and entry in high-tech sectors (Chart 4), compared to the much more gradual and limited liberalization witnessed in heavy and capital goods industries (Chart 2 and 3). Moreover, in pragmatically experimenting with ownership diversification, key portions of China’s private sector remains characterized by significant direct and indirect state involvement by different layers of government at the central and local level – a form of market competition with Chinese characteristics. Although seen as operating with a competitive market ethos, Chinese private or ‘semi-private’ firms (Lin and Wang 2008:14) often occupy an ambiguous middle ground

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<sup>26</sup> In building a domestic semiconductor industry, for instance, see: Hufbauer (2006), Scalise (2005), O’Melveny and Myers (2003).

<sup>27</sup> See, Levovo Group’s website: [http://www.pc.ibm.com/ww/lenovo/investor\\_factsheet.html](http://www.pc.ibm.com/ww/lenovo/investor_factsheet.html)

between public and private spheres as they retain strong roots to government and remain attentive to state plans and guidance (Mattlin 2007:25-7; Yusuf *et al.* 2006:24, 89, 96-99; OECD 2005:309-11; Green 2004:6-7; Woetzel 2004). This led to further institutional adaptation in China's industrial reform process as firms not initially given priority as national champions were accepted and supported by the central government as such if they proved effective in pushing ahead national economic objectives, while simultaneously exerting a competitive influence on other economic actors, particularly large SOEs, to perform better. As Naughton and Segal have argued:

Chinese policy, while attempting to shape market outcomes, is now to a significant extent itself shaped by market processes. The government did not choose the competitors, but elected to support aggressive competitors once they emerged. (Naughton and Segal 2001:19)

In striking a better balance between state support and demonstrated economic performance, some China-watchers interpret this approach as a "lighter-handed but potentially more effective form of Chinese industrial policy." (Noble *et al.* 2005:13) Thus, as opposed to a rigid top-down exercise in 'picking winners', China's conduct of industrial policy pragmatically adjusted over the course of the 'grasp the large, release the small' initiative in gradually learning and tinkering with greater degrees of enterprise autonomy and industrial privatization processes and coming up with effective institutional innovations in making headway on national ambitions and goals.

## 2. Industrial Policy Framework, Institutions and Tools

With Chinese domestic industrial capabilities still focused on gaining mastery in medium technology heavy and capital goods industries and yet to become competitive with foreign competitors in high-value sectors at the technological frontier, China's industrial policy, more often than not, is assessed in a negative light: "porous" (Kennedy 2007), "a failure" (Nolan 2002), unlikely "to have an import effect on the development of China's emerging economic sectors" (Naughton 2007), and where national champion firms "end up in reality as little more than local or regional players." (Steinfeld 2004:1982)<sup>28</sup> More comprehensively,

China, in other words, has joined the global economy on terms that reinforce its dependence on foreign technology and investment and restrict its ability to become an industrial and technological threat to advanced industrialized democracies. (Gilboy 2004)

This subsection argues, however, that such views are, at best, premature, and misleading of China's current development stage and the challenges posed in deepening the learning process. At worst, such analyses merely assume that all industrial learning processes occur effortlessly and automatically, as per conventional economic theory. Given the obvious point that China's industrial reform process remains a work in progress, it is not only important to evaluate trends in the current state of the industrial sector, but to also examine changes in the underlying institutional architecture in providing the sufficient legal and regulatory breathing space in which to continue fostering leading domestic firms towards international competitiveness. Below, three critical areas of China's 'policy space' toolbox are explored, namely, in banking and financial, industrial and technological sectors.

To be sure, dating back to the 1949 Communist Revolution, the governing Chinese Communist Party policymakers have long had institutions with access to widespread tools of intervention to engineer industrial development. For instance, an enduring legacy of Mao Zedong's 1960s policy that each province, each prefecture, county or even town, should have a relatively complete

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<sup>28</sup> Economist (2005). "The myth of China Inc.", September 1. See, [http://www.economist.com/business/displayStory.cfm?story\\_id=4352026](http://www.economist.com/business/displayStory.cfm?story_id=4352026); Economist (2005). "The Struggle of the Champions", January 6. See, [http://www.economist.com/displaystory.cfm?story\\_id=3535818](http://www.economist.com/displaystory.cfm?story_id=3535818)

industrial structure (or 大而全, 小而全) comprising of five small local SOEs producing iron and steel, cement, fertilizer, coal, and machine tools, while critical in establishing China's industrial base, continues to hamper the competitiveness and consolidation of certain key industries in contemporary China (Lin 2004; Young 2000). What has evolved, gathering pace in the 1990s, is the configuration of China's economic regulatory architecture designed to structure competition in fostering national champions through a mixture of protection, support, opening and reform regulatory policies in generating pressures for upgrading and deepening national production capabilities. (Pearson 2005; Howell 2007; Naughton 2003; Nolan 2002; Jencks 1999)

This institutional reform was marked by three intertwined reform processes: First, the breaking-up and reform of incumbent commercial monopolies from the ministries that previously controlled them, creating conditions for "orderly" market competition between a handful of firms that compete and collude with each other (see Box 1). Second, streamlining government bureaucracy and establishing competently staffed new sector-specific regulatory institutions to watch over and guide the development of market structure against unchecked expansion, competition and excess capacity. Third, as seen in the previous subsection, a (relatively) clearer economic rationale and commercial division of labour between state firms and private, non-state firms. Instead of seeing non-state firms as rivals to SOEs, by the late 1990s, the former were now viewed as national champions able to challenge the dominance of foreign firms.

Since the start of economic reform and opening, China's economic bureaucracy has been reorganized numerous times to streamline and increase its efficiency. Amid the numerous reorganizations, four major restructurings round stand out in the 1980s, 1990s, 2003 and 2008.<sup>29</sup> Round two reforms in the 1990s saw then-Premier Zhu Rongji roughly halve the number of government ministries, leaving just 29 in 1998. "Industrial-line ministries" were merged or folded and downgraded to the rank of bureau subsumed under the reform-minded State Economic and Trade Commission (SETC), the then-umbrella economic ministry in charge of industrial policy decision making. These reforms were designed to reduce regulatory interference from vested bureaucrats, creating the space for newly established regulatory bodies. The State Council began carving out specialized stand-alone regulatory institutions previously governed by departments of larger agencies focused on key aspects of reform. Financial and infrastructure sector institutional reforms led the way, starting the process in 1992 with creation of the China Securities Regulatory Commission (CSRC), followed by respective commissions in telecommunications (1997), insurance (1998), aviation (2002), electric power (2003), and banking (2003) (Pearson 2005; Chen 2004). It was this process that led to the establishment of central SASAC in 2003, drawing back scattered state assets to better oversee their management, as part of round three reforms.

This subsection highlights the point that while SASAC has emerged as a key institutional player with a relatively well defined mandate, it is only one piece of Beijing's evolving big-picture institutional constellation involving other specialized commissions, reformed ministries and other bodies governing industrial policy. China's capacity in maintaining a capital controls regime is a case in point of this institutional constellation at work in stabilizing the macroeconomic environment while deliberately and effectively channeling domestic and foreign capital towards direct investment in learning processes – ie. production, technology, distribution channels and management skills. This process was conducted with particular attention to direct investment in the manufacturing sector, while dissuading (thus far) more speculative flows into portfolio investments (IMF 2008:313-22; Ma and McCauley 2007:14; Dollar 2008:2). Despite brief revelations in 2007 regarding a 'through-train' for mainland investors to directly buy Hong Kong-listed shares, China's capital account opening has occurred very gradually given its close relationship to independent monetary and exchange rate policy decisions (Akyuz 2007:19-21),

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<sup>29</sup> For restructuring rounds 1-3, see: AmCham (2003); Jencks (1999); Munro and Yan (2003); Chen (2004); Rosen and Houser (2007). For round 4, see: Batson, Andrew and Shai Oster (2008). "Beijing Reorders Priorities – New Attention Given to Environment, Services", *Wall Street Journal*, March 12; Dickie, Mure and Richard McGregor (2008). Beijing unveils ministry shake-up", *Financial Times*, March 12.

and will likely remain closely linked to degrees of liberalization and restructuring in core areas of the economy (Yu 2009:4-11, 43-4).

The remainder of this subsection delves further into this process by briefly reviewing the gradual evolution and recent developments in industrial policy measures taken in the key areas of banking and finance, industry and technology.

### **Box 1. Strategic Partners and Civil Aviation – “Orderly Competition” Case Study<sup>30</sup>**

Strategic sectors predominantly owned by central SASAC help to illustrate China's working system of “orderly competition”. China's commercial aviation sector, for example, was one of the most fragmented airline industries in the world, due to an intensified breakup that began in the late 1980s and early 1990s, as provinces and regions were authorized to form their “own” regional airlines. The resulting hemorrhaging of revenues and great market disorder inspired a series of restructuring moves. By the fall of 2002, the ten carriers that had remained directly under the China Administration of Civil Aviation (CAAC) were merged into three groups, which collectively controlled 80% of the aviation market; local governments, primarily, own the remaining firms. This left CAAC as industry regulator, while a government controlled holding company overseen by SASAC took ownership of the triumvirate firms: China Southern Airlines Corp., China Eastern Airlines Corp., and China National Aviation Holding Co. (parent of Air China Ltd.). Air China, based in Beijing, is the strongest and most profitable of China's airlines and dreams of becoming a national supercarrier, which threatens the current structure of China's airline industry. Foreign ownership stakes for Chinese airlines is capped at 25%.

In 2004, **Air China** introduced a strategic partner, Hong Kong-based Cathay Pacific Airways Ltd., via a stake sale it renegotiated into a 17.5% share swap in 2006. Shanghai-based **China Eastern** was following a similar path selling a 24% stake to Singapore Airlines Ltd. and Temasek Holdings. It appeared only a matter of time before Guangzhou-based China Southern Airlines would also find a foreign partner. However, in January 2008, Air China announced an informal hostile bid for the minority stake in China Eastern, seen as an example of a leading Chinese SOE deploying Western-style takeover tactics to influence the direction of government industrial policy. For instance, Air China's ultimately rejected bid offer was HKD 5 per share, compared to Singapore Airlines' initial September 2007 offer of HKD 3.80. To block the purchase, Air China's parent also built up a toehold stake of 12.07% in China Eastern's Hong Kong-listed shares, where it then persuaded the remaining 21.3% of shareholders to reject the initial offer. Singapore Airlines' initial offer expired Aug. 9 2008, and any deal is likely to be revised downwards as China Eastern's shares had fallen almost three-quarters from the beginning of the year. The original offer represented a 35% premium on the then share price; a similar premium in July 2008 would give a price of about HK\$3 per share.

<sup>30</sup>Lau, Justine (2009). “China Eastern buys rival for \$1.3bn”, *Financial Times*, July 13; Anderlini, Jamil (2009). “Chinese airlines ask Beijing for more aid”, *Financial Times*, April 17; Anderlini, Jamil (2008). “China Eastern rescue package doubles”, *Financial Times*, December 29; Anderlini, Jamil (2008). “Beijing reshuffles chiefs at top three state airlines”, *Financial Times*, December 16; Financial Times (2008). “China's airlines”, July 18; China Daily (2008). “Airlines may resume talks after Olympics”, July 30; Kwong, Robin (2008). “Air China still keen on China Eastern”, *Financial Times*, March 18; Stanley, Bruce and Jeffrey Ng (2008). “Air China sets options for Shanghai”, *Wall Street Journal*, March 19; Richard McGregor (2008). “China's state companies outgrow the ‘family’”, *Financial Times*, January 16; Carew, Rick and Costas Paris (2008). “Air China lobs bid to undo rival's deal”, *Wall Street Journal*, January 7; Sternberg, Joseph (2008) “Air China Inc.”, *Wall Street Journal*, January 10.

Despite Air China's distaste for seeing its weaker competitor get a capital boost and a strong foreign partner, many analysts believed Air China would stay on the sidelines after the Singapore Airlines investment won the blessing of the State Council in September 2007. Senior Chinese officials and regulators have taken a neutral, wait-and-see approach. SASAC, issued a statement saying the agency supports SOEs introducing foreign strategic investors, but that management of state firms should make decisions "autonomously" based on "market principles". Li Jiaying, former chairman of Air China, and newly appointed minister of the CAAC, has long advocated further consolidation in the industry with Air China leading the charge. The two ministries (CAAC, SASAC) that could have reigned in Air China's ambitions, may have simply decided to step back, to make clear to China Eastern, and other enterprises, that there is a price to pay for underperformance. Ultimately, however, while China Air was able to block Singapore Airlines planned investment, its own campaign to absorb China Eastern and its coveted Shanghai hub also failed.

Amid economic crisis, China Eastern, considered the worst-performing, both financially and operationally, of the three big state carriers, was provided a government bailout (along with China Southern) in late December 2008 as the airline sector suffered from a downturn in passenger demand and massive losses from derivatives contracts caused by plummeting oil prices. The bailout was preceded by a reshuffling of top executives between the big three carriers, swapping senior managers at China Eastern and Air China and replacing China Eastern's chairman with the China Southern chairman. The move was seen as a prelude to an overhaul of industry structure to pave the way for state-directed mergers, a common practice as part of the Communist Party's efforts to foster "orderly competition" among supposed rivals.

In July 2009, China Eastern acquired local rival Shanghai Airlines, which also received a bailout, for just under \$1.3bn. With many overlapping routes, fierce price wars between the two Shanghai-based airlines had been a major cause for China Eastern's chronic losses, which were the result of domestic yield per seat of 10% and 3% lower than that of Air China and China Southern, respectively. Following the merger, China Eastern's market share in Shanghai will increase from 35% to 50%, and it will control 30% of China's aviation market.

## **2.1 Financial Institutions and Capital Markets**

**Banking:** Given the importance of the financial system as the 'brain' of the entire economic system in allocating resources and the historical link between Chinese state-owned commercial banks' (SCBs) lending and state-owned enterprises' (SOEs) borrowing, liberalization of the banking and financial sector is shrouded in political sensitivities as the role of foreign firms in domestic banking would likely increase, drawing deposits, capital and customers away from the 'big four' SCBs, which still account for roughly 60% of all banking sector assets. This would, in turn, constrain the government's ability to provide ongoing financial support to reforming SOEs and the stability presumably provided by these firms in terms of economic growth, employment and some public services. (Okazaki 2007; JEC 2006; Hansakul 2006; 2004; Stiglitz 1994)

China's accession process had a five-year WTO phase-in period for banking services culminating in 2006, when foreign banks were to be allowed to conduct foreign currency business without any market access or national treatment limitations and conduct local currency business with foreign-invested enterprises and foreign individuals, subject to certain geographic restrictions. Foreign bank ability to conduct RMB business with Chinese enterprises and individuals was to be phased in two years and five years after succession, respectively, with all geographic restrictions removed at the latter deadline. However, by end-2006, the total assets of foreign banks in China



had reached \$123bn, just over 2% of total mainland banking assets. In some coastal cities, the amount could be higher; in Shanghai, foreign banks' assets are reported to be 12.4% of total municipal banking assets in October 2005.

