

# China's National Champions: The Evolution of a National Industrial Policy — Or a New Era of Economic Protectionism?

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*In this article we ask a series of related research questions concerning China's recent industrial policies, particularly the 10th and 11th five-year economic policy plans. Our questions go to the nature of China's long-term competitiveness of its national champions, and to what extent Chinese government policies are evolving to domestic protectionism that adversely affects foreign invested enterprises' (FIEs) competitive position in the Chinese economy. We thus evaluate the nature of the five-year economic policy plans, their adverse impact on FIEs operating in China, and the rise of designated Chinese national champions (in the 11th five-year economic policy plan) to compete with major FIEs on a global scale. However, we suggest that the role of the Chinese government's recent*

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*industrial policy, when compared to Michael Porter's "Diamond of National Competitive Advantage" recommended government policy approaches, may not augur well in the long-term for China's national champions. © 2013 Wiley Periodicals, Inc.*

An increasing concern of foreign governments is the emerging pattern of industrial policies established by the government of the People's Republic of China (PRC) (hereafter "China" or "Chinese government") favoring Chinese state-owned enterprises (SOEs) at the expense of their foreign counterparts.<sup>1</sup> According to the US Chamber of Commerce, concerns that the Chinese government is retreating on opening its economy to foreign direct investment (FDI) are at a 10-year high among US companies directly investing in China (Reuters, 2010).<sup>2</sup> For example, results of a recent survey undertaken by the American Chamber of Commerce in the People's Republic of China (2011a) reveals that US foreign invested enterprises (FIEs) are facing product discrimination in SOE purchases and Chinese government procurement policies, with 46% of survey respondents believing that indigenous innovation preferences will negatively impact their firms, and 70% rating the PRC government's enforcement of intellectual property rights as either "ineffective" or "totally ineffective." Further, 71% of survey respondents believe that the Chinese government licensing process effectively discriminates against FIEs (American Chamber of Commerce in the People's Republic of China, 2011a).

In its *Business Confidence Survey 2011*, the European Union Chamber of Commerce (2011b) reports that its survey respondents perceive that Chinese government industrial policies have become increasingly less fair for FIEs over the past two years (43% in 2011 versus 33% in 2010) and 46% expect this trend to continue, up from 36% in 2010's survey. Moreover, European companies are being shut out of the bidding process for China's \$1.1 trillion market for public projects due to opaque bidding procedures, inconsistent enforcement of regulations, and local content rules (European Union Chamber of Commerce, 2011a). In summary, PRC industrial policies, including regulations concerning indigenous innovation, licensing standards, government procurement, competition law, and intellectual property enforcement, remain significant obstacles for FIEs operating in China (American Chamber of Commerce in the People's Republic of China, 2011b; European Union Chamber of Commerce, 2011c).

These examples of alleged domestic "new protectionism" initiatives raise basic questions concerning the

industrial policy<sup>3</sup> motivations of the Chinese government (Roberts, 2010a). Are these recent changes a continuation of an evolution in Chinese industrial policy enhancing the international competitiveness of China's national champions in the longer term? Is this a recent and substantive change in a government policy previously encouraging FDI (and domestic economic growth) into China? Or could this be the culmination of a national industrial policy that has "nurtured" the development of SOEs since the late 1980s, and who represent the Chinese government's anointed national champions? Are the foreign government and private sector criticisms of these alleged Chinese protectionist policies leading to an adverse change in FIE decisions regarding FDI in China? These are not insignificant questions, as nonfinancial FDI in China has increased from \$40.7 billion in 2000 to \$92.4 billion in 2008, a 127% increase in 8 years (National Bureau of Statistics, 2009).

To answer these critical questions, this article first explores China's modern industrial policy, focusing on the evolution of its SOE and "national champion" strategy

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(often at the expense of private Chinese companies and FIEs<sup>4</sup>) (Browne & Dean, 2010). Second, this article identifies recent trends in protectionist Chinese government policies, including competition and national economic security policies, domestic indigenous and procurement policies, foreign investment policies, product standards, and patent law. Third, based on the preceding explication of Chinese industrial policy, this article evaluates whether these policies are a change in the direction of national industrial policy, or the natural evolution of this national industrial policy, while applying Porter's (1990a) "Diamond" framework to Chinese industrial policy, specifically to Chinese national champions firms and their future international competitiveness. Fourth, this article concludes with a discussion of the questions raised above, first focusing on recent Chinese industrial policies and how they translate to long-term, international competitiveness of Chinese national champions, and second, discussing new directions in foreign government trade policies and FIE corporate policies pertaining to the future climate for FDI in China.