In 2003, China's central bank, the People's Bank of China (PBoC), spun off the China Banking Regulatory Commission (CBRC) to focus on the regulatory and supervisory function of banking and financial institutions in enhancing the strength of these entities, as well as monitoring capital adequacy issues, bank restructuring and the accumulation of non-performing loans (NPLs). As such, under China's historically bank-centered and government-owned banking system, the CBRC plays the equivalent supervisory (but not ownership) role over central government financial assets as central SASAC does for the state's largest industrial assets. However, with institutional roots inherited from the PBoC, the central bank remains a very influential institution with regulatory weight found in its mandate over monetary policy management and price stability; the PBoC sets interest rate bands for loans and deposits, decides the level of reserve requirements and other ratios affecting banks' liquidity, monitors lending by banks and holds authority over banks' credit extension.

Despite face-value commitments to significantly liberalize financial services, the USTR noted that new regulations governing foreign-funded banks, effective February 2002, issued by the People's Bank of China (PBoC) were *de jure*, but not *de facto* in-line with WTO commitments, as it became clear the PBoC exercised "extreme caution" in opening up the banking sector by setting high capital requirement and other stringent prudential rules aimed so that "only large banks had sufficient resources to satisfy the entry requirements" for domestic expansion. For example, a foreign bank branch licensed to conduct business in all currencies for both corporate and individual clients had to satisfy an operating capital requirement of RMB 500m (\$67.5m), while a domestic bank branch with the same business scope needed only RMB 300m (\$40.5m) in operating capital. Also, the regulations allowed foreign-funded banks to only open one branch every 12 months. Following discussions with some WTO members, China removed the 12 months/branch limitation in July 2004. Nevertheless, the US, along with Australia, Canada, the EC and Japan, continue to urge China to make its banking sector more accessible to foreign banks, as seen in the annual transitional reviews before the Committee on Trade in Financial Services that have taken place since 2004. (USTR 2007:88; 2006:81)

The opening of foreign banks access to RMB business with Chinese individuals, slated for December 2006, was seen as likely to further accelerate the role of foreign banks, although the relevant regulations issued by the State Council in November 2006 did include significant limitations. For example, the new regulations allowed only foreign-funded banks that have had a representative office in China for two years and that have total assets exceeding \$10bn can apply to incorporate in China. Following incorporation, these banks only become eligible to offer full domestic currency services to Chinese individuals if they can demonstrate that they have operated in China for three years and have had two consecutive years of profits.

The regulations also restricted the scope of activities that can be conducted by foreign banks seeking to operate in domestic currency through branches instead of through subsidiaries. For instance, bank branches can take deposits and make loans to Chinese enterprises in domestic currency, but they can only take domestic deposits of RMB 1m (\$135,000) or more from Chinese individuals and are not allowed to make any domestic currency loans to Chinese individuals. Also, unlike banks incorporated in China, branches cannot issue domestic currency credit and debit cards to Chinese enterprises or Chinese individuals. Even for domestically incorporated foreign banks, Chinese regulators did not act on applications to issue domestic currency credit and debit cards, or to trade or underwrite commercial paper or long-term listed domestic currency bonds (USTR 2007:89; 2006:81-2).

Another contentious issue surrounds WTO commitments made regarding the establishment of Chinese-foreign joint banks. Upon WTO accession, China agreed to allow qualified financial institutions to set up joint banks without any limitation on foreign ownership. This has yet to be

realized as limits have been imposed on the sale of equity stakes in existing state-owned banks to a single foreign investor to 20%, while the total equity share of all foreign investors is limited to 25% (USTR 2007:88). Given the difficulties foreign banks have encountered in expanding their presence in China, direct market penetration has not proved easy. Instead, foreign banks have looked to indirect market penetration through equity stakes in local banks, particularly to gain access to their Chinese counterparts' extensive branch networks.<sup>31</sup>

While in most other countries, foreign investment took the form of direct takeover or majority shareholding, foreign investment in China's banks has taken the form of minority shareholding with very limited management involvement. Since 2004, foreign "strategic" investors have entered four of the largest five banks. The 2004 \$1.75bn purchase by Hong Kong and Shanghai Banking Corporation (HSBC) of a 19.9% stake in the Bank of Communications (BoCom), a joint stock commercial lender and China's fifth largest bank, was the first major transaction. Since June 2005, foreign investors have invested or committed to invest over \$14bn in the three large SCBs, in becoming strategic investors: the Bank of America (BoA) in China Construction Bank (CCB), a consortium led by Royal Bank of Scotland (RBS) in the Bank of China (BoC), and Goldman Sachs led investor group in the Industrial and Commercial Bank of China (ICBC). The investments are strategic from the foreign banks' point of view, as a way to enter the Chinese market, but so far they have only been important portfolio investors in the Chinese banks, with some side activities in credit cards and wealth management (Leigh and Podpiera 2006:3-5, 11-13, see Table 1 and 2).<sup>32</sup>

The SCBs' Hong Kong stock market listing process was the culmination of efforts to reform and recapitalize the banks in preparation of increased foreign competition following WTO entry and spurred by events surrounding the Asian financial crisis; only the Agricultural Bank of China (ABC) has yet to undergo this process. One important restructuring measure came when in late 1998 Beijing issued RMB 270bn (\$33bn) in special bonds to recapitalize the big four banks, effectively injecting new capital derived from the country's foreign exchange reserves. Then in 1999, four asset management companies (AMCs) were established to absorb a substantial amount of non-performing loans at book value from each of the big-four banks. Assets transferred off SCB balance sheets were worth RMB 1.4 trillion (\$170bn), of which 580 SOEs had agreed to swap RMB 405bn of debt for equity with the AMCs. The NPL transfer alone was estimated at equivalent to 20% of total loans made by SCBs and 18% of GDP in 1998. Importantly, the NPLs transferred to the Chinese AMCs represented just less than half of the total estimated NPLs at the big four banks. (Ma and Fung 2002; Shih 2005)<sup>33</sup>

This move was followed by a further recapitalization in early 2004, transferring \$45bn to the CCB and BoC and introducing changes in legal structure, corporate governance, and risk management, with the goal of bringing in strategic investors and eventually listing the banks. For instance, recapitalization of CCB and BoC led to restructurings that put into place new corporate

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<sup>31</sup> For instance, by end-2006 HSBC had the largest foreign branch network on the mainland with 26 outlets. According to figures from June 2006, China's big four banks have a combined network of 70,000 branches across the mainland. (China Daily (2006) "China to open renminbi business to foreign banks", November 16. See, [http://www.chinadaily.com.cn/china/2006-11/16/content\\_734524.htm](http://www.chinadaily.com.cn/china/2006-11/16/content_734524.htm))

<sup>32</sup> Nonetheless, the SCBs' Hong Kong listing process stirred some domestic controversy. Particularly incendiary was the view that, despite the risks of investing in state banks (including in corporate governance, legal system, reliability of financial information, and regulatory treatment), equity in SCBs was being sold off too cheaply and at great profit to strategic investors to the detriment of national interests (Naughton 2006). The pricing of foreign investments into China's banking system has varied, but look to generally pay off handsomely when and if shares are later divested. For instance, relative to the pre-Initial Public Offering (IPO) price paid by HSBC for BoCom shares, by late 2006 BoCom share price was trading at roughly 300% higher. Similarly, CCB's and BoC's IPO price was roughly 170% and 160% relative to pre-IPO prices paid by foreign investors, respectively (Leigh and Podpiera 2006:7).

<sup>33</sup> Lo Chi (2004). "Bank Reform: how much time does China have?", *The China Business Review*, March/April. See, <http://www.chinabusinessreview.com/public/0403/chilo.html>

governance structures with a shareholders' meeting, board of directors, board of supervisors, and top management operating according to newly adopted rules (Podpiera 2005:3-6).<sup>34</sup>

This PBoC-CBRC induced reform process managed to restore some financial health to state banks, which have long suffered from high NPL ratios due to their inability to freely price loans according to international commercial standards of risk as opposed to those of government policy (Bottelier 2006). This raises issues of solvency rather than of liquidity, the reverse situation of the bind that regional and international banks and firms experienced through the Asian financial crises. Although the CBRC reported that NPLs in SCBs fell to \$164bn, or 6.6 % of GDP as of March 31 2006, outside observers estimate the real figure to be much higher. In a widely publicized study, Ernst & Young estimated that NPLs amounted to \$911bn, or 41% of GDP at year-end 2005. The PBoC and the CBRC vigorously disputed the Ernst & Young estimate and under pressure from Chinese officials, the company, which does auditing business with ICBC, withdrew its study nine days after its release in May 2006 (JEC 2006:20-1).

**Capital Markets:** With regards to the development of domestic capital markets, the China Securities Regulatory Commission (CSRC) was created in 1992 and amalgamated in 1997 to form one ministry-rank unit directly under the State Council. Spun-off from the PBoC and other government agencies, the CSRC became the country's sole supervisory agency for the securities markets in stocks and bonds traded in Shanghai and Shenzhen exchanges (both created in 1990), in charge of monitoring listed companies, regulating securities firms and share issuance approvals, while also taking over local securities offices run by provincial governments. (Hansakul 2004)<sup>35</sup>

As with other aspects of China's reform processes, the establishment of domestic stock exchanges continues to be a work in progress in terms of acting as a market for corporate control, market discipline and privatization. Marked by periodic scandals and market irregularities, the CSRC took a gradual approach to corporate governance reform as it sought to build-up a regulatory framework. Green (2004) outlines seven high profile reforms advanced gradually over the years (mainly in the early year 2000s) to improve basic transparency and regulation:

- Making the boards of directors more independent;
- Allowing minority shareholders to sue management for making false disclosures;
- Boosting institutional investment;
- Toughening up punishments for illegal activities;
- Forcing badly-performing firms to exit the market;
- Improving the link between performance and compensation for senior managers;
- Introducing foreign shareholders

Importantly, in terms of public share issuance criteria, until 2001 the CSRC administered a quota system for the number of firms to be listed (Naughton 2002). Since then, share issuance approval is granted on the fulfillment of certain conditions – one of which requiring the company must have been in business for more than three years and have maintained profits over these three years<sup>36</sup>, a condition seen as favouring the state-owned sector and making it more difficult for non-state firms to win a public listing. For these reasons, "China's stock market does not operate as a vehicle for privatization but rather as a capital-raising tool for state firms." For instance, by year-end 2003, some 95% of China's 1,278 listed firms began their corporate lives as traditional SOEs and many spent only a few months as limited liability companies before being listed. (Green 2004:6-8; Green 2003)

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<sup>34</sup> Economist (2005). "A great big banking gamble – China's banking industry", October 29.

<sup>35</sup> See China Securities Regulatory Commission (CSRC) website:, [http://www.csrc.org.cn/en/homepage/about\\_en.jsp](http://www.csrc.org.cn/en/homepage/about_en.jsp)

<sup>36</sup> Shanghai Stock Exchange website 'Listing Requirements'. See, [http://www.sse.com.cn/sseportal/en\\_us/ps/lc/lst\\_req.shtml](http://www.sse.com.cn/sseportal/en_us/ps/lc/lst_req.shtml)

Moreover, the stock market's shareholding structure was divided and fragmented according to different classifications in order to prevent the full privatization of some Chinese firms and to shelter local markets from shocks in the global economy. As such, a two-tier ownership structure was put in place of tradable and non-tradable shares, the latter of which could not be sold on the public markets. This became known as 'one-third privatization' (and later 'two-thirds' privatization) as only roughly one third of the shares in the listing firms are sold as "individual shares" (各人股, *geren gu*), which can be further sub-divided into three types: A-shares are freely traded by mainland individuals and institutions; B-shares are for foreign individuals and institutions and domestic individuals with foreign currency; and H/N-shares are listed in foreign stock exchanges, mostly in Hong Kong and New York.<sup>37</sup>

The orientation of the exchanges left minority shareholders with very limited influence either on the governance of these companies or their investment decisions, which in turn negatively influenced the development of the exchanges as the number of listings grew but the proportion of shares that circulated rose only very slowly. For instance, by end-2001, only 35% of shares were actually allowed to circulate on the market (Yusuf *et al.* 2006:89). Efforts to gradually increase the proportion of tradeable shares were experimented with over time as the state tinkered with ownership diversification through stock market listings. The latest major step, taken in April 2005, was to make non-tradable shares liquid by allowing controlling shareholders of individual companies to draw up their own share conversion programme to be approved by the company's board of directors, two-thirds of tradable and non-tradable shareholders (respectively), and government regulators.<sup>38</sup> (Ahn and Cogman 2007; Naughton 2005a)

As more than 90% of SOEs have already completed conversion plans by the spring of 2007, all non-tradeable shares in Chinese domestic capital markets could become fully tradable over the next five years, the latest by 2012. As noted by *McKinsey*, these reforms are an important enabler for the domestic merger and acquisition (M&A) market mainly due to the diversity of state entities that now own non-tradable shares – different layers of government, other SOEs, banks and investment companies. As the conversion plans go into effect, these financial investors in non-tradable shares will for the first time be able to rationalize their non-core investments, possibly paving the way for a wave of domestic M&A activity.

*McKinsey* believes that current plans to reform the pension system and social security, along with other the emergence of other institutional investors (see below), if implemented, will have generated new funds for investment into the equity market. Those funds will be worth two-thirds of the value of all non-tradable equity, or roughly 75% excluding sectors with investment restrictions. This increase will greatly enlarge the base of domestic institutional investors, which today account for roughly only 10% of all investors. That huge shift will create a professional-investor segment with holdings that exceed the capitalization of China's domestic equity market today. A professional, organized investor base would be a powerful force in advancing industry

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<sup>37</sup> The other two-thirds of the shares are in the form of: 1) "legal person" shares (法人股, *faren gu*) are granted to the parent firm of the listing firm. LP shares are not freely traded on stock exchanges but were later allowed to be exchanged freely between legal entities, leading possibly to "two-thirds privatization"; 2) the remaining shares of the listing firm is allocated to the government as "state" shares (国家股, *guojia gu*). These shares are held by state asset management organs, either at the provincial or central level, depending on which layer of government originally controlled the enterprise. State shares cannot be traded in the market, and their transfer is subject to multiple administrative approvals (Green 2004). See also, Smitsendonk (2007).

<sup>38</sup> Generally, two key elements were included in every share conversion plan: 1) no more than 5% of the previously non-tradable shares could be sold in the first year following the shareholders' approval of the conversion plan, and no more than 10% in the next year. Thereafter, companies could further specify longer, voluntary lockup periods, but for most enterprises there would be no mandated restriction on the sale of former non-tradable shares; 2) plans had to involve some compensation paid by the holders of non-tradable shares to the owners of tradable ones. Holders of tradable shares generally received a bonus worth 30% of their pre-conversion stake. Most plans provided this bonus in the form of equity, as well as the combination of cash and options. (Ahn and Cogman 2007)

consolidation and even corporate governance practices, while also further diversifying ownership structures.

Other measures, such as China's Qualified Foreign Institutional Investor (QFII) programme, a quota-system perceived as going beyond WTO commitments, which regulates foreign investor access to yuan-denominated securities in A-shares, treasuries, and corporate and convertible bonds. Established in 2003 with \$10bn initially under-quota, the QFII currently represents less than two percent of domestic market capitalization, signifying Beijing's deliberate partial and measured opening of the securities market with particular attention to speculative 'hot flows' of foreign portfolio investment and possible threats of unwanted foreign takeovers. Although the programme is slated to expand its quota to \$30bn by 2014, allocation and timing of quota approvals remains at the discretion of the CSRC. (Howson 2007:167-9; OECD 2005:317)<sup>39</sup>

Additional government efforts to influence the development of other institutional investors also suggest an intention to shape domestic capital markets by creating 'homegrown' financial firms attuned to state industrial policy concerns and objectives. This approach is particularly apparent in the support of domestic firms involved in a) securities brokerage; b) private equity; and c) the creation of China's sovereign wealth fund (SWF).

**a)** In domestic securities firms and brokerages, CSRC regulations are widely acknowledged in formally meeting WTO commitments in allowing foreign-invested entities underwriting of all equity shares and bonds and trading in all non-A-shares and bonds, as well as a maximum foreign equity ownership of 33.3% in any Chinese securities firm. However, lucrative A-share trading and fund management lines of business are still largely reserved for domestic firms and prospective foreign investors are often required to forfeit an 'admission ticket' or 门票 (menpiao). This entails a cash bail-out payment to domestic entities prior to being allowed entry and something akin to control over newly organized PRC-based securities firms with possibly wider business scopes as seen in the 2005 deal between UBS and Beijing Securities Co. Beijing has also made use of a two-year moratorium (ending in Fall 2007) on foreign investment aimed at giving local companies time to prepare for greater competition. According to the CSRC, the duration of the ban depended on the improvement initiatives: (1) the sell down and making liquid of state and legal person shareholdings in listed firms (share conversion); and (2) the reorganization and partial bail out of China's existing securities firms. (Howson 2007; Shih 2005)<sup>40</sup>

**b)** In private equity, government regulators in 2006 established Bohai Industrial Investment Fund Management Co, majority state-owned, as part of efforts to promote a local private-equity industry run by Chinese managers, funded by Chinese investors for the benefit of Chinese companies. Formed to compete against international counterparts such as TPG, Carlyle Group and Kohlberg Kravis Roberts & Co., long known to have dominated the private equity in scene in China, the Bohai Fund is different from foreign funds because it is denominated in local currency, thus treated as a local firm and subject to lighter financial and regulatory hurdles (except in restricted sectors). Moreover, the National Development and Reform Commission's (NDRC) policy "recommendation" (Measure no.39) for this sector permits local governments to provide tax breaks, loans and even direct investment to the sector. Such treatment is seen to flout the spirit, but not the letter of WTO rules as venture capital is a grey area between banking and securities businesses, areas where China's commitments are stronger in the former, but weaker in the latter. In a further boost to the sector, in 2008 central authorities cleared the national social-security fund to invest up to 10% of its \$75bn in assets with local private equity funds operating in domestic currency, representing potentially the largest pool of capital for yuan-denominated private equity deals in the country.<sup>41</sup>

<sup>39</sup> Wood, Andrew (2009). "China's foreign investor scheme on track", *Financial Times*, February 22; Konyn, Mark (2008). "Rules relaxation no incentive in crisis climate", *Financial Times*, March 30.

<sup>40</sup> Dyer, Geoff and Sundeep Tucker (2007). "China to ease securities tie-up rules", *Financial Times*, September 23.

<sup>41</sup> Guerrero, Francesco *et al.* (2005). "China champions plans for venture capitalists", *Financial Times*, November 24; Anderlini, Jamil (2007). "China acts to develop domestic VC funds", *Financial Times*, September 4; Carew, Rick and

c) Also worth mentioning as another institutional player in China's industrial toolbox is the advent of the China Investment Corp. (CIC), China's controversial sovereign wealth fund (SWF) formally created in September 2007 as a ministry-rank agency reporting to the State Council charged with a mandate to ease the PBoC's exchange rate sterilization efforts by investing abroad and generating higher investment returns from foreign exchange earnings in gradually diversifying away from US Treasury Bills, in addition to supporting state enterprises in the process. Starting off with a capital fund of \$200bn, CIC has used roughly two-thirds on acquiring and bailing out other state-owned financial assets. Thus, roughly \$90bn will be invested in "offshore" financial markets, acting as a main channel of outward investment as part of China's capital controls apparatus (Martin 2008; Sester 2008; Kroeber 2007). So far, only three direct equity investments have been made, the first and third transactions involving private equity firm Blackstone Group, and investment bank Morgan Stanley, respectively, that have received the bulk of international attention and roundly criticized when these investments appeared to sour.<sup>42</sup> However, in addition to plans to assist central SASAC firms in overseas projects and investments<sup>43</sup>, it is the agency's second investment that reveals a possibly more nuanced investment strategy that also directly implicates SASAC and industrial policy.

In late November 2007, CIC purchased \$100m worth of shares as a "cornerstone" investor in China Railway Group's Hong Kong IPO, along with other institutional investors such as China Life Group, Singapore government's GIC, and Henderson Land's Lee Shaukee. China Railway Group's parent, China Railways Engineering Group, is the former construction arm of the Ministry of Railways and a central SASAC firm. China Railway Group is the mainland's largest railway construction company, but also builds highways, irrigation works, hydroelectric dams, airports and seaports. Aside from playing a supporting role in state firm IPOs, and in light the international concern over SWF investments (given weak WTO jurisdiction in this area)<sup>44</sup>, the simplest way for the CIC to hit its long-term return target (about 15%) is to buy internationally-listed shares in companies with yuan-denominated earnings, in order to provide a natural hedge against the mainland currency's appreciation. Should those companies have good growth prospects, so much the better. In practice, this means buying up Hong Kong-listed H-shares of mainland companies, together with similar stock in other listings in New York, London and Singapore.<sup>45</sup>

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Laura Santini (2007) "China cheers private-equity home teams", *Wall Street Journal*, September 14; Carew, Rick (2008). "Chinese fund gets set to invest in private equity", *Wall Street Journal*, June 6.

<sup>42</sup> McGregor, Richard (2007). "China unveils fund to invest forex reserves", *Financial Times*, September 29; South China Morning Post (SCMP) (2007). "CIC buys stake in China Railway", November 20; Anderlini, Jamil (2007). "China fund looks to Mideast as model", *Financial Times*, November 29; SCMP (2007). "CIC's home bias makes good sense", December 3; Wighton, David and Henny Sender (2007). "CIC's opportunistic deal is lesson learnt", *Financial Times*, December 19; Sender, Henny (2008). "China turns risk averse as capital outflows rise", *Financial Times*, January 18.

<sup>43</sup> In December 2007, news agencies reported that CIC reached agreement with SASAC to provide Sinopec with a direct cash injection to help fund overseas exploration and drilling projects. Sinopec was selected following several rounds of discussions, though the details of the capital injection have not been finalized. [SCMP (2007). "State fund to help Sinopec parent acquire overseas assets", December 22]

<sup>44</sup> Davis, Bob (2007). "How trade talks could tame sovereign wealth funds", *Wall Street Journal*, October 29.

<sup>45</sup> Also note that provincial and city governments also appear keen to set-up their own investment funds to support local companies that go abroad. Both Shanxi and Guangdong are launching energy funds, while Sichuan plans to establish a technology fund. Tianjin has already launched a technology investment fund. Moreover, the State Administration of Foreign Exchange (SAFE), under the PBoC, with the country's foreign exchange reserve under its management, has also been identified as a possible agency with the capital pool to act as a second, and so far less scrutinized, Chinese SWF. [Financial Times (2007). "Shanghai sets up \$1bn fund", December 4; Anderlini, Jamil (2008). "China investment arm emerges from shadows", *Financial Times*, January 5; McGregor, Richard and Henny Sender (2008). "Rival Chinese funds jostle to invest abroad", *Financial Times*, April 5]

## 2.2 Industry

The 11<sup>th</sup> Five Year Plan issued by the NDRC on November 9 2006 (but formally endorsed at the NPC's meeting in March 2006), stressed a FDI policy that moved away from the growth-at-all-costs approach to promote sustainable economic development. The key point was to raise the *quality of FDI*, which the NDRC says will entail promoting foreign investments that introduce advanced technology or have significant research and development components, discouraging the indiscriminate pursuit of FDI by local governments in low-value export-processing and assembly-type manufacturing, and applying stricter environmental standards to FDI proposals. At the September 2006, 10<sup>th</sup> China International Fair for Investment and Trade (CIFIT) in Xiamen, Fujian province, then Vice-Premier Wu Yi assured foreign representatives that "while China still welcomes all forms of foreign investment it will open its arms *wider* to investors who have advanced technologies to offer". For his part, Justin Yifu Lin, formerly director of the China Center for Economic Research at Peking University, suggested: "It's time China started to get picky with foreign investment. I have no doubt that preferential policies will only remain for certain kinds of foreign investors". (Wang 2007; Naughton 2005b)<sup>46</sup>

As seen in Table 1 below, FDI inflows as a proportion of GDP and fixed asset investment, respectively, have undergone a steady decline since the late 1990s. In the meantime, inbound merger and acquisition (M&A) transactions have been on the rise in recent years as over two decades of rapid growth Chinese domestic firms have matured and become more appealing as foreign acquisition targets. In directing FDI inflows and responding to trend changes, this subsection briefly highlights ongoing institutional measures oriented towards attracting quality over quantity FDI inflows. Although China's industrial policy tools are many, the discussion here will focus on a select few: a) the pattern of priorities seen in the *Catalogue for the Guidance of Foreign Investment Industries* (Investment Catalogue); b) the unified enterprise income tax law; c) the M&A regulations; d) the anti-monopoly law; e) sector-specific support and protection policies; and f) outward investment.

**Table 1. Inbound FDI and M&A flows in China, 1998-2006**

	1998	1999	2000	2001	2002	2003	2004	2005	2006
<b>Inbound M&amp;A (\$bn)</b>	0.80	2.40	2.20	2.30	2.10	3.80	6.80	8.30	6.70
<b>Inbound FDI (\$bn)</b>	45.40	40.30	40.70	46.90	52.70	53.50	60.60	72.40	69.50
<b>Inbound FDI/GDP</b>	4.70%	4.50%	3.70%	3.40%	3.50%	3.60%	3.30%	3.10%	2.70%
<b>Inbound M&amp;A/FDI</b>	1.80%	5.90%	5.50%	5.00%	3.90%	7.10%	11.10%	11.40%	9.70%
<b>FDI/ Fixed Asset Investment</b>	15.00%	13.20%	11.20%	10.20%	10.40%	10.00%	8.00%	7.10%	5.60%

**Source: UNCTAD 2007 World Investment Report, China Statistical Yearbook 2007.**

<sup>46</sup> Xinhua News (2006). "Investors offering advanced tech welcomed", September 7. See, [http://english.gov.cn/2006-09/07/content\\_381847.htm](http://english.gov.cn/2006-09/07/content_381847.htm); People's Daily (2006). "China regulates foreign mergers for more investment", September 11. See, [http://english.peopledaily.com.cn/200609/11/eng20060911\\_301644.html](http://english.peopledaily.com.cn/200609/11/eng20060911_301644.html); Economist Intelligence Unit (EIU) (2006). "Quality not quantity, please", November 10; EIU (2007). "Rebate review", June 21; Otteman, Scott (2008). "GAO study hits 'ambiguous' nature of Chinese investment reviews", *Inside US-China Trade*, vol.8 no.10, March 5.

## a) Investment Catalogue

Following Deng Xiaoping's 'Southern Tour' in 1992 to politically support the expansion of special economic zones (SEZs) and further encourage foreign direct investment, China also issued an Investment Catalogue through which to better control and channel FDI to preferred regions and industries. Periodically updated, since the 1990s the Catalogue acted as China's main policy tool vis-à-vis FDI as SEZs grew in kind and number throughout the country and limitations on wholly-owned foreign enterprises (WFOE) were gradually relaxed. Foreign investment projects are classified among three categories: 'encouraged' (investments qualify for incentives), 'restricted' (investments subject to gradual opening), 'prohibited' (investments off-limits). Investments in sectors not explicitly listed in these three categories are deemed 'permitted' with limited incentives and restrictions attached. (WTO 2008:39-40; 2006:52-4; BEA 1999)

The latest Catalogue, which entered into force December 2007, generally followed the same pattern of previous versions: 'encouraged' projects include those that use advanced technology and are less polluting; 'restricted' and 'prohibited' projects include those that use outdated technologies, over-exploit scarce natural resources, and that tend to damage the environment or that endanger the safety of the state or damage social and public interests. Compared to the last version of the Catalogue (issued in 2004), the number encouraged sectors increased significantly (to 633 in 2007 from 256 in 2004), while the number of restricted and prohibited categories also rose (to 175 from 156). Despite these alterations, foreign equity limits vary by industry and are not necessarily consistent by category. For example, 'encouraged' industries may have foreign equity restrictions, while 'restricted' industries may be wholly foreign owned. For instance, in the 2007 Catalogue, manufacturing of automobiles is 'encouraged'; however, the proportion of foreign investment in this industry should not exceed 50%. In the 2004 Catalogue, investment in the non-life insurance sector is listed as 'restricted', but wholly foreign-owned enterprises are allowed to be established in the non-life insurance sector as of 11 December 2003.

Another important aspect of the Catalogue is the sliding-scale nature of technical thresholds as domestic capabilities improve from one version of the Catalogue to the next (regardless of classification). For example, under the 1997 and 2004 Catalogues, investment in the manufacture of truck cranes (general machinery) of less than 50 tonnes is 'restricted'; under the 2007 Catalogue the sub-sector is still restricted, but the threshold is moved to truck cranes below 300 tonnes. In semiconductors, according to the 1997 and 2004 Catalogues, investment in design and production of large scale semiconductor's with line width of 0.35 micron or smaller is 'encouraged'. By 2007, the Catalogue shows production of semiconductor line width of 0.18 micron or smaller as 'encouraged'.

## b) Unified Enterprise Income Tax Law (EITL)<sup>47</sup>:

Prior to the new EITL, domestic enterprises and foreign invested enterprises (FIEs) in China were taxed under different EIT laws; foreign invested firms being taxed at a 15% rate, compared to 33% for domestic firms. As mentioned in earlier sections, the EITL was effective January 1 2008 and sets EIT rates as follows: unified EIT rate, 25%; small business rate, 20%; incentive rate (hi-tech, environmental), 15%.<sup>48</sup> The EITL framework was further elaborated in Implementation Rules (IR), publicly released on December 11 2007. While all the details and definitions of the EITL

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<sup>47</sup> This subsection relies on: Wagner (2008); Sussman *et al.* (2007); Niederhoffer, Jay (2007); Liu (2008). See also, Tucker, Sundeeep and Xi Chen (2009). "Foreign-registered companies face China tax scrutiny", *Financial Times*, May 18.