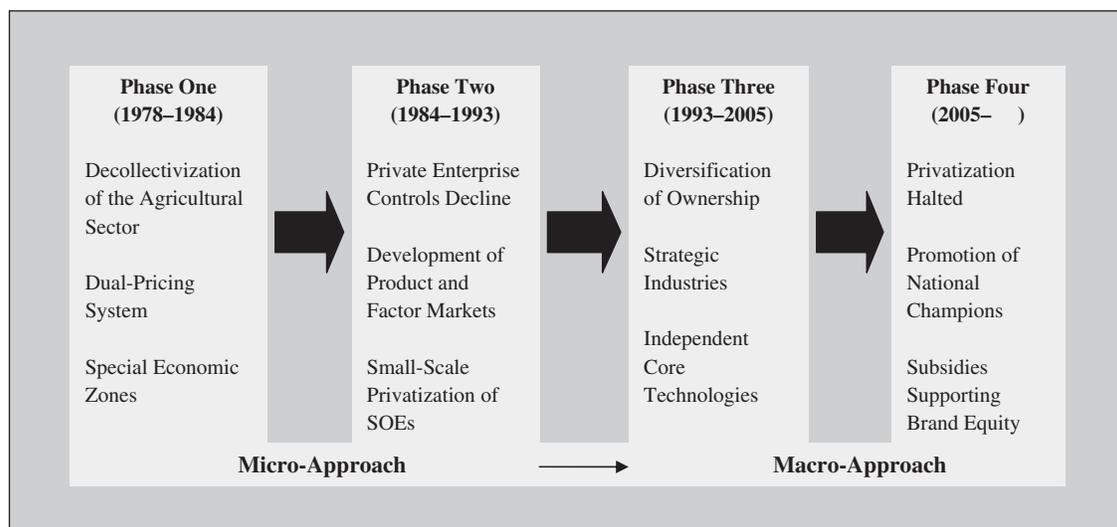
## The Modern Industrial Policy of China

Modern Chinese industrial policy has evolved through four phases of economic reform over the past three decades (see Figure 1). The beginning of modern industrial policy in China dates to December 1978, when Communist Party reformer Deng Xiaoping and his allies began the first phase of a series of economic reforms continuing into the early 1980s (Brandt & Rawski, 2008). These first

phase reforms (instituted within the Chinese Communist Party's series of Five-Year Plans) included decollectivization and the "household responsibility system" in the agriculture sector, and the institution of a dual-price system that developed product markets outside the state planned economic system (Brandt & Rawski, 2008; Hay, Morris, Liu, & Yao, 1994). This policy allowed for the sale of products above the state quota among state-owned industries located in urban areas (Brandt & Rawski, 2008; Hay et al., 1994). Furthermore, China opened to FDI in 1980, in four special economic zones, for the first time in 30 years (Brandt & Rawski, 2008; Ng & Tuan, 2001). To complement the country's welcoming FDI, the Chinese constitution—as early as 1982—has protected the legal rights of FIEs (Havrylchyk & Poncer, 2007).

In the second phase of economic reforms under Deng Xiaoping (from the mid-1980s through the mid-1990s), private enterprise controls by the central government continued to decline (Brandt & Rawski, 2008). Furthermore, there was simultaneous development of product and factor markets, as well as efforts at small-scale privatization of SOEs, resulting in a more diversified equity ownership structure in the Chinese industrial sector (Brandt & Rawski, 2008). During this phase of economic reform, the Chinese government drove the development of product standards for a variety of electronic products, including consumer video discs, digital televisions, integrated circuits, and cellular telephony (Linden, 2004). According to Liu & Garino (2001), in 1997, wholly controlled SOEs accounted for 44% of total industrial sales, collectively owned firms accounted for

**FIGURE 1** China's Modern Industrial Policy



26% of total industrial sales, mixed state and privately owned firms accounted for 24% of total industrial sales, and wholly privately owned firms contributed 6% of total industrial sales. Increasingly, there was decentralization of national control over the provinces, leading to the development of village-level private enterprise (Brandt & Rawski, 2008).

Beginning in the late 1990s, the third phase of economic reforms began under Jiang Zemin and Zhu Rongji, with large-scale privatization of SOEs occurring and several major monopolies being liquidated and their assets sold to private investors. This third phase of economic reform was designed to create a diversified ownership structure in the industrial sector of the Chinese economy, with the national government retaining state ownership in strategic sectors of heavy industry, while simultaneously withdrawing ownership control of small and medium-sized enterprises (Lin, 2001). Furthermore, in the late 1990s China's government officially promulgated its policy to foster "national champions and independent core technologies" that eventually gave rise to "pillar" or "strategic" industries that would remain "under absolute state control or kept within strong state influence" in the twenty-first century (Poon, 2009). As a result of Chinese industrial policy strategy, between 2001 and 2004 the number of SOEs decreased by 48%, although SOEs still accounted for about 40% of industrial value added to the national gross domestic product (Brandt & Rawski, 2008).<sup>5</sup> Also, on November 10, 2001, China received approval as a member of the World Trade Organization (WTO), thus insuring an evolving WTO influenced national industrial policy toward attracting FDI growth when anticipating

the progressive opening of its domestic market to foreign competition in future years (Henley, Kirk & Wilde, 1999; Poon, 2009; World Trade Organization, 2001). In 2003, central government ownership rights and direct control in 196 major state enterprise groups were vested in a newly formed Beijing-based state agency (with branch offices throughout the country), the Assets Supervision and Administration Commission (SASAC) (Kroeber, 2006). SASAC also has regulatory authority over SOEs at the provincial and lower levels, but it does not exercise direct ownership rights (Kroeber, 2006).