<sup>48</sup> The implementation of the unified enterprise income tax policy appears to offset the dividend policy imposed on SOEs. For example, China Mobile, paid an effective tax rate of just under 31.8% in 2006. In 2008, it will likely pay 24.2%. The difference, roughly RMB 11bn, represents 10% of the company's estimated 2008 earnings. 10% is also the CMB rate applied to central SOEs in the telecommunications industry. (Wall Street Journal (2008). "China tax shift resonates", January 10) See also Naughton (2008:7).



remain to be further elaborated by a group of agencies including the State Council, the Ministry of Finance (MoF), the State Administration of Taxation (SAT), and the Ministry of Commerce (MoC), three main points highlight the tougher stance of the new EITL toward foreign investment:

i) The new EITL divides enterprises into two categories: tax resident enterprises and non-tax resident enterprises. The former category of firms are taxed EIT on a worldwide income basis, whereas the latter category are only taxed EIT on China-sourced income, which is often much smaller. The law defines the meaning of “tax resident enterprises” to include enterprises incorporated outside China, with their effective management situated in China. The IR further details the term “place of effective management”, adopting a more comprehensive, but still vague, definition as “the place where a substantive overall management and control of the production and business operation, personnel, accounting, properties, etc. of an overseas enterprise is situated.”

ii) Prior to January 1 2008, dividends remitted to foreign investors from FIEs in China were exempt from withholding tax. Effective with the new EITL, outbound China-sourced passive income (including dividends, royalties, interest, etc.) will be subject to a withholding tax rate of 20%. The IR reduced this rate to 10%. The removal of the withholding tax exemption on dividends can greatly increase foreign investors’ global tax liability.

iii) According to the IR, in order to qualify for the EIT rate for “high/new technology enterprises”, the company is required to have certain characteristics, including: 1) possess independent ownership of “core intellectual property rights”; 2) provide products/services within high-tech areas “encouraged” by the state; 3) have incurred R&D expenses exceeding the minimum required percentage of annual sales revenue; 4) have income from high- or new-tech products or services exceeding the required percentage of total revenue; 5) have a number of R&D personnel exceeding the required percentage of total employees; 6) meet other specified requirements.

These qualifying stipulations, particularly the one requiring possession of core intellectual property, have been interpreted as being aimed to pressure, if not force, for greater technology transfer of key technologies and know-how to Chinese companies. Currently, it is uncommon for multinational corporations to transfer the ownership of their core proprietary intellectual assets to their Chinese subsidiaries for various reasons, but primarily out of intellectual property right (IPR) protection concerns.

### **c) M&A Regulations:**

Effective September 2006, the new M&A rules were announced by MoC, joined by five other leading state regulatory agencies: SASAC, SAT, State Administration for Industry and Commerce (SAIC), CSRC, and the State Administration of Foreign Exchange (SAFE). As shown in Table 1 above, the new regulations came at a time when foreign M&As emerged as a growing source of FDI as companies on the mainland matured from decades of growth.<sup>49</sup> Although China has long been a large recipient of FDI, this initially tended to flow into joint ventures or later in the form of wholly-owned foreign enterprises oriented towards exports. Few domestic companies fell into foreign hands until inbound M&A transactions became more prevalent. Given this new foreign investment ‘vehicle’, the Chinese government is particularly apprehensive that private equity investors will end up selling an acquired Chinese company to a foreign industrial conglomerate competing in the same sector. Moreover, the new rules were also widely seen as China’s backlash against foreign investment following the failed bid by CNOOC for Unocal in the summer

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<sup>49</sup> Note that China M&A statistics provided by Thomson Financial differ from those sourced from UNCTAD. For example, while foreign firms spent \$2.7bn on completed M&As in China in 2001, this figure jumped to \$13.2bn in 2005. Moreover, M&A accounted for 3.9% of FDI in China in 2002; in 2005, the share rose to 21.5%. [Dyer, Geoff *et al.* (2006). “Forbidden country? How foreign deals in China are hitting renewed resistance”, *Financial Times*, August 8.]

of 2005, two months after which the MoC halted the bid by the Carlyle Group to purchase 85% of Xugong Construction Machinery Corporation.<sup>50</sup>

The new regulations supersede previous interim measures issued in 2003, and have expanded roughly threefold in terms of length. Key features of the new regulations include: a) increased scrutiny over offshore special purpose vehicle (SPV) transactions, overseas listings and “round-tripping”, the traditional legal conduit through which domestic firms gain access to international capital markets and foreign private equity investors gain access to PRC domiciled and owned assets by bypassing the Chinese regulatory system; b) added measures to monitor and regulate (block, unwind, adjust) M&A activity that may result in either control or concentration of control in industries considered to be “key”, or that may affect “national economic security”, control of “famous trademarks”, or traditional Chinese brands. Although the M&A provisions were largely later superseded by the Anti-Monopoly Law (AML) (see below, AML ‘concentrations’), the M&A regulations played a key stop-gap role until the AML came into full force in August 2008. (Chao and Xu 2008; Li 2007; Morrison and Foerster 2006)

#### d) Anti-Monopoly Law<sup>51</sup>:

In late August 2007, the Standing Committee of the 10<sup>th</sup> NPC adopted the Anti-Monopoly Law, China’s first comprehensive competition law. After 13 years of debate, the final adoption of the AML is a landmark in China’s market-economy transition. Largely neutral on its face, the AML contains deliberate provision with uniquely Chinese characteristics, and their impact will ultimately depend on how Beijing authorities choose to enforce the new law and its relative treatment of foreign multinationals and domestic industry.

Effective August 2008 with draft implementation rules issued for consultation in April 2009, the AML’s general structure includes four substantive sections that: i) prohibit certain types of monopoly agreements (unless specifically exempted); ii) establish a framework for determining when abuse of dominant market position exists; iii) outlining a broadly defined merger review scheme; and iv) prohibit abuse of government administrative powers restraining competition, particularly between regions, while exempting SOEs from anti-trust provisions. Latter section sets forth wide powers of investigation and penalties for noncompliance, as well as provisions for appealing anti-trust rulings. Institutionally, SAIC is responsible for implementing and enforcing the

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<sup>50</sup> Batson, Andrew (2007). “China’s Merger Boom Continues”, *Wall Street Journal*, January 12; Areddy, James T. (2007). “In China, Bulls Sire Deal Making – Local M&A Heats up Amid Rising Stock Market”, *Wall Street Journal*, October 1; Tucker, Sundeep (2007). “China and India begin to deliver on M&A promise”, *Financial Times*, December 20; Sender, Henny *et al.* (2007). “Private equity groups rethink China options”, *Financial Times*, November 16; Yeh, Andrew (2006). “Rule changes puzzle OECD”, *Financial Times*, December 20; Chan, Kenneth (2006). “M&A makeover makes good sense”, *Financial Times*, December 20; Lewis, Robert and Andrew McGinty (2006). “Have no fear”, *International Financial Law Review*, December 1. Slater, Dan (2007). “China: Protectionist? Or just picky?”, *The Deal*, March 19; Tucker, Sundeep (2007). “Carlyle defends Chinese strategy”, *Financial Times*, August 27; Dyer, Geoff and Sundeep Tucker (2007). “Buying small is beautiful for private equity”, *Financial Times*, March 20; Batson, Andrew (2007). “How Carlyle Adapts to China”, *Wall Street Journal*, September 4; Whan, Andrew (2007). “When equity is difficult to buy”, *Financial Times*, January 17; Arnold, Martin (2008). “Carlyle in buy-out deal with Chinese province”, *Financial Times*, May 15.

<sup>51</sup> Unless otherwise indicated, this sub-section is based on: Bush (2007; 2008); Wang and Zhang (2008); Wei, Jun and Janet L. McDavid (2007). “China’s Anti-Monopoly Law”, *The National Law Journal*, vol.30 iss.7; October 15; Wang, Peter (2008). “New Chinese Anti-Monopoly Law”, Mondaq Business Briefing, October 16; Otteman, Scott (2007). “Investment Rules Increasingly Favor Domestic Firms”, *Inside US-China Trade*, vol.7 no.25, June 20; Tang, David (2007). “The PRC’s New Antimonopoly Law Has A Long Way To Go”, Mondaq Business Briefing, November 14; Speares, Sandra (2008). “Wise up on new monopoly law”, *Lloyd’s List*, April 30; Davis, Avram (2008). “Clarity Coming to China’s M&A Market?” *Investment Dealers Digest*, May 12; EIU (2008). “China: Competition and price regulations”, March 25; *International Financial Law Review* (2008). “Anti-monopoly law could turn China protectionist”, March 1; Tucker, Sundeep and Patti Waldmeir (2008). “Deals on hold?”, *Financial Times*, July 29; Otteman, Scott (2009). “China anti-monopoly rules deem IPR as factor in dominating markets”, *Inside US-China Trade*, May 13.

AML except those aspects dealing with M&A, which falls within the jurisdiction of MoC, and those related to price monopolies, to be handled by the NDRC.

**i) Monopoly agreements:** Under the AML, this includes both horizontal and vertical monopoly agreements. Prohibited horizontal agreements include price-fixing; output or sales volume restrictions; market division; restricting the purchase or development of new technology, equipment or products; and boycotts. Vertical monopoly agreements include minimum resale price-fixing. However, some observers have expressed concern that prohibiting agreements that "limit the purchase of new technology" may restrict the ability of intellectual property rights owners to license their intellectual property rights on terms that may seem reasonable to them but not to potential Chinese licensees or the Chinese government. Exemptions found in the law may offer some protection, but licensors may find it difficult to satisfy the conditions for exemption, such as that the agreement "enables the consumer to share the benefits derived" from the agreement, and the law appears to place the burden of proof on licensors.

**ii) Dominant position:** Under the AML, a commercial entity has a dominant market position if it is able to control the price or quantity of goods, or if it can block or affect other entities' access to the relevant market. Relevant factors include market share and entry barriers -- a dominant position is presumed from a 50% market share from a single firm, 66% market share for two firms, or 75% market share for 3 firms. A position of dominance may also be found even in cases where the individual firm has market share of below 50%, but above 10%. Cases of dominant market abuse include sales at an unfairly high price or below cost, purchases at an unfairly low price, refusing to trade, tie-in sales, exclusive dealing and other discriminatory treatment.

"Supplementary provisions" of the AML specifically state that anti-trust rules do not apply to efforts by firms to protect their legitimate intellectual property rights in accordance with IP laws and regulations, although it does apply to "abuses" of IP rights to eliminate or restrict market competition. As seen in draft implementation rules, market dominance is defined and the factors for its determination. Among the six determinants outlined, market dominance derived from "technological condition" includes consideration of R&D, technological equipment, innovation and utilization capabilities (SAIC 2009 Article 5, ss.3). Given that "unreasonable" royalties for foreign patent holders (particularly in high-tech industries) is a common complaint of Chinese industry groups and regulators, foreign investors and analysts suggest that firms deemed "dominant" in a market where intellectual property rights play a large role might be threatened with actions, such as compulsory licensing, for abuse based on their refusal to license or extraction of unfairly high royalties.<sup>52</sup>

**iii) Concentrations:** Under the AML, "concentrations" (defined as mergers, acquisitions of shares or assets, and contracts to acquire control over other firms) must be notified prior to being finalized. Undertakings involved in such transactions must make advance filings and await clearance prior to closing. All filings are subject to an initial 30-day review period and a possible additional 90-day investigation (extendable by a further 60 days under certain circumstances). The factors to be considered include the market shares of the involved parties, the degree of concentration in the relevant market, and the effect of the concentration on consumers, entry barriers, technological progress, and "the development of the national economy". Deals must be filed in advance for approval if each party has a turnover of Rmb400m (\$60m, £30m, €38m) in China as well as total global turnover of Rmb10bn or combined turnover in China of Rmb2bn.

Provisions in this chapter of the AML also consider the effects of "monopolistic conduct outside the territory of the PRC that has eliminative or restrictive effects on competition in the domestic market of the PRC". This raises questions of the extraterritoriality application of Chinese anti-trust laws beyond its borders and the possibility of Beijing as a third sphere of regulatory influence,

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<sup>52</sup> Penalties for market dominance abuse will vary between one and 10% of annual turnover, to be determined by SAIC. (SAIC 2009: Article 16)

matching the anti-trust powers of Brussels and Washington. These provisions, for instance, could influence Microsoft's possible takeover of Yahoo since the latter company invested \$1bn in Alibaba.com, China's largest e-commerce business, representing roughly a 40% stake in the Chinese company.<sup>53</sup>

In the first merger decision under the AML in December 2008, Beijing approved global brewer InBev's \$52bn acquisition of Anheuser-Busch, on the condition that increases in existing equity shares in other Chinese brewers held by the merged entity are required to obtain prior government consent. Other recent cases include anti-trust restrictions imposed in April 2009 on the \$1.6bn takeover of UK chemical-maker Lucite International by Japan's Mitsubishi Rayon, forcing the merged entity to divest (for five years) half of its annual production of methyl methacrylate (MMA), an organic compound used in making plastic resins for products ranging from liquid crystal displays, car lights and aquarium tanks, due to horizontal and vertical anti-competitive concerns held by Beijing authorities. In March 2009, China formally rejected Coca-Cola's proposed \$2.4bn takeover of Huiyuan, a well known Chinese brand name and the country's leading juice-maker, on competitive grounds that such a deal would hurt small local juice companies, could push up juice market prices and limit consumers' choices.<sup>54</sup>

**iv) Abuse of administrative power:** Found in Chapter V of the new law, these provisions do not apply to private actors, but to "administrative agencies and organizations empowered by laws or regulations with responsibility for the administration of public affairs", particularly relating to regional jurisdictions. Common tactics of local protectionism, such as discriminatory taxes, fees, charges, licensing and inspection requirement, local content requirements, and checkpoints have been banned. Other provisions prohibit discrimination against parties from other regions in public tendering processes, in the approval of new branches or investments. Seen in combination with provisions allowing for significant flexibility in the treatment of SOEs under the AML, the focus on administrative abuses appears targeted to override local government protection of local firms and employment to the detriment of greater inter-provincial competition and trade, and ultimately greater economies of scale across regional jurisdictions.

## **e) Sector-Specific Policies**

With a long history in sectoral strategies to guide the industrialization process, until recent years, it was not common for central authorities to officially publish policy documents outlining state plans and ambitions, preferring to keep these in-house. However, the last five years has witnessed a string of official sectoral industrial policies to increasingly restrict foreign ownership and access in the Chinese market, reflecting its shift towards a more selective treatment of foreign investors. Sectoral policies have been seen in the auto industry (1994, 2004, 2008), steel industry (2005, 2008), paper industry (2005), machinery industry (2006), and shipbuilding industry (2006) (Mattlin 2007:53). Below, the auto and steel sectoral policies will be briefly discussed, respectively.