The Chinese government has chosen its "pillar" or "strategic" industries based on the following four policy criteria: defense and national security, job creation, technology and skill acquisition, and competitive advantage. According to Haley (2009), the Chinese government chose "pillar" or "strategic" industries (with several industries falling under more than one criterion) in its 10th (2001–2005) and 11th (2006–2010) five-year economic policy plans (see Table 1).

Beginning in 2005, the fourth phase of economic reform began under the most recent Wen administration, whereby SOE privatization efforts halted and government subsidies for remaining SOEs ("national champions") were increased (Scissors, 2009). The Wen administration is enhancing the economic power and opportunities of their national champions in strategic industries (Wines, 2010). Moreover, the increase in government investment, that is, standard subsidies as well as subsidies in support of brand equity or specific product brands, is focused to promote the rise of Chinese national champions within these strategic sectors to compete with major FIEs

**TABLE 1** Pillar Industries by Chinese Governmental Criteria

| Defense and National Security  | Job Creation  |
|--|---|
| Aerospace<br>Semiconductor Design and Manufacture<br>Computer Hardware<br>Iron and Steel Manufacture<br>Oil and Petrochemicals<br>Computer Software                              | Automobiles and Parts<br>Semiconductor Design and Manufacture<br>Iron and Steel Manufacture<br>Machinery and Mechanical Equipment<br>Information Technology                             |
| Technology and Skill Acquisitions  | Competitive Advantage   |
| Biotechnology<br>Semiconductor Design and Manufacture<br>Computer Hardware<br>Information Technology<br>Computer Software<br>Telecommunications and Telecommunications Equipment | Logistics, Shipping, and Storage<br>Banking and Insurance<br>Strategic Brand Equity<br>Machinery and Mechanical Equipment<br>Wholesaling and Retailing<br>Utilities and Power Equipment |

Source: Haley (2009).

(Scissors, 2009). These strategic industries were targeted and nurtured by the Chinese government not because they necessarily complemented the country's comparative advantage, but because they could potentially provide positive externalities in education, science, technology, or national security (Prestowitz, 2009).

The 11th Five-Year Plan stressed an FDI policy that moved away from the “growth-at-all costs” economic development approach and emphasized a “quality of FDI approach” that entailed promoting foreign investments that introduce advanced technology or have significant research and development (R&D) components (Poon, 2009). The Chinese government offered special subsidies for FIEs to invest in China in certain strategic industries, including automotive, telecommunications equipment, biotechnology, information technology, and semiconductor design and manufacture—but with certain *pro quo* requirements (Haley, 2009).<sup>6</sup> While the Chinese government had a policy of introducing FDI as a building block of its economic development, FDI by FIEs in some strategic industries required these companies to enter into joint ventures with Chinese manufacturers (Prestowitz, 2009). Approval for a joint venture with

a Chinese national champion often rested “solely” on the ability of an FIE to provide proprietary technology transfer—patents and trade secrets related to production methods—and upgrades to that technology to a potential future Chinese competitor (Prestowitz, 2009). According to Poon (2009, p. 6):

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.

On March 14, 2011, China's National People's Congress approved the nation's 12th Five-Year Plan for national economic development through 2015, which also brought an end to the “super national treatment” that foreign MNEs enjoyed for 30 years under the six previous Five-Year Plans (China Business Focus, 2011; KPMG China, 2011). The 12th Five-Year Plan is expected to continue the major economic policy shift undertaken by the 11th Five-Year Plan, which moved away from a focus of “growth at any cost” toward a balanced and sustainable growth pattern (APCO Worldwide, 2010). According to Fung and Peng (2012, pp. 1–2):

At the Plan's core lies: the question of how to maintain momentum towards rapid economic growth built up during the past 30 years of “Reform and Opening Up”; how to greatly enhance the competency of Chinese enterprises, transforming them from followers into leaders on the global stage, and drivers of global growth; and how to adjust the economic model to cope with these social, economic, technical and environmental factors that hamper development.

In the 12th Five-Year Plan, three industrial sectors are singled out, with seven designated as “Strategic Emerging Industries”: energy (new energy, including nuclear, wind, and solar power; energy conservation and environmental protection; and clean energy vehicles); health care (drugs and medical devices); and technology (new materials, including rare earths and high-end semi-conductors; new information technology, including broadband networks, Internet security infrastructure, and network convergence; and high-end equipment manufacturing, including aerospace and telecommunication equipment

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(APCO Worldwide, 2010; KPMG China, 2011). Moreover, as Li & Woetzel (2011, p. 2) argue in their analysis:

The central government could further shape the competitive landscape by specifically identifying technology paths, industry standards, market entry criteria, and partnership models. Given the fragmented markets that developed around early favorites such as wind and solar power, the government will increasingly become selective in its policies, looking for avenues to expedite consolidation and to identify national champions quickly.

To summarize China's modern industrial policy, Lin & Wang (2008) identified economic reforms as initially adopting a "micro-first" approach, whereby the transition to a market economy began with the promulgation of incentive structures at the firm/household level, that is, agricultural decollectivization, establishment of special economic zones, enterprise autonomy in the state sector, and promotion of non-state enterprises facing budget constraints. This economic strategy was followed later by "macro-level" policies, that is, liberalization of the commodity price system, fiscal reforms, and setting a competitive exchange rate, and the continued use of dual-track economic strategies, whereby the traditional central planning system remained intact, while market opening changes were made on the margin over time, including ownership diversification and the targeting of strategic industries and subsequent nurturing of national champions (Lin & Wang, 2008). Lin and Wang (2008) propose that this gradual approach to economic reform, or industrial policy, follows a "logic of learning and innovation to explore its comparative advantage" (which, according to the authors, has been "only partially successful") while simultaneously emerging as a global manufacturing center. In conclusion, Ravallion (2008, p. 17) observes that: "[C]hina'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."

## Recent Trends in China's Industrial Policy

The year 2010 was a turning point for what many foreign executives and government officials view as the "new protectionism" of China's national champions in the nation's fourth phase of economic reform (Roberts, 2010a). As national industrial policies are perceived throughout the world, China's is allegedly the one of most concern to FIEs (*The Economist*, 2010). These Chinese government economic policies, as well as the intensifying domestic

competition with FIEs within China, are contributing to an environment that is increasingly perceived as less open to FDI (Browne & Dean, 2010; American Chamber of Commerce in the People's Republic of China, 2011b; European Union Chamber of Commerce, 2011b). As the European Union Chamber of Commerce has noted, FIEs "are losing market share in China across a broad range of industries because of discriminatory treatment by the government and regulators" (Anderlini, 2010). Given this growing consensus on trends in Chinese industrial policy toward FDI, what subsequently follows are the six substantive government policy areas that have been interpreted by many executives as discouraging for their future investment in the PRC, and one substantive government policy encouraging FDI in China.

## Competition and National Economic Security Reviews

Under the recently enacted Antimonopoly Law of 2008, the Antimonopoly Law Enforcement Authority (ALEA), an agency of the Ministry of Finance and Commerce (MOFCOM), is charged with reviewing and ruling on whether proposed cross-border mergers and acquisitions (M&As) will concentrate economic power and result in restricting or eliminating market competition in the PRC (Ross, 2008). Contrarily, the ALEA may rule not to prohibit the industry concentration if those parties involved in the merger or acquisition can prove either that the positive effect of the concentration or competition outweighs the negative effects, or that the concentration is in the "public interest," a line of reasoning that has not yet been clearly defined and is potentially problematic for FDI (Wang & Zhang, 2009). The Antimonopoly Law contains language indicating that the M&A review process "will include protection of existing competitors and the effect on the national economy in addition to the effect on competition as such" (Ross, 2008, p. 67). Thus, the Antimonopoly Law not only "aims to protect both 'fair market competition', but the 'socialist market economy'" (Orey, 2009, p. 73). Under Article 27 of the Antimonopoly Law, one factor that ALEA considers in its merger and acquisition review process is "the effect of the concentration on national economic development" (Ross, 2008, p. 66). In addition to the Antimonopoly Law, Article 12 of the Rules on Mergers and Acquisitions of Domestic Enterprises by Foreign Investors requires foreign investors to report to MOFCOM any transactions in which they will acquire control of domestic entities in key economic sectors and/or affect national economic security or famous Chinese brands (Evrard, Harris, Wang, & Zhang, 2010). Although the antitrust merger review chapter of these Rules is understood to have been superseded

by the Antimonopoly Law, Article 12 appears to remain in force (Evrard, et al., 2010).

On March 18, 2009, the ALEA denied approval of Coca-Cola's planned \$2.4 billion acquisition of the PRC's Huiyuan Juice Group, which would have allowed Coca-Cola to control less than 20% of the PRC's juice market, a percentage that would hardly be worthy of an antitrust review in the U.S. (Orey, 2009). According to George L. Paul, an antitrust attorney with White & Case, a Washington, D.C., law firm, the PRC's denial of the Coca Cola acquisition "is nothing less than a frontal assault on foreign investment disguised as merger review" (Orey, 2009, p. 73). According to Wang & Zhang (2009): "Indeed, MOFCOM [Ministry of Finance and Commerce] expressly cited potential effects on small- and medium-sized competing juice companies as one ground for its rejection of the Coca-Cola/Huiyuan transaction." Wang and Zhang (2009) further elaborate on their concerns regarding "murky protectionism" in the PRC's Antimonopoly Law<sup>7</sup>:

Article 27 [of the Antimonopoly Law] appears to permit consideration of other goals, such as protection of domestic competitors or national economic development that would be better separated from antitrust review. ... In addition, the consideration of a proposed transaction's effects (sic) on "market entry and technological progress" in Article 27 has sparked concerns about potentially excessive regulatory discretion, prejudice against IP [intellectual property] rights (especially when held by Western firms and seen by many in China as entry barriers to fair competition) and favoritism towards domestic Chinese industry.