**i) Auto Industry Policy** Initially announced in 1994, the central government sought to consolidate a fragmented Chinese production structure, while providing protection for local

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<sup>53</sup> Markoff, John (2008). "China law could impede Microsoft deal", *International Herald Tribune*, March 28. See, <http://www.iht.com/articles/2008/03/28/technology/28yahoo.php>;

<sup>54</sup> Negishi, Mayumi (2009). "M'bishi Rayon's Lucite bid hits snag in China", *Reuters*, April 13. See, <http://www.reuters.com/article/mergersNews/idUST5029020090413>; Tucker, Sundeep and Patti Waldmeir (2009). "Lawyers warn on China's monopoly regime", *Financial Times*, May 4; Financial Times (2009). "Antitrust in China" *Financial Times*, May 4; Tucker, Sundeep (2009). "China blocks Coca-Cola bid for Huiyuan", March 18; Ha, Hannah, Gerry O'Brien and John Hickin (2009). "PRC uses anti-monopoly law to place conditions on Mitsubishi Rayon's acquisition of Lucite", *Mondaq*, April 27. See, <http://www.mondaq.com/article.asp?articleid=78730>; Smith, Stephen, Xiaohu Ma, and Tej Srimushnam (2008). "China's first public merger decision under the AML", Morrison and Foerster Legal Updates & News, December 2008. See, <http://mofo.com/news/updates/files/14970.html>

automakers through import quotas and high tariffs (between 80 to 100%) on both vehicles and parts. A foreign ownership ceiling of 50% in joint ventures was established to allow Chinese partners more control and leverage in technology transfer negotiations. Regulations also placed greater demands on foreign partners such as local content requirements of at least 40% in the first year of operations, enhanced technology transfer to partners, requests to open joint technical centers for training of Chinese workers, as well as limitations to the product mix chosen by the JV (Gallagher 2003:9). To promote auto industry exports, the updated 2004 Auto Industry Policy, allowed for majority stakes in auto and motorcycle JVs, as long as these took place in export processing zones and aimed at overseas markets. In 2003, Honda acquired a 65% stake in a JV in Guangzhou with Dongfeng Motor and Guangzhou Auto Group. Unlike in 1994, the new policy allows foreign investors to establish more than two JVs in China to make the same types of vehicles (passenger, commercial, motorcycle). However, this is allowed so long as foreign firms join forces with existing Chinese partners to acquire other auto firms in China, and as long as one of the Chinese shareholders holds the largest equity stake of all foreign investors combined.<sup>55</sup>

Despite China's commitment to make its automotive policy compatible with WTO rules and principles, there is concern that the Chinese government merely switched to other tools to promote national objectives. One controversial measure, currently going through WTO dispute settlement procedures, is China's practice of applying a 25% tariff rate to imported parts – when the resulting completed car exceeds a threshold amount of imported parts – rather than the 10% rate agreed upon in China's terms of accession. The US government has argued that such measures “impose charges that unfairly discriminate against imported automotive parts and discourage automobile manufacturers in China from using imported automotive parts in the assembly of vehicles.” (Stewart *et al.* 2007:23-7)

In December 2008, a WTO Appellate Body upheld a July ruling against China's auto parts tariff, although US trade officials noted that the value of the ruling for foreign companies may be blunted by the fact that “the Chinese government policy has already created a parts industry under this policy.” Besides, Chinese officials indicated that immediate compliance was impractical and have since implemented a new auto tax that varies with the size of a vehicle's engine – a commonly used WTO-compliant measure seen as implicitly limiting market access for foreign automakers that generally have larger engines than domestic Chinese cars.<sup>56</sup>

Covering the period 2009-2011, the latest Auto Industry Policy was issued in response to the global economic downturn as central authorities introduced a raft of measures to selectively boost domestic consumption<sup>57</sup>, while also addressing ongoing restructuring, technology upgrading and branding priorities. Concrete measures include:

- Until end-2009, passenger cars with 1.6 litre engines and below will be taxed five percent less. Also, as part of the “Cars to Countryside” (汽车下乡) programme, the government set-up a RMB 5bn fund to subsidize rural residents' purchase of mini, three-wheel, or low-speed vehicles of 1.3 litre engines or less to replace their high emission light vehicles.
- Government funding for old car replacement programme will be expanded from RMB 600m in 2008 to RMB 1bn in 2009.
- Removal of regional and local restrictions and protectionist measures impacting automobile purchases.

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<sup>55</sup> People's Daily (2004). “Automobiles industry opens wider for overseas investment”, October 7.

<sup>56</sup> Neumann, Dan (2008). “Appellate body upholds most of auto parts ruling, reverses on kits”, *Inside US-China Trade*, December 17; Neumann, Dan (2008). “New China autos tax may withstand WTO scrutiny, US sources predict”, *Inside US-China Trade*, September 3; Neumann, Dan (2009). “US, EU Canada press for quick implementation of auto parts ruling”, *Inside US-China Trade*, February 17.

<sup>57</sup> Financial Times (2009). “China car sales reach record high”, April 9.

- Promotion and standardization of purchase credit financing, including the establishment automobile financing companies, as well as the strengthening of second-hand car market and supervision.
- Speed up modernization of comprehensive urban transportation systems.
- For technology upgrading, the central government will form a RMB 10bn fund to improve capabilities in core technologies and parts, including product, conservation, and safety standards. The government will also draw up a list of “special projects and products” to prioritize upgrading in core technologies and parts.
- Emphasis is also placed on expanding the demonstration of alternative fuel vehicles, such as hybrid, and electric battery cars. Large and medium cities will be supported in plans to adopt alternative fuel vehicles for use in public service areas such as: bus transport, taxi, government, sanitation, postal service, and airports. Building of appropriate electric car infrastructure is also stressed (filling stations and parking lots with recharging equipment).<sup>58</sup>

**ii) Steel Industry Policy** Historically, the industry has benefited from a wide range of preferential policies, from soft loans, equity swaps, land use privileges, grants, tax benefits, provision of raw materials and cheap utilities (Price *et al.* 2007). In July 2005, the NDRC announced its first official Steel Industry Development Policy.<sup>59</sup> The intent of the document was to prevent foreign firms from acquiring controlling stakes in China’s steel industry, while also strictly limiting the creation of new steel mills. This happened to come at a time when both **Arcelor SA** and **Mittal Steel Corp.** (prior to their own merger in 2006) were both pursuing large stakes in mainland targets such as Valin Iron & Steel and Laiwu Iron & Steel of Hunan and Shandong, respectively. As such, the steel policy effectively halted these pending acquisitions for controlling interest, which did not appear to contravene the foreign investment guidelines at the time.<sup>60</sup> Moreover, as the steel policy’s Article 23 requires that foreign investors possess proprietary technology, the policy has been criticized as a de facto technology transfer requirement as it does not allow for foreign investors to have controlling shares in iron and steel companies. The policy also aims to foster backwards linkages in Article 16 by providing tax refunds, interest subsidies, and R&D funds for projects that use “home-made equipment”. Article 18 encourages the use of domestic equipment and provides that if equipment or technology must be imported, that “the introduced equipment or technology shall be advanced and practical.” (Stewart *et al.* 2007:29-32)

The policy also contains other standard features of sectoral industrial policy: plans for China’s top 10 steel makers to control more than 50% of the nation’s total steel output by 2010 (over 70% by 2020) with two Chinese steel giants with an annual output of more than 30 million tonnes, and several others with an annual output of over 10m tonnes; technical standards to benchmark industry progress; and energy and water conservation targets. It also included a regional dimension, with new construction concentrated in southern coastal areas that have deepwater ports and access to global ore and energy resources, and where demand is strong. For these reasons, and despite the failure of past steel policies to spur consolidation, foreign investors have yet to significantly penetrate the Chinese steel industry. (Naughton 2005c) (See Box 2 below)

<sup>58</sup> State Council (2009). “Auto sector adjustment and rejuvenation plan”, 汽车产业调整和振兴规划, March 20. See [http://www.gov.cn/zwqk/2009-03/20/content\\_1264324.htm](http://www.gov.cn/zwqk/2009-03/20/content_1264324.htm)

<sup>59</sup> National Development and Reform Commission (NDRC) (2005). “Steel Industry Development Policy”, 钢铁产业发展政策, July 19. See, <http://finance.sina.com.cn/g/20050720/11451816905.shtml>  
See, [http://www.ndrc.gov.cn/zcfb/zcfbl/zcfbl2005/t20050719\\_52618.htm](http://www.ndrc.gov.cn/zcfb/zcfbl/zcfbl2005/t20050719_52618.htm)

<sup>60</sup> According to the 2004 Foreign Investment Catalogue, investment guidelines for the ferrous metallurgical smelting and rolling processing industry is “encouraged” for production of direct and fusion reduced iron only. No other provisions exist in the “restricted” or “prohibited” categories, thus presumably unlisted sectors in this category are “permitted”. The 1997 Catalogue, listed 11 sectors within the ferrous metallurgical industry to be “encouraged”, mostly relating to higher-end production processes.

## Box 2. ArcelorMittal in China – Foreign Investment Case Study<sup>61</sup>

Luxembourg-based steel-maker **ArcelorMittal** has persisted in efforts to gain a greater foothold in China's steel industry, and provides a good example of the strategies at play in investing in sectors seen by Beijing as strategic to national economic development. China is easily the world's biggest steelmaking and consuming country, with more than a third of world output, but a place where ArcelorMittal's steelmaking capacity is negligible. In terms of global steel output, ArcelorMittal controlled roughly an 8.9% share in 2007; in China, this figure is reduced to 0.6%.

The first piece of ArcelorMittal's China strategy took shape in 2005, when the company (pre-merger) acquired a minority stake in **Hunan Valin Steel Tube & Wire**, a medium-sized steel-maker, the first time the Chinese government allowed a foreign business to take a strategic stake in a relatively large domestic concern. Although similar efforts to acquire **Laiwu Steel** of Shandong Province were held up and eventually abandoned, ArcelorMittal then shifted its attention to **China Oriental**, a steel-maker near Beijing with an annual output of 4m tones, about one-third of that of Hunan Valin. By November 2007, ArcelorMittal built up a 73% stake in the company, conducted through a series of Hong Kong stock-market transactions involving existing investors. However, the China Oriental deal required approval from Chinese regulators and in 2008 the company was forced to sell back some of its shares in China Oriental to restore a free float of more than 50%. By August 2008, it emerged that ArcelorMittal was unlikely to win Beijing approval to buy all the shares it wanted and will have to settle for a stake just under 30%.

In March 2008, ArcelorMittal held informal talks with **Angang Steel**, China's second largest steel firm, of Anshan in northeastern China to purchase a 25% stake. Angang's chairman, Zhang Xiaogang, turned down the deal, but expressed he would be keen in principle to allow the Luxembourg-based company a much smaller share-holding in Angang of 1-2%. For his part, ArcelorMittal chief executive and main owner, Lakshmi Mittal appears very aware that if he moves too quickly or appears aggressive, this will antagonize the Chinese leadership. However, the aim appears to be to position ArcelorMittal so that if Beijing does eventually relax its stance, the company will be in pole position to become the first foreign investor to complete the acquisition of a leading Chinese steel company.

### f) **Outward Investment:**

As Beijing re-calibrates its institutional stance towards FDI, it is also noteworthy that outward flows of investment have increased as China's "go out" policy, or **走出去** (zouchuqu) (formalized in 2002), gains momentum. As of June 2006, Beijing scrapped foreign exchange quotas for outward investment, streamlined approval and annual review processes, and allowed all profits to be reinvested abroad, and improved access to offshore guarantees issued by Chinese banks. Nonetheless, Chinese companies using funds from within the country require various government approvals before offshore investments can be made. The primary regulatory agencies are the NDRC, SAFE, and MoC, and their respective local counterparts. Approval from either central or local agencies depends on the transaction size, but as applicable thresholds are relatively low, any transaction of meaningful size will require approval at the central level. Thus, outward investment remains subordinate to government objectives and industrial policy, particularly in lessening the external surplus, securing access to natural resources, technologies and brands,

<sup>61</sup> Marsh, Peter (2008). "Mittal eyes solution to Chinese puzzle", *Financial Times*, May 5; Marsh, Peter (2008). "ArcelorMittal holds discussions with Chinese group over link-up", *Financial Times*, May 5; Marsh, Peter (2008). "ArcelorMittal predicts buoyant year for steel industry", *Financial Times*, May 15; Marsh, Peter (2008). "Mittal's Chinese stake plan thwarted", *Financial Times*, August 3.

encouraging the growth of selected large Chinese companies, and, most recently, plans to acquire farmland abroad to enhance food security (Chao and Ji 2008; Ma and McCauley 2007; Zhang 2005).<sup>62</sup>

According to official statistics, China outward FDI flow rose from roughly \$2bn in the early 2000s to almost \$18bn in 2006, to an estimated \$56bn in 2007, and most analysts expect the outward flow to continue growing strongly (MoC 2007; Cheng and Ma 2007).<sup>63</sup> Although in relative global terms this volume of outward FDI is not substantial, China has become a capital exporter in its own right, and is one of the key players in the growth of Sovereign Wealth Funds (SWFs), with foreign exchange reserves surpassing \$2,000bn as of July 2009.<sup>64</sup> Overall, SWFs assets were up 18% in 2007, a rate of growth much faster than the roughly \$75 trillion vested in global institutional investment pools that include pensions funds, mutual funds, and insurance investments.<sup>65</sup> (Wu 2005)

Other policy instruments involve the use of state-owned policy lending institutions, such as the China Development Bank (CBD), in supporting the international expansion of Chinese enterprises, particularly state-owned national champions, in securing offshore acquisitions. For instance, since the start of 2009, the CBD has provided long-term, low-interest loans on easy terms to Russia (\$25bn), Brazil (\$10bn), Turkmenistan (\$4bn), and Venezuela (\$4bn) in exchange for guaranteed future supplies of oil. By end of 2008, the CBD extended just \$20bn of its total portfolio of \$426bn in outstanding loans beyond the country's borders, but this amount is expected to double for 2009.<sup>66</sup>

Another indication of China's conduct of outward investment to pursue national objectives is evidenced in Beijing's response to the late-2007 unsolicited bid by mining firm **BHP Billiton** to acquire **Rio Tinto PLC**. A merged BHP-Rio Tinto would control more than one-quarter of the global supply of iron ore, a key raw material for Chinese steelmakers supplying the world's fastest-growing economy. According to analysts, China will consume 59% of the world's iron-ore production 40% of aluminum production and 29% of refined copper by 2012. Although **Baosteel** and **CIC** were rumoured to be considering a counter-bid for Rio Tinto, it was eventually the **Aluminum Corp. of China (Chinalco)**, owned by central SASAC, teaming up with **Alcoa Inc.** to spend \$14.05bn for 9% of Rio Tinto, buying London-listed shares overnight in February 2008 in a so-called "dawn raid".

The deal, China's single largest investment abroad to date, was carefully orchestrated to avoid leaks that might have alerted the market and given BHP time to respond. The share purchase is seen by analysts as Beijing using Chinalco as the chosen vehicle to either block BHP's takeover plans, or at least to force BHP to divest some of its assets to Chinalco when Rio Tinto assets are carved up. Moreover, by teaming up with Alcoa, Chinalco could help show the deal was commercially driven and mute suspicions that it was orchestrated by the Chinese government.<sup>67</sup> Meanwhile, a planned second-round investment in Rio Tinto by Chinalco of \$19.5bn to raise its

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<sup>62</sup> Anderlini, Jamil and Javier Blas (2008). "Beijing looks at foreign fields in plan to guarantee food supplies", *Financial Times*, May 9; Blas, Javier and Andrew England (2008). "Foreign fields: Rich states look beyond their borders for fertile soil", *Financial Times*, August 20.

<sup>63</sup> Anderlini, Jamil (2009). "Outward investment: politics tangles with commerce", *Financial Times*, September 30.

<sup>64</sup> McGregor, Richard (2009). "China's forex reserves pass \$2,000bn", *Financial Times*, July 15.

<sup>65</sup> Willman, John (2008). "The wealth of nations is reflected in the stellar rise of sovereign funds", *Financial Times*, March 31; Sender, Henny (2008). "China turns risk averse as capital outflows rise", *Financial Times*, January 18; Carew, Rick *et al.* (2007). "Great Wall Street of China", *Wall Street Journal*, December 20.

<sup>66</sup> Anderlini, Jamil (2009). "CBD turns away from the path of reform", *Financial Times*, September 2; Hoyos, Carola (2009). "Burning ambition", *Financial Times*, November 4.