Through August 2010, ALEA approved 95% of its reviewed merger review applications, a number that compares favorably to both the United States and the European Union, which both approve 93% unconditionally (King & Wood, 2010). What still remains uncertain, however, is whether the ALEA decision to reject Coca-Cola's acquisition of Huiyuan Juice based on a desire to protect so-called iconic Chinese brands, that is, "national champions," will be a precedent for future decisions. Also, U.S. companies who are participating in MOFCOM review proceedings report (American Chamber of Commerce in the People's Republic of China, 2011b, p. 46):

... a tendency on the part of MOFCOM personnel to couch investigations in terms of competitiveness of countries or economies rather than undertakings (i.e., considering the impact of a concentration on China's competitiveness rather than competition in the relevant market. Such concerns with competition between

countries or the fostering of national champions should be beyond the scope of antitrust review.

On February 3, 2011, China's State Council issued Circular 6, establishing a national security review scheme for the acquisition of a Chinese company by one or more non-Chinese investors (Li, Arsenault, & Li, 2011). Effective March 6, 2011, Circular 6 adds new barriers confronting non-Chinese investors in China and empowers the Chinese government to review certain types of transactions for which investors have not traditionally sought such approval, including the following unanswered questions: What businesses are "key" or affect national security? What type of minority investor rights constitute control? How will the Joint Review Committee weigh different actors in its review? What is the extent to which the security review will lengthen the approval process in practice and the likelihood that transactions will be blocked or reversed? (Li et al., 2011).

In summary, while the Chinese government has made significant progress in clarifying its new competition law regime, concerns persist—albeit somewhat naively—regarding risks attributable to (American Chamber of Commerce in the People's Republic of China, 2011b, p. 40):

... certain provisions of the AML and its implementing measures [that] may be applied in a manner contrary to the general "antitrust" goals of promoting consumer welfare and economic efficiency; and that Chinese competition laws may be selectively or discriminatorily enforced to promote industrial policy and other ends.

### Domestic Innovation and Procurement Policies

Beginning in 2006, the Chinese government formally introduced a policy of promoting indigenous innovation through privileged access by Chinese companies to the government procurement market (Levy, 2011; US-China Business Council, 2010). This policy involved government agencies, including the Ministry of Finance, Ministry of Science and Technology, Ministry of Industry and Information Technology, and the Ministry of Commerce, working cooperatively within the State Council Leading Group on Science, Technology, and Education to institute preferential policies, product catalogues, financing schemes, and other tools reflecting preference in government procurement to ensure the development of Chinese-owned technology and IP (US-China Business Council, 2010). The primary concern of FIEs was that they would be excluded from selling to China's government procurement programs because they have developed patents and trademarks in other national

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jurisdictions (US-China Business Council, 2010). Thus, products would be required to have a patent owned by an entity in China or their original first registration of trademarks in China to be eligible for the government procurement market in China (US-China Business Council, 2010). The six areas identified for inclusion in the indigenous innovation catalog include: information technology related; computers; communication, including mobile phones; office equipment, including scanners; software; new energy equipment; and new energy-efficient products (US-China Business Council, 2010).

Building on published November and December 2009 Chinese government edicts related to indigenous innovation, in January 2010, the Chinese government released its draft administrative rules, *Implementing Regulations on the Government Procurement Law*, stating that qualifying products, including indigenous innovation products, should be given priority or mandatory purchase preference (without further clarification), causing concern from FIEs that they may be excluded or restricted from procurement participation (US-China Business Council, 2010).<sup>8</sup> In January 2010, the Ministry of Science and Technology modified this indigenous innovation policy as it pertains to government procurement so as to include registered FIEs, so long as their products comply with national laws, regulations and "technology" policies, applicant's own IP rights, products are classified as "advanced," and they must be "reliable" in quality (Lubman, 2011). In April 2010, the IP requirement was modified so that FIEs must only

have a license to use the respective IP (Lubman, 2011). After a December 2010 US-China Joint Commission on Commerce and Trade meeting, the Chinese government agreed to delink its innovation policies from government procurement preferences and made other changes to its indigenous innovation policies (United States International Trade Commission, 2011). Furthermore, effective July 1, 2011, the Ministry of Finance announced that it revoked three national laws linking procurement with indigenous innovation: Evaluation Measures on Indigenous Innovative Products for Government Procurement; Administrative Measures on Budgeting for Government Procurement of Indigenous Innovative Products; and Administrative Measures on Government Procurement Contracts for Indigenous Innovative Products (Layton, Liang, & McKonkey, 2011).

While reassurances from the PRC government continue, the European Chamber of Commerce (2011c, p. 63) concludes that, "foreign companies are still discriminated against in public procurement in a number of concrete ways" and "clarification on the definition of 'domestic products' and its application is needed." Moreover, this indigenous innovation procurement problem continues at the provincial and municipal levels of Chinese government, as fragmentation of the Chinese government procurement market allows for these local governments to develop their own written and unwritten procedures and procurement catalogues (European Chamber of Commerce, 2011a). In April 2011, US companies reported that local governments in China had not delinked their indigenous innovation procurement policies to conform to national policies (Bussey, 2011).

### Exchange Rate Regime

As of July 2008, in response to the global economic crisis, the Chinese government stopped the appreciation of its currency, the renminbi or RMB, and returned to a peg at approximately 6.83 RMB to the U.S. dollar ("Oanda Historical Exchange Rates," 2010). Since July 2005, the RMB began its decline from 8.3 RMB to the U.S. dollar ("Oanda Historical Exchange Rates," 2010). According to a recent analysis of the US-China Economic and Security Review Commission (2010, p. 21):

China's deliberately undervalued RMB has unfairly conferred substantial economic advantages on China to the detriment of major trading partners, principally the United States and Europe. China's undervalued RMB makes China's exports cheaper and imports more expensive, and it encourages foreign direct investment into China, resulting in the loss of investment and jobs in Europe and the United States.

C. Fred Bergsten (2010), president of the Peterson Institute of International Economics, describes RMB undervaluation in very specific terms:

Such currency manipulation is a blatant form of protectionism. It subsidizes all Chinese exports 25 to 40 percent. It places the equivalent of a 25 to 40 percent tariff on all Chinese imports, sharply discouraging purchase from other countries.<sup>9</sup>

The Chinese government, however, strongly denies that its exchange rate policies are being manipulated to encourage domestic exports, and consequently contributing to the continued trade imbalances with its trade partners in the U.S. and Europe (Batson, Johnson, & Browne, 2010). To date, less than .01% of China's international trade is conducted in its own currency (Cookson, 2010). What China does aspire to is transforming the RMB into an international, or at least regional, reserve currency in the long-term, thus allowing the country to conduct trade and settle accounts in its own currency (US-China Economic and Security Review Commission, 2010). To attain this currency goal, the People's Bank of China in June 2010 announced that it was in the process of slowly introducing policy changes and currency reforms by allowing the RMB steady appreciation against the dollar through "a managed floating exchange rate regime" tied to a basket of currencies (Freeman & Yuan, 2011; US-China Economic and Security Review Commission, 2010).<sup>10</sup> In a July 2011 report, the staff of the International Monetary Fund argued that "the renminbi remains substantially below the level consistent with medium-term fundamentals" and that "despite the important progress made in many policy areas, the real effective exchange rate has depreciated over the past year" (International Monetary Fund, 2011, p. 18).

### Foreign Investment Restrictions, Barriers, and Disincentives

In addition to the review of M&As found in a clause in the Antimonopoly Law, over the past five years the Chinese government has initiated a litany of official sectoral industrial policies that increasingly restrict foreign ownership and access in the Chinese market, reflecting a formal shift towards a more selective treatment of FDI unevenly applied across industrial sectors (Frisbie, 2010; Poon, 2009). In April 2010, the Chinese State Council released new regulations on FDI, welcoming foreign investment in high-tech industries, the service sector, and energy savings and environmental protection, strictly prohibiting FDI in polluting and energy-intensive projects or industries running at overcapacity (State

Council, 2010). Foreign investment is limited to minority ownership (or face other ownership prohibitions) in the agricultural, automobile, chemicals, machinery, paper, securities, shipbuilding, steel, and telecommunications industries, among others (Frisbie, 2010; Poon, 2009).<sup>11</sup> In April 2011, the National Development and Reform Commission and MOFCOM released a draft of the *Catalogue for Guiding Foreign Investment in Industry 2011* (hereafter *Draft Catalogue*). In this new *Draft Catalogue*, there are new "encouraged" and "permitted" sectors for FDI. It is unclear, however, whether limitations to foreign shareholding remains, for instance, in new energy automobile components and parts, as well as medical instruments (European Union Chamber of Commerce, 2011c).

Another contentious issue related to foreign investment in China is direct offsets.<sup>12</sup> An example of such direct offset requirements includes the General Electric Company having to agree to share its technology with two Chinese companies as a requirement of being awarded a \$900 million contract for high-technology electricity-generation turbines (Kranhold, 2004). Furthermore, the US-China Economic and Security Review Commission (2005, p. 30) notes that "... Chinese firms have used their leverage to extract offsets—agreements to transfer some of the aircraft production along with the related expertise and technology—as part of the deals."

This Chinese government pressure for the transfer of knowledge of cutting-edge technology in high value-added industries is found, for example, in the nuclear industry, where Westinghouse released more than 75,000 technical documents to its Chinese customers as required in an agreement to license reactor technology (Roberts, 2010b), and the passenger rail industry, where Kawasaki, who entered into a joint venture with Chinese manufacturer CSR, soon found its patented, high-speed train technology imitated by its Chinese partner (Shirouzu, 2010). China has also issued new rules for the electric vehicle market, with foreign automobile companies indicating that in order to participate in this industry sector, they would be forced to share electric vehicle proprietary technology with Chinese competitors (Shepardson, 2010). This direct offset requirement policy continues because the Chinese government did not sign a key piece of the WTO accession agreement that would prohibit this required sharing of proprietary technology, or a requirement that foreign manufacturers establish research centers to train Chinese engineers in the proprietary technology, from being demanded by the PRC government (Kranhold, 2004).

Another regulatory barrier to FDI involves business licensing requirements. While 71% of U.S. company

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respondents recently surveyed believe that the licensing process is not the same for foreign and Chinese companies (American Chamber of Commerce in the People's Republic of China, 2011a), this has been a particularly vexing issue for insurance companies and foreign banks. For example, insurance companies such as Chubb, Liberty Mutual, and Zurich are only allowed to apply to open one branch at a time, and it typically takes more than 18 months to win approval (Roberts, 2010a). The end result of this business licensing policy is that many insurance companies have no more than a handful of branches in operation (Roberts, 2010a). For foreign bank branches licensed to conduct business in all currencies for both corporate and personal clients, regulations issued by the People's Bank of China (and effective February 2002) require operating capital of \$67.5 million, while a domestic bank branch with the same business scope required only \$40.5 million in operating capital (Poon, 2009).