<sup>67</sup> Carew, Rick and Andrew Batson (2008). "Beijing Inc. shows savvy in latest investment move", *Wall Street Journal*, February 6; Dyer, Geoff (2008). "Stakeholder Chinalco in no hurry to show its hand", *Financial Times*, February 7; Dyer, Geoff *et al.* (2007). "Players eye China options in Rio battle", *Financial Times*, December 6; Dean, Jason *et al.* (2007). "China is wary of BHP-Rio Tinto tie-up", *Wall Street Journal*, November 16.



stake to 19% was ultimately rejected in June 2009, and China has since threatened to use its anti-trust laws to block a proposed joint venture between BHP and Rio Tinto which have adjacent operations in Western Australia.<sup>68</sup>

Financial reports also indicate “an unprecedented assault on Australian resource groups”, prompting the Australian government to slow down investment applications and charges from Chinese firms of unfair treatment. A large proportion of Rio Tinto’s iron ore assets are located in Australia.<sup>69</sup> While China has invested in Australia for decades, almost all of those investments were until recently in specific projects, often via joint ventures, rather than in listed equities. The Chinese appear more willing to use more aggressive tactics, including hostile offers. Led by Chinalco’s foray into Rio Tinto’s share-ownership, the assault also features **Sinosteel**, **Shougang** and **China Metallurgical Group**, all owned by central SASAC.<sup>70</sup>

### 2.3 Technology

Released by the State Council in February 2006, the Medium to Long-Term Plan for Development of Science and Technology (MLP) (2006-2020) is the government’s primary instrument to attain an “innovation-oriented society” by the year 2020, and to become a world leader in science and technology by 2050. Its primary component is to steer China in developing capabilities for “indigenous innovation”, or 自主创新 (zizhu chuangxin), and to leapfrog into leading positions in new science-based industries by the end of the plan period. The plan marks not only China’s first long-term plan in the new century, but also the first long-term plan China presented since joining the WTO and since the inauguration of the Hu-Wen administration. The preparation and drafting of the plan roughly three years – one year longer than intended – and required the direct intervention by Premier Wen Jiabao in a six-month delay for plan modification.

The key aspects of the MLP can be summarized in three points. First, China will aim to invest 2.5% of GDP in research and development (R&D) and to quadruple GDP (using 2000 baseline) by 2020. China’s R&D expenditure was 1.34% of GDP in 2005 and 0.5% in the 1990s. According to the OECD, between 1995-2005 China’s average gross domestic expenditure on R&D (GERD) grew at an annual rate of 19%, as the economy expanded at a rate of about 10%. Given that GDP growth is expected to continue at a torrid pace, increasing R&D expenditures as a share of GDP implies a substantial increase in absolute terms. Second, the MLP stresses continued reform in managing science and technology (S&T) institutions and completing the shift from a government research lab-oriented innovation system to one where firms play a leading role. This process has focused on building R&D capacities within Chinese firms, including the spinning-off or merging of government research institutes with industrial enterprises. According to government statistics, in the decade from 1994 to 2004 Chinese business sector R&D expenditure as a share of the total domestic R&D expenditure increased from 30% to 64%. (OECD 2007:45; Serger and Breidne 2007; Cong *et al.* 2006; Suttmeier *et al.* 2006:9)

Based on these two components alone, the government appears to be boosting its supply of knowledge creation through funding and incentives for research, development and design, while also influencing demand by encouraging firms as key drivers and users of innovative capacity.

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<sup>68</sup> Fry, Elizabeth (2009). “Chinalco buys \$1.5bn Rio Tinto shares”, *Financial Times*, July 2; Waldmeir, Patti, Sundeep Tucker and William MacNamara (2009). “China attacks BHP-Rio joint venture”, *Financial Times*, June 18; Smith, Peter (2009). “BHP and Rio abandon marketing venture”, *Financial Times*, October 15.

<sup>69</sup> Rio Tinto website (2008). “Iron ore: Key data” [http://www.riotinto.com/whatweproduce/572\\_iron\\_ore\\_3565.asp](http://www.riotinto.com/whatweproduce/572_iron_ore_3565.asp)

<sup>70</sup> Santini, Laura and Rick Carew (2008). “Sinosteel wins a hostile first for China”, *Wall Street Journal*, July 11; Smith, Peter and Richard McGregor (2008). “Chinese fret at delays in rush for resources in Australia”, *Financial Times*, May 9; Smith, Peter (2008). “Canberra puts the brakes on Chinese resource deals”, *Financial Times*, April 30; Smith, Peter (2008). “BHP met Rudd about Chinalco holding in Rio”, *Financial Times*, March 18.

Third, and most controversially, the MLP aims to strengthen indigenous innovation through a programme of import substitution of high technologies and processes. This effort can be seen in three interrelated policy instruments: a) intellectual property right (IPR) regime reform; b) technology standards development and preferential government procurement; and c) targeted industrial interventions in the so-called engineering megaprojects. Using such policy interventions, the MLP aims to raise the contributions to economic growth from technological advance to more than 60%; and limit its dependence on imported technology to no more than 30%. In April 2007, the NDRC released the “11<sup>th</sup> Five Year Plan for High Technology Sector Development”, furthering detailing targets for 2010, such as: having a batch of large high-tech firms with sales over 10bn RMB, value-added of high-tech sectors should rise 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 under Chinese brands. (Naughton 2007; Cong *et al.* 2006)

**i) IPR Regime Reform** China’s IPR regime has undergone substantial changes have taken place post-WTO accession to gradually bring China inline with international standards. The process is a work in progress with reforms noted in areas such as: legislative reform; law enforcement; training and education; international cooperation; promoting business self discipline; and services to right holders. As the IPR regime evolved over the past three decades, China’s framework of laws, regulations and implementing rules are seen as largely satisfactory, on paper. In practice, many observers see law enforcement (administrative, civil, and criminal) as the biggest problem affecting China’s IPR regime. For instance, high thresholds for criminal prosecution limit the ability of enforcement authorities, while light-handed civil damages and toothless administrative penalties provide no real deterrence to infringement. (USTR 2007:78; Stewart *et al.* 2007:116)

In June 2008, the Chinese government released the *Outline of National Intellectual Property Rights*, a new national IP strategy. The strategy has four basic points: **a)** Revise IPR framework legislation, including patent, trademark, and copyright laws (and implementation rules); **b)** Revise rules surrounding IPR infringement punishment, and strengthen judicial protection and administrative law enforcement; **c)** Properly define the scope of IPR to prevent their abuse and protect the lawful rights and interests of the public; **d)** Launch of extensive educational programmes among the public to foster a culture respecting IPRs.<sup>71</sup>

However, there are some more controversial details of the new strategy that have surfaced. For instance, proposed changes to China’s patent law will require foreign companies making discoveries in the country to file for a patent in China first or risk losing legal protection of their intellectual property. Most western countries also have a “file first at home” rule but the penalty for failing to do so will be tougher in China. Failure to register Chinese discoveries first in China, will allow rivals to challenge the validity of any subsequent domestic patent and potentially block sales in the local market. Most foreign companies that invent in China currently file for patent protection in the country in which they are based, where applications can be written in their native language by counsel experienced in the home country’s patent law. It has been known for multinational companies to send Chinese inventors to work temporarily in their home country, so that key patents can be filed overseas to prevent early disclosure to Chinese rivals. If the revisions are adopted, foreign companies would have to draft patents in Chinese for inventions made in the country at a time when foreign companies are increasingly setting up research centres in China and trying to expand sales in the market.

The new IP strategy also involves the adoption of an “absolute novelty” standard that will limit the issue of Chinese patents for inventions that are already in use overseas. This should make it easier for foreign companies to challenge rogue Chinese patents that make use of less stringent filing standards. In 2007, China’s State Intellectual Property Office (SIPO) received nearly 700,000 patent applications, placing China far ahead of both the US and Japan, which received under 500,000 domestic patent filings each. Of this total, the bulk of filings are so-called “mini-

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<sup>71</sup> Wang Qishan (2008). “No More Chinese Knock-Offs”, *Wall Street Journal*, June 17.

patents", which give 10 years' protection with less cost and fuss – ie. scarce investigation of claims - than the 20-year protection otherwise standard abroad. Some Chinese companies also get government subsidies to cover patent application costs, a factor that artificially inflates the number of filings.<sup>72</sup>

**ii) National Technology Standards and Government Procurement:** Officially announced as part of the 10<sup>th</sup> Five-Year Plan (2001-2005), China has sought to leverage its market size and its own technological assets in fostering innovation to shape the “architecture” of global technology standard-setting to its own advantage. Often concurrently used as an IPR negotiations tactic to lower royalty payments, ultimately the long term goal is to reduce dependence on foreign core technologies and know-how to enhance the competitiveness of Chinese firms. A 2006 report, the *Study on Development Strategies of China's Technical Standards*, made by (among other agencies) the China National Institute of Standardization (CNIS) and the Standardization Administration of China (SAC) officially calls for China to move from a net importer and consumer of international standards to that of producer of standards for domestic and international consumption by 2020. (Zhao 2006; Suttmeier *et al.* 2006; Kennedy 2006; Suttmeier and Yao 2004; Naughton 2004; Linden 2004)

Concerted efforts to establish national technology standards were pursued in the electronics and information technology industries in the 1990s, involving many products from consumer video discs (VCDs, DVDs) and digital televisions, to computer microprocessors, software, cellular telephony, and wireless networking equipment encryption codes (see Table 1 in Suttmeier *et al.* 2006:29). At the time, the Ministry of Electronics Industry coordinated and funded standards-setting research mainly to leverage domestic capabilities against MNCs and the royalty payments required to use their technologies. However, in most cases, these standards were not developed with a view to impose them on market actors, but pragmatically as part of a competitive market outcome (Linden 2004:22-3; Naughton and Segal 2001:19). As such, efforts to develop technology standards do not necessarily negate China's commitment to the international order.<sup>73</sup> Suttmeier and Yao (2004) for instance, distinguish between two extreme types of technology development strategies: one mercantilist and closed (techno-nationalist), the other completely liberalized and open to global forces (techno-globalist); they argue that China's standards strategy is best understood in terms of a “neo-techno-nationalism”, in which technological development in support of national economic and security interests is pursued through leveraging the opportunities presented by globalization for national advantage.

The establishment of mobile phone standards, where China since 2002 became the world's largest country in cellular phone subscribers with roughly 600m mobile subscribers today, provides an illustrative case. In light of the two globally dominant 2G digital telecommunications standards, the European-standard Global System for Mobile Communication (GSM) and the US-standard Code Division Multiple Access (CDMA), China's Ministry of Information Industry (MII) granted the use of both standards for the domestic economy (via joint ventures). However, only the GSM standard became well established in China, despite CDMA's technical superiority, as Beijing regulators were willing to delay its adoption, presumably to lessen any “lock-in” effects of CDMA technology, to increase their influence over the configuration of the subsequent 3G digital wireless standard offering high-speed data services.

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<sup>72</sup> Waldmeir, Patti (2008). “Beijing eyes tighter law for foreign companies”, *Financial Times*, July 3; Waldmeir, Patti (2008). “The value of branding becomes patent”, *Financial Times*, July 3; Otteman, Scott (2008). “Foreign Firms Look to IPR Strategy to Unleash Wave of Regulations”, *Inside US-China Trade*, May 14; Dickie, Mure (2006). “China seeks home-grown innovation”, *Financial Times*, October 4; *Inside US-China Trade* (2008). “U.S., China Battle to Define ‘Commercial Scale’ Piracy in WTO IPR Case”, May 7.

<sup>73</sup> Note however that in January 2008, the SAC, an agency under the General Administration for Quality, Supervision, Inspection and Quarantine (AQSIQ), was considering regulations that would ban foreign firms, including joint ventures, from taking part in standards-setting committees as voting participants, and instead allow them only to serve as non-voting observers. See: Neuman, Dan (2008). “China Said to Disallow Foreign Votes in National Standards Groups”, *Inside US-China Trade*, March 12.

The MII meanwhile started developing its own 3G standard in 1994, called TD-SCDMA (timed-division synchronous code-division multiple-access) through the state-owned Datang Telecom, a consortia of research institutes affiliated with the MII, the China Academy of Telecommunication Technology (CATT) (formerly under the Ministry of Posts and Telecommunications), and technical assistance from Siemens, and approved by the International Telecommunications Union standards-setting body in 2000. The commercial promotion of the standard began in October 2002 with the establishment of the TD-SCDMA Industry Alliance (composed of seventeen domestic firms and eight joint ventures) and the TD-SCDMA Forum in December 2002 (total members of about 420 Chinese and international firms). As China's standard was compatible with the GSM standard (also known as wideband CDMA or WCDMA), MII was strategically leveraging alternative standards insofar as its decision increased the attractiveness of a GSM-compatible technology, and put China in a better position for the pecuniary bargain with the holder of other key CDMA technology patents behind wireless telephony, Qualcomm Corp. (Suttmeier *et al.* 2006; Naughton 2003b)

The Chinese government has backed the development of TD-SCDMA mainly with R&D support and preferential financing for Chinese firms. Most importantly however, has been the government's role in granting 3G licenses, which has been delayed since the TD-SCDMA was selected as the national standard in January 2006. This is due to MII's strategic judgment that TD-SCDMA is not yet technologically mature and thus cannot be favourably licensed on technical grounds, while also allowing more time to Chinese firms to refine the technology and its capabilities. In most recent developments, after more than three years of fierce internal debate about how to reorganize the telecoms sector, regulators announced in May 2008 the latest round of restructurings to enhance industry competition.

Under the latest scheme, six companies will be collapsed into three, each spanning the mobile, fixed and broadband markets. China Mobile, the world's largest mobile operator by subscribers, will merge with China TieTong, the smallest fixed-line operator. China Telecom, the country's biggest fixed-line operator, will acquire one of the mobile networks run by China Unicom, which will merge its remaining mobile operations with China Netcom, another fixed-line operator. A sixth operator, China Satcom, will be taken over by China Telecom. In addition to fostering greater competition for industry leader China Mobile (holding 70% of wireless market), Beijing claimed the reform would also clear the way for the long-delayed introduction of 3G licenses to be issued following the completion of restructuring. It is also expected that China Mobile will be forced to adopt the TD-SCDMA standard for its networks, leaving the two foreign standards (WCDMA and US-favoured CDMA2000) to be used by smaller competitors China Unicom and China Telecom.<sup>74</sup>

In announcing restructuring plans and the approaching launch of 3G wireless services, the government also published a statement calling for "strong support" for the development and use of domestic technology in its telecoms industry, without mention of its TD-SCDMA standard. The statement said that government departments and enterprises would be "encouraged" to give priority to the use of products featuring "autonomous innovation". Moreover, government departments will make use of favourable overseas loans, aid grants and other export policies to promote these products abroad. Financial institutions, for their part, would be "guided" to increase support for companies that developed or manufactured products featuring local technology, giving them priority access to capital markets. The statement also made clear that the government wanted local operators to do more to favour domestic suppliers such as Huawei and ZTE, which have in the past complained about the easy access to China's market granted to international rivals such as Nokia and Alcatel-Lucent.<sup>75</sup>

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<sup>74</sup> Lau, Justine (2008). "China Mobile trails on 3G technology", *Financial Times*, August 27; Lau, Justine (2008). "China Unicom eyes top 3G slot", *Financial Times*, August 26; Dickie, Mure (2008). "Beijing finally answers the shake-up call", *Financial Times*, May 26; Economist (2008). "Rewired – Telecoms in China", May 31.