Finally, a general disincentive to foreign investment is the Unified Enterprise Income Tax Law, which became effective on January 1, 2008, and sets Enterprise Income Tax (EIT) rates as follows: unified EIT rate at 25%; small business rate at 25%; incentive rate (applicable to high technology and environmental enterprises) at 15% (Poon, 2009). This new EIT tax takes a tougher stance toward FDI. First, firms are divided into either tax resident enterprises or nontax resident enterprises, with the former category taxed on a worldwide income basis, and the latter taxed only on China-sourced income, which is often less. Second, outbound China-sourced passive income (e.g., dividends, royalties, interest) will be subject to a withholding tax rate of 10%, with the removal of this withholding tax exemp-

tion on dividends greatly increasing foreign investors' global tax liability. Third, to qualify for the EIT tax rate, "high technology enterprises must possess a number of qualifying requirements."<sup>13</sup> These qualifying requirements, particularly one requiring possession of core intellectual property, have been interpreted as being designed to pressure, if not force, increased technology transfer of key technologies and knowledge to Chinese competitors.

### Global Product Standards

The lack of harmonization of international and Chinese technical standards remains a serious concern for FIEs in China (American Chamber of Commerce in the People's Republic of China, 2011b). In the 2005 National Standardization Strategy, the China National Institute of Standardization and the Standardization Administration of China officially called for the nation to move from a net importer and consumer of international technical standards to that of a producer of national and global standards by 2020 (Zhao & Graham, 2006). There is increasing concern that the Chinese government often uses mandatory technical standards as part of its industrial policy to promote the growth of its domestic companies and limit the access of FIEs to the Chinese market (Roberts, 2010a; American Chamber of Commerce in the People's Republic of China, 2011b).<sup>14</sup> An example of this abuse of technical standards (and apparent violation of WTO policy) was the proposed mandatory data-encryption standard for wireless local area networks, known as the Wireless LAN Authentication Privacy Infrastructure, announced in mid-2003 that proved incompatible with internationally recognized wireless local area networks (WLAN) standards (Roberts, 2010a; American Chamber of Commerce in the People's Republic of China, 2004). According to Kogan (2005, p. 7):

Apparently, this requirement [WLAN standards] was imposed for the purpose of differentiating and protecting the nascent marketplace for Chinese technologies and products from more advanced and encroaching U.S. technologies and products. It also likely serves as a disguised means of extracting sensitive proprietary information (trade secrets) and other intellectual property from U.S. technology companies without adequate compensation or IP protections for competitive advantage.

The apparent abuse of the WTO's Agreement on Technical Barriers to Trade, which only allows for mandatory domestic standards related to the protection of the public welfare ("environment, health, and safety"), was recognized in the American Chamber of Commerce in the People's Republic of China (2004) 2004 membership

questionnaire. In this survey, 25% of respondents (and 50% of representatives of high-technology companies) indicated that their Chinese operations had been negatively impacted by new technical standards and certification processes (American Chamber of Commerce in the People's Republic of China, 2004). Other recent examples illustrate this ongoing issue. For example, several Italian gas cooking stove manufacturers were “shut out” of the Chinese market due to a standards clause that burners must withstand temperatures above 700°C — higher than generally accepted global standards (the melting point of aluminum is 660°C) — and requiring that burners cannot be made of aluminum (the material commonly used by European manufacturers) (Roberts, 2010a).

### Patent Law Amendments

On October 1, 2009, the Third Amendment of the Chinese Patent Law (“Third Amendment” hereafter) went into effect, with final rules published by the country's State Council on January 19, 2010 (Wu, 2010). While the Third Amendment is recognized by many observers as encouraging innovation in China and adding increased protection for innovations created by cross-border research efforts (Cass, 2010), it has created new issues of concern for foreign FIEs. A major issue has to do with the compulsory licensing of a patented invention if the Chinese government finds that the patent holder has not commercially exploited the patent sufficiently, or if the patent itself is deemed to restrict competition (Cass, 2010). Compulsory licensing provisions often will frustrate intellectual property incentives for innovation by maintaining inventions in secrecy (Intellectual Property Owners Association, 2009). Under the Third Amendment, says Cass (2010), “compulsory licensing decisions turn on opaque standards such as ‘sufficient’ use of patents and ‘proper justification’ for patent holders’ decisions.” Unless the State Intellectual Property Office (SIPO) issues clarifying rules for implementing this vague legislation, FIE patent holders will be at constant risk of a compulsory license requirement (Cass, 2010).