<sup>75</sup> Dickie, Mure (2008). "China pushes home-grown technology", *Financial Times*, May 26.

The TD-SCDMA standard case helps illustrate the manner in which preferences will be given to purchasing high-tech equipment and products in which domestic manufacturers own their independent IPRs in priority sectors. In December 2006, three ministries jointly released the *Provisional Measures for Accreditation Measures of National Indigenous Innovation Products*. This will establish an administrative accreditation process to certify “domestic innovative products” for preferential procurement while also giving consideration to whether these products can be substituted for imports. (Howell 2007; Naughton 2007; Serger and Breidne 2007:155) However, this does not automatically preclude foreign companies from participating in government contract bidding, as the legal definition of a “Chinese enterprise” can be more malleable if needed and if certain requirements are met.<sup>76</sup>

**iii) Targeted Engineering Megaprojects:** The MLP broadly identifies national priorities in 11 key areas<sup>77</sup> and 8 areas of frontier technology<sup>78</sup>. In addition to these sectors, the MLP also outlines government-directed “megaprojects” in engineering and science, respectively. Engineering megaprojects include: advanced numerically-controlled machinery and basic manufacturing technology; core electronic components, high-end generic chips, and basic software; extra large scale integrated circuit manufacturing and technique; large advanced nuclear reactors; large scale oil and gas exploration, manned aerospace and moon exploration, new generation broadband wireless mobile telecommunications, and large civil aircraft.

These engineering megaprojects are of particular interest as they will not be run principally by the Ministry of Science and Technology (MOST). In June 2006, the State Council presented the first installment of a “consolidated list of the rules for implementation of the supporting policies for the ‘Outline of the National Medium- and Long-Term Planning for Development of Science and Technology’ formulated by the relevant department” which lays out 99 supporting policies assigned to one lead ministry or government institution and one person within that lead agency, generally at the vice-minister level or, at least in one case, the minister level. (Serger and Breidne 2007:151; Cong 2006 *et al.*:42)

Lead responsibility for implementing the largest number of supporting policies is given to the NDRC with 29 policies, followed by the Ministry of Finance (MoF) with 21, MOST with 17, and the Ministry of Education with 9. That MOST places third in number of supporting policies indicates that while it remains important, it is no longer the dominant actor in China’s S&T policy. Serger and Breidne contend that the extensive responsibilities placed with the NDRC and MoF reinforces the importance of the latest S&T plan by moving key responsibilities up the ministerial pecking-order. Moreover, it further underlines the “guidance” to be provided by central authorities in implementing certain aspects of the MLP.<sup>79</sup>

For instance, one of the engineering megaprojects is to build large civilian aircraft (>150 seats). Ten years after their break-up, SASAC-owned China Aviation Industry Corp. I and II (AVIC I and AVIC II) are to merge into a single entity to pool resources to manufacture large aircrafts in eventual competition with Boeing and Airbus by 2020. According to Boeing estimates, China will

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<sup>76</sup> Other more clandestine Technical Barriers to Trade (TBT) support measures includes a ban on the marketing of mobile phones with wireless local area network (WLAN) capabilities that do not undergo stringent domestic testing and certification of security functions. [Otteman, Scott (2009). “USTR telecom review knocks Chinese testing, certification policies”, *Inside US-China Trade*, April 8.]

<sup>77</sup> These are: agriculture, energy, environment, information technology industry and modern services, manufacturing, national defense, population and health, public securities, transportation, urbanization and urban development, and water and mineral resources.

<sup>78</sup> These are: advanced energy, advanced manufacturing, aerospace and aeronautics, biotechnology, information, laser, new materials, and ocean.

<sup>79</sup> Serger and Breidne also note the recent appointment of a new minister for S&T in April 2007, potentially signaling that Beijing is seeking a trend change in the role of MOST and China’s S&T system more generally. The new minister, Wan Gang, is the first minister in 35 years who is not a member of the Communist Party. He is noted for having significant industry experience having worked for car-maker Audi among fifteen years studying and working abroad. (Ibid:156)

need 3,400 new passenger jets over the next 20 years, quadrupling the total fleet to 4,460 by 2026 on the back of annual domestic growth in traffic of nearly 9%. At that rate of growth, China will overtake North America as the largest domestic air travel market in the world, making a home-grown large jet even more of an imperative for China's leaders.

In 2003, the State Council backed research into the feasibility of a large airliner project and, in February 2007, the State Council's standing committee released a "Report on the Feasibility of a Large Aircraft," which named Xi'an and Shanghai as two bases for research and development into military and civil airplanes, respectively. The report also said that the preliminary budget for the project, headed by COSTIND, would be between RMB 50-60bn. By early May 2008, central authorities unveiled a revamped state-owned aircraft manufacturer, the Commercial Aircraft Corporation of China (CACC). To be headquartered in Shanghai, CACC's initial capital will be RMB 19bn (\$2.7bn). The new company's main shareholders include the central SASAC, AVIC I and II, as well as key input suppliers such as Baosteel Group, the Aluminum Corporation of China (Chinalco) and Sinochem.

Officials said that while promoting "indigenous innovation", CACC would also need to import vital technology from overseas. Jin Zhuanglong, the new company's general manager, was quoted saying, "We welcome foreign suppliers, and will purchase engines and other on-board systems and facilities from them because we believe in mutual benefit." This would be in line with China's other home-grown aircraft project, the "Advanced Regional Jet for the 21<sup>st</sup> Century", or ARJ21 project, initially developed by AVIC I before being subsumed under CACC and seen as an integral step for developing the research, development, manufacturing and marketing capacity to sell Chinese jets abroad. Hailed as a triumph of domestic engineering, up to 80% of ARJ21 parts, including the engines, brakes, hydraulics and air-conditioning systems come from foreign suppliers.

First unveiled in December 2007 in Shanghai, the maiden flight of the white 90-seat ARJ21-700 jet, called the "Flying Phoenix" (Xiangfeng), was delayed six months until September or October of this year because of unspecified delays from parts suppliers. Nonetheless, the project has received strong support from the highest levels of government. For instance, by July 2008, more than 180 Flying Phoenixes have been ordered, largely from state-owned domestic airlines. Roughly 100 will be bought by Kunpeng Airlines, a new venture between China's Shenzhen Airlines and US-based Mesa Air Group that only had two 50-seat CRJ-200 Bombardier jets by end of 2007. General Electric, which supplied the engines, promised to buy five with an option to take 20 more, while Lao Airlines has signed a letter of intent to buy two. Happy Airlines, AVIC I's own newly-established joint venture airline, has agreed to buy 10. Moreover, an import tax of more than 20% on regional jets also helped shelter domestic manufacturers. (Large jets, for the time being, are charged an import tax of close to 0%).<sup>80</sup>

### 3. Chinese Industrial Policy and WTO Compliance

The final component of China's "big push" effort is the government's ongoing ability to apply the myriad of industrial policy instruments reviewed in the previous sub-sections in pursuit of national objectives to build national champions, enhance internal economic integration, and move up the value chain in catching up to production and technological capabilities in advanced industrialized nations. In light of restrictions and conventions from WTO membership that are believed to severely restrain industrial policy initiatives, this subsection presents evidence that Chinese governing institutions are learning from industrialized country counterparts in adopting binding

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<sup>80</sup> China Daily (2008). "Shareholders of China's first jumbo aircraft company listed", January 29; Caijing (2008). "China may restructure its aviation industry", January 22; Financial Times (2008). "Shake-up looms for Chinese aircraft makers", January 4; FT (2007). "China planning to build own large airliner", March 20; Dickie, Mure (2008). "China unveils state aircraft maker", *Financial Times*, May 11; Anderlini, Jamil (2008). "A nation's hopes rest on a Flying Phoenix", *Financial Times*, July 14.

international agreements on its own terms by using flexibilities that already exist, or by deliberately carving out flexibilities through legal finesse and the judicious exploitation of apparent loopholes in many of these agreements (Howell 2007).

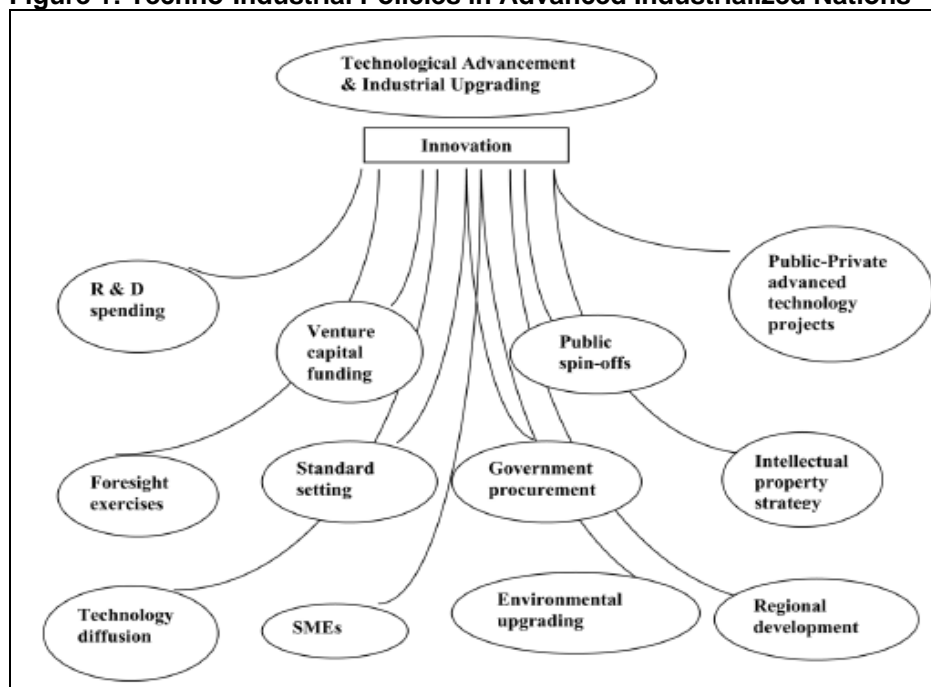
This perspective emanates from the general observation that advanced industrialized nations have carved out areas of economic policy discretion that better suit their current developmental trajectory, at or near the technology frontier. On the one hand, the current trade regime reduces governments' room for manoeuvre – ie. policy space – to promote the more labour- and capital-intensive industries that are critical to existing developing countries for building productive capacities in climbing up the development/technology ladder; while, on the other hand, leaving ample space for supporting innovative activities – technology- or knowledge-intensive industries – that are now deemed vital in maintaining national prosperity (Weiss 2005b). Thus, it is widely recognized that support for the high technology, knowledge-based economy differ from those needed for the 'old economy', and that government in advanced industrial economies have shifted assistance “away from ... the development of production capacity to more broad-based strategic practices” (Government of Canada 2001).

As shown in Figure 1, these broad-based strategic practices include, among others: sponsorship of government-private sector partnerships in R&D, transfers of state-developed intellectual property and innovations spun-off to the private sector from government research labs, financing of venture capital funds and export promotion schemes, public procurement of private goods and services, standard setting and subsidization of end-user demand, and provision of information infrastructure (Weiss 2005b:728,731). While policy instruments to expand productive capacity, say, by subsidizing targeted investment in new plant and equipment in specific sectors such as machinery, shipbuilding, or steel, remain outlawed for all but the poorest of WTO members<sup>81</sup>, evidence and experience would suggest that ambiguities between the distinction of economy-wide (functional) and sector- and firm-specific (targeted) subsidies are mainly exploited by industrial countries to support import-competing and export industries “through carefully crafted and disguised subsidies without contravening WTO rules or triggering retaliatory action.” (Akyuz 2007:14)

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<sup>81</sup> Moreover, Least Developed Countries (LDCs) and countries with per capita income of less than \$1,000 are allowed to use export subsidies until their development level surpasses this income threshold.

**Figure 1: Techno-Industrial Policies in Advanced Industrialized Nations**



Source: Weiss 2005b:731.

In this context, it becomes more obvious that many of China's ongoing industrial policy tools described in the last sub-section appear tailored to closely coincide with areas of flexibility identified in Figure 1. Beyond the policy instruments already described, China also makes use of so-called "permissible (non-actionable) subsidies" such as those for regional development where for years China has announced a number of 'poor-area development programmes' like the Northeast Rejuvenation Programme, the Western Development Programme, and Rise of Central China Programme (Ravallion and Chen 2004; Naughton 2007). Although these exceptions were to expire in 1999, they continue to be widely used by leading member countries and in a WTO review in 2000 were reclassified as "potentially actionable" (Weiss 2005b:728; Lal Das 1999:157).

However, given China's current developmental trajectory and its main focus on building production capacity in intermediate and capital-intensive goods sectors, Chinese officials also deftly find industrial policy flexibilities through legal finesse and the judicious exploitation of apparent loopholes in many international agreements. As mentioned in the previous sub-section, such tactics are witnessed, for instance, in the banking sector where ongoing restrictions on foreign-funded bank market access are disguised through high capital requirements and other stringent domestic macro-prudential rules. In the auto sector, despite having lost its WTO case in auto parts, Chinese officials implemented a new auto tax that varies according to the size of a vehicle's engine – a commonly-used WTO-compliant, presumably on environmental grounds, measure seen as implicitly limiting market access for foreign automakers that generally have larger engines than domestic Chinese cars.

In the case of the intellectual property rights protection, Chinese officials took liberties in defining terms in the TRIPS agreement to reflect their own national objectives. For instance, the term "invention" was initially defined very narrowly, thus encouraging the patenting of 'copy-cat' innovations which had close resemblance to already patented products and procedures. Over the years, officials have narrowed the definition as China enhances its own innovative activities and gradually becomes a net-producer of technologies and standards. Moreover, going against international conventions, the recent draft implementation rules of the Anti-Monopoly Law explicitly include abuse of intellectual property rights as a key factor in determining a (foreign) company's market dominance.



As for government procurement, upon WTO accession, China accepted observer status to the agreement on the understanding of its full commitment at a future date. Thus, flexibility in this policy area remains wide-ranging as China only agreed not to treat one foreign supplier more favourably than another for procurement contracts open to foreign bidders. China's initial market access offer in January 2008, while covering most central government ministries and departments, did not include many sub-central government entities, public utilities, and state-owned enterprises, and contained high threshold dollar amounts below which China would not be committed to allow foreign competition for government contracts. Moreover, initiatives such as the *Long Range Science and Technology Plan to 2010* suggest that the government "intends to make expanded, orchestrated use of preferential procurement as a tool to promote the development of indigenous industries."<sup>82</sup> (Howell 2007:4-5)

With regards to foreign investment, although formal global trade rules exist, Chinese officials (along with most developed countries) make use of substantial legal grey area to negotiate informal terms with foreign investing companies as a condition to access generous state-provided benefits and incentives to support domestic industry development (Akyuz 2007:15-6; Bora *et al.* 2000:21; Amsden 1999:11-2). More specifically, such informal initiatives have taken the shape of:

- Export performance requirements of foreign investing firms requiring that a foreign company sells some of its output overseas for a given period to protect domestic markets for local firms;
- Manufacturing requirements stipulating that a foreign company produces, or does not produce, a certain good in the host country;
- Local ownership requirements ensuring that domestic investors retain a proportion of a firm's equity; and
- Technology transfer requirements specifying that a foreign investing company conduct a proportion or type of its R&D locally and transfer or license the most up-to-date technology to domestic firms. (Weiss 2005b:726-7)

In summary, the configuration of China's constellation of industrial policy measures appears increasingly tailored to make use of flexibilities found within, but also often beyond the WTO trade rules regime. This strategy consists of a mixture of policy configurations depending on the extent and strength of WTO legal disciplines and commitments that cover respective policy issues:

- Where international rules are stronger: China has adopted a 'bait-and-switch' strategy in finding legal loopholes and delay tactics in modulating its commitments (ex: banking, IPR protection, subsidies, and sectoral strategies);
- Where rules are weaker or non-existent: China makes use of this policy space (ex: foreign investment and M&A treatment and screening, anti-trust policy, government procurement, finance, securities and venture capital, sovereign wealth funds, exchange-rate policy);
- At times, China has adapted methods used by other advanced industrial nations to clandestinely continue industrial policy practices (ex: innovation and technology, security, standards, regional development and environmental policies).