Another issue for FIEs to consider under the Third Amendment is foreign license filing requirements for patent applications based on inventions “completed” in China. Thus, in managing research and development (R&D) in China, FIEs (with research occurring in different countries on the same invention) are confronted with the onerous SIPO requirements making it problematic on where they should file their first patent application (Wu, 2010).<sup>15</sup> Finally, the ambiguity of the Final Rules (interpreting the Third Amendment legislation) concerning the topic of inventor remuneration requirements (both

for monetary rewards and damages to employees) is another Third Amendment issue that troubles many FIEs with R&D activities in China (Wu, 2010). This is due to the uncertainty over potential financial, legal, and social risks associated with these Final Rules that could lead to FIEs moving R&D from China or replacing Chinese nationals with researchers from other countries, thus reducing presently perceived corporate risk (Wu, 2010).

Finally, due to a lack of transparency and clarity in China's Anti-Monopoly Law regarding the use of patents as an anti-competitive business practice, there is a perceived lack of distinction between legitimate and abusive exercise of IPR under Article 55. This deficiency in a clear legal definition of what constitutes anticompetitive use of patents is causing US companies concern that it could lead to findings that force foreign IP holders to license their IP to domestic competitors, or charge royalties less than their commercial value (American Chamber of Commerce in the People's Republic of China, 2011b).

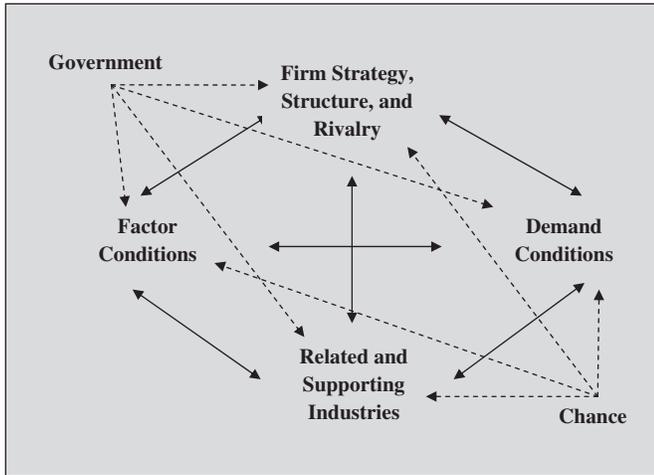
Next, based on the preceding review of Chinese industrial policy, we will evaluate, by employing Porter's “Diamond of National Competitive Advantage” framework (Porter, 1990a), whether these policies are a change in the direction of national industrial policy or the natural evolution of long-term national industrial policy.

## Government and National Firm Competitive Advantage: An Application of Porter's Diamond

Michael Porter (1990a) conducted an international study of 10 nations (and utilized 100 case studies) to develop an analytic framework combining theories from international economics with those from competitive strategy that would explain why a specific nation succeeds in particular industries but not in others. To that end, Porter identified four broad attributes that both individually and as a system constitute the “Diamond of National Competitive Advantage” (hereafter “Diamond”) (see Figure 2), the competitive environment that each nation establishes and operates for its industries/firms. These four attributes include:

- *Factor conditions:* The nation's position in factors of production, such as skilled labor or infrastructure, necessary to compete in a given industry.
- *Demand conditions:* The nature of home-market demand for the industry's product or service.
- *Related and supporting industries.* The presence or absence in the nation of supplier industries and other related industries that are internationally competitive.

FIGURE 2 Porter's Diamond Model



- *Firm strategy, structure, and rivalry.* The conditions in the nation governing how companies are created, organized, and managed, as well as the nature of domestic rivalry.

Porter (1990b) makes two distinctions in the factors of production: those that are basic and those that are advanced. He believes that basic and generalized factors are inherited or relatively easy to create or replicate. Advanced or specialized factors—those specialized to a particular industry's needs—are viewed as a more decisive and sustainable basis for competitive advantage. Demand conditions necessary for national competitive advantage to a nation include the composition, size, and pattern of growth; the existence of internationally competitive related and supporting industries; the strategies and structures of firms as well as the nature of domestic rivalry; and the intensity of domestic rivalry in particular, as it encourages firms to upgrade their technologies and human capital. It is the systemic nature of this complex “Diamond” framework that makes it difficult to replicate the exact structure of an industry in another country. Porter (1990b) also recognizes the indirect role of “chance” events, which by definition is beyond the control of firms, but often creates forces that reshape the industry structure, resulting in a firm's competitive position. Furthermore, Porter (1990b) views the role of government in the competitive development of an industry as an important, but indirect role, mainly through influencing (“transmitting and amplifying”) the four major determinants of competitive advantage.<sup>16</sup> This role of government in the national competitive advantage of a nation is that which will be compared to the recent evolution in China's industrial policy.

*It is the systemic nature of this complex “Diamond” framework that makes it difficult to replicate the exact structure of an industry in another country.*

As part of his “Diamond” framework, Porter (1990b, p. 86) envisions the proper role of government

... as a catalyst and challenger; it is to encourage – or even push – companies to raise their aspirations and move to higher levels of competitive performance, even though this process may be inherently unpleasant and difficult. Government plays a role that is inherently partial, that succeeds only when working in tandem with favorable underlying conditions in the diamond. Still, government's role of transmitting and amplifying the forces of the diamond is a powerful one. Government policies that succeed are those that create an environment in which companies can gain competitive advantage rather than those that involve