Other informal practices include the implicit threat of regulatory retaliation by Chinese officials to dissuade foreign companies/industries in calling on their home authorities to initiate a dispute settlement process. According to James Mendenhall, former USTR general counsel from 2005 to 2007, considerable fear exists in US industry and in industries around the world that dispute settlement cases brought against the Chinese would lead to a price to be paid down the road in

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<sup>82</sup> Otteman, Scott (2008). "U.S., EU voice grumbles on unambitious Chinese procurement offer", *Inside US-China Trade*, February 27; Otteman, Scott (2008). "China's initial WTO procurement offer has exemptions, long delay", *Inside US-China Trade*, January 9; Otteman, Scott (2009). "China urged to stop foot-dragging, submit new procurement offer", *Inside US-China Trade*, May 20.

terms of that firm/industry gaining access to China's sizeable market. It is believed that this was one of the key factors that halted Bush administration officials from bringing more WTO challenges to Chinese trade practices. As Mendenhall noted in a conference at George Washington University, "You may not get a license or may face a regulatory barrier that will lock you out of the market somewhere down the road."<sup>83</sup>

Another important consideration revolves around China's involvement in ongoing WTO trade round negotiations, where the architecture of the global trade regime are negotiated and established. In general, Chinese trade negotiators have pragmatically leveraged their economic weight and interests alongside other developing country negotiating positions, as seen in their involvement with the then G-22 coalition of such countries, while also acting as a more moderated deal-broker in efforts to bridge the positions separating Western governments, and other emerging countries such as India, and Brazil (Deng and Moore 2004:118; Narlikar and Tussie 2004).

In the latest efforts to conclude the Doha round by end of 2008, negotiations once again broke down during a July 2008 ministerial meeting, this time with China siding with India over modalities in agriculture and non-agricultural market access (NAMA). This marks the first time Chinese negotiators played a major role in WTO negotiations, as the country is normally known for its passive, low-profile approach to global trade talks. China's resistance to offer further concessions, despite the benefits it draws from global trade, can be partially explained by the fact that it is still implementing commitments it made to accede to the WTO in 2001, many of which went beyond concessions demanded of past WTO entrants.<sup>84</sup>

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<sup>83</sup> Otteman, Scott (2008). "'Palpable' retaliation fear limits WTO cases vs. China, ex-counsel says", *Inside US-China Trade*, October 22.

<sup>84</sup> Inside US-China Trade (2008). "USTR Official Criticizes China's Role in Failed WTO Doha Ministerial", August 13; Otteman, Scott (2008). "Low-Key Chinese Role in Doha Trade Talks Frustrates U.S., EU", *Inside US-China Trade*, January 2; Castle, Stephen (2008). "All eyes on China at WTO", *International Herald Tribune*, July 29; Lague, David (2006). "U.S. calls on Beijing to strengthen WTO", *International Herald Tribune*, August 30; Lague, David and Donald Greenless (2005). "China officials take low-key role at WTO talks in Hong Kong", *International Herald Tribune*, December 16.

### Box 3. Danone-Wahaha Joint Venture – IPR Judicial Enforcement Case Study<sup>85</sup>

The recent high profile flaring up of relations between consumer drink-makers **Groupe Danone of France** (51%) and **China's Hangzhou Wahaha Group** (49%) illustrates the potential use of the China's court system to influence the application of WTO disciplines, particularly regarding the treatment of intellectual property rights for foreign companies with Chinese joint-venture partners. Although consumer beverages is hardly seen as a industry that is crucial to the development of the national economy, the building of domestic brand names remains nonetheless a priority for Chinese policy-makers in terms of occupying a strategic position along the food processing supply chain. (By extension, initiatives witnessed in a strategic yet non-pillar, non-economic lifeline industry can be viewed as a kind of bellwether for the extent of measures that would be taken if a similar commercial conflict took place in a strategic, pillar industry perceived as part of the lifeline of the economy.)

Joint venture partners since 1996 and now with joint operations around China, earning roughly RMB 1bn annually in net profit, Danone began legal proceedings against Wahaha in early April 2007, suing for breach of contract by claiming that Wahaha owner and chairman, Zong Qinghou, established side-business that were selling competing products under the same brand and distribution networks. According to Danone, such behaviour proved that Wahaha failed to transfer ownership of the Wahaha trademark to the joint venture as required under their agreement. To compensate for lost revenue, Danone demanded a controlling share or to buy out these side ventures and tried to sue companies and individuals linked to Zong in courts in Sweden, US, and the British Virgin Islands. Zong rebuked the offers and threats, hitting back at Danone with public accusations of arrogant, strong-arm, imperialistic corporate tactics. In a series of media interviews and internet campaigns, Zong caused something of a public-relations firestorm for Danone in appealing to Chinese nationalism in his cause, "The Chinese have stood up and the era of invasions by eight-country armies is long gone," he said, referring to a twentieth century military campaign in Beijing by colonial powers.

Following many months of accusations and lawsuits, on 11 December 2007 the Hangzhou Arbitration Commission ruled in favour of Wahaha that the trademark used to sell bottled water, tea and other beverages remains with the Chinese company. The Commission panel ruled to terminate the trademark transfer agreement initially signed by the two parties in 1996 to use the Wahaha brand exclusively for joint venture activities expired in 1999. This decision followed an earlier ruling by the Guilin Intermediate People's Court also in favour of Wahaha that Danone JV board-appointee Francois Caquelin participated in unfair competition because of his membership on boards of Wahaha's commercial rivals. On 22 December, a third lawsuit against Wahaha, this time by subsidiaries in Xinjiang province was rejected by the Intermediate People's Court of No.8 Unit of Xinjiang Production and Construction Army. The court turned down litigation by Jinjia Investment Co Ltd., a Danone subsidiary, that Zong's Xinjiang side-company should pay for a fee of RMB 24,656 at the first trial. In hearing Danone's appeal following the initial Hangzhou decision, by August 2008 the Hangzhou Intermediate People's Court upheld the earlier decision by the Hangzhou Arbitration Commission. Due to these events, Danone executives became increasingly worried that even if they win an international arbitration process about the case, they would not be able to enforce the ruling in China because of parallel judgments in Chinese courts.

<sup>85</sup> China Daily (2007). "Danone to appeal after losing dispute to Wahaha", December 12. See, [http://www.chinadaily.com.cn/china/2007-12/12/content\\_6314493.htm](http://www.chinadaily.com.cn/china/2007-12/12/content_6314493.htm) ; China Daily (2007). "Wahaha wins 3<sup>rd</sup> lawsuit against Danone in China", December 22. See, [http://www.chinadaily.com.cn/bizchina/2007-12/22/content\\_6341271.htm](http://www.chinadaily.com.cn/bizchina/2007-12/22/content_6341271.htm); Dickie, Mure (2007). "Danone and Wahaha agree to legal ceasefire", *Financial Times*, December 24; Wang, Jasmine (2008). "Wahaha-Danone talks hit by court ruling", *South China Morning Post*, July 15; Ng, Michelle (2008). "Danone's Wahaha appeal is dismissed", *Wall Street Journal*, August 6; Waldmeir, Patti (2009). "Danone ends disputes with Wahaha", *Financial Times*, September 30.

By July 2008, an arbitration tribunal in Stockholm also ruled in favour of Wahaha, rejecting Danone's requests for interim measures to prevent Wahaha and Mr. Zong from increasing production capacity at his side business or from setting up new ones. The arbitration panel also rejected Danone's demand that any goods made by Wahaha on its own must be sold through the joint venture, but it granted Danone the right to access all premises at all of the ventures. By September 2009, Danone agreed to sell its 51% joint venture stake to Wahaha, and announced that the sale would "put an end to all legal proceedings related to the disputes between the two parties." For his part, Mr. Zong commented: "China is an open country. Chinese people are broad-minded people. Chinese companies are willing to cooperate and grow with the world's leading peers on the basis of equality and reciprocal benefit."

#### **IV. Conclusion**

Often characterized and criticized in recent years as renegeing on a decidedly liberal economic reform programme, this paper has emphasized China's current development stage in entering a more difficult stage of deepening learning and production capabilities in intermediate and capital goods industries that feed into the export and services sectors of the economy. As such, it becomes increasingly apparent that China's economic ambitions include greater degrees of internal economic integration as it moves up the value chain in developing the national economy calibrated alongside greater degrees of external economic integration with the world economy.

From this perspective, China's movement up the value chain is intertwined with efforts to shift to a greater consumption and demand-led growth pattern in attaining a national economic structure that can sustain a high-wage society. With increasing life expectancy and a falling birth rate, the share of the working age population in the total population will peak over the next few years before beginning to fall. In order for relatively fewer workers to support relatively more dependents and sustainably increase wages, China will have to increase productivity beyond the process of relocating workers from the rural to urban areas. The central government's policies of creating national champions, establishing national brands and independent technological capabilities are ways to shift the mode of production from extensive to intensive growth generated by technological rents from proprietary knowledge-based assets. Far from 'reversing course', Chinese reform strategy appears increasingly aimed at a 'big push' forward in its industrial capabilities.

The three World Bank papers carry valuable lessons-learned and insights to the Chinese developmental process that are helpful to policy makers in developing countries. However, in focusing only on the policy pathways (positive and negative) already taken, while over-looking the ongoing efforts to deepen learning in higher-value production, the World Bank authors only attribute passing remarks to the sequential stage-to-stage process in moving up the value chain and the institutional innovations and policy instruments needed for this otherwise arduous developmental journey. Whether this oversight is by omission or commission is less important than the need for China's development experience to be comprehensively examined and explained if it is to act as a model of some kind for other countries.

This pragmatic and phased policy approach is hardly unique to China's development, but one Chinese officials likely learned from the different stages of previous East Asian development experiences, which mixed and matched different stages and development priorities with appropriate policy instruments to suit the purpose.

As seen in South Korean and Taiwanese development phases, an export promotion phase in labour-intensive manufactures was followed by a phase of industrial consolidation and “secondary import substitution” with local production of industrial intermediates and capital goods – such as iron and steel, petrochemicals, machine tools and electrical machinery – for use in the export and services sectors. During this period, government interventions became much more selective than during the export promotion phase, taking the form of directed credit for channeling funds to priority areas and firms, along with other targeted measures. In this phase, government also laid the foundation for new high technology activities and national systems of innovation (NSI), which became the new priority focus after the completion of the secondary import substitution period, or the ‘Heavy and Chemical Industry Drive’, as it was known in South Korea in the 1970s. With the subsequent focus on high-tech sectors (in the 1980s-1990s for both countries), government support measures were relaxed and less targeted as preferential loans at subsidized interest rates were increasingly made available for broad categories of high-tech and less polluting technologies rather than for individual firms. Moreover, in building a NSI, support for R&D activity was manifested in a combination of tax credits and government expenditure in public laboratories, science parks and technical centers. (Weiss 2005a:17-22)

Critics of the idea of an industrial policy for other developing countries often raise two arguments: first, developing country governments generally lack the institutional capacity to effectively carry out complex and demanding industrial planning strategies, which could be harmful and wasteful; second, even if competent state capacity existed, the ability to use this capacity – ie. ‘policy space’ – is significantly circumscribed by legally binding global trade rules, the violation of which can lead to possibly costly disputes with negatively affected WTO members (Weiss 2005a; Kaplan 2008).

While these arguments are well taken, this paper contends that they are over-simplified and short-sighted. On the former point, it somehow assumes that Chinese and other East Asian government capacities were ‘born competent’ and squeaky-clean throughout their developmental processes, rather than seeing them as pragmatically improved over time in more effectively utilizing policy tools in deepening the learning and upgrading process. Far from an over-stylized linear process, it should be no secret that these states had a fair degree of ‘muddling-through’ decision-making, with their strategies often characterized by “bumbling and stumbling and going back and forth” (Ranis 1991, cited in Bruton 1998:925).<sup>86</sup> However, the flexibility in this approach gave rise to what could be called government learning. In South Korea, for instance, Pack and Westphal (1986) stress the role played by government as the central mediator between market actors, ensuring information exchanges for the effective implementation of decisions. As such,

the process of integrated decision-making has been a flexible one – one that has generally been able to elicit, digest, and act on information uncovered in the process of implementing previous decisions ... Thus, for example, initial decisions to promote or establish particular industries have been reversed or the sequential process of their implementation has been changed or delayed on the basis of market and technical information obtained along the way. (1986:99)

This process is necessarily an experimental and risky process, and although mistakes should be confined, it is clear that in East Asia successes have more than paid for the failures (Rodrik 2008; 2004). Moreover, suggesting that experimenting and coordinating interventionist measures is ‘too difficult’ implies that there are other ‘easier’ strategies in achieving lasting prosperity – often relating to much greater and rapid degrees of economic deregulation and privatization. However, the failure of ‘big-bang’ market reforms implemented in much of the developing world in the 1980s and 1990s also cast considerable doubt on the presumption that freer and more competitive markets called simply for a weakening of state institutions largely in disregard of a country’s developmental condition. (Naim 2000; Evans 1998; Ravallion 2008).

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<sup>86</sup> Kroeber, Arthur (2007). “The underestimated party-state”, *Financial Times*, February 26

On the latter point regarding stringent international trade rules limiting 'policy space', it is certain that many developing country governments do not currently wield the same institutional capacity and market influence as China to bend international trade agreements, withstand political pressure and deploy financial assets in making use of policy space where it exists. While these limitations are palpable, as shown in this paper, certain policy areas remain beyond the scope of strong trade rule disciplines, particularly in science and technology, and others can be modulated through legal finesse and attention to loopholes (Weiss 2005b; Amsden 1999).

As Rodrik noted, "What stands in the way of coherent industrial policy is the willingness of governments to deploy it, not their ability to do so." (Rodrik 2004:6) However, China's industrial policy lesson is not only in the existence of an array of policy tools and their tailoring to WTO rules, but also in the manner in which these tools were implemented and monitored in better tuning state support with demonstrated economic performance and development. Far from perfectly implemented, as in other East Asian development experiences, Chinese authorities made institutional changes to find ways to ensure greater degrees of reciprocity in attaching clear performance requirements to subsidy recipients.

As Michael Boskin, Chairman of the Council of Economic Advisors in the early 1980s, once quipped, "computer chips, potato chips, what's the difference?" Not without setbacks, East Asian nations, and China today, have taken these differences rather seriously and have successfully embarked on a transformation of their comparative advantage in the process of raising standards of living and national prosperity.

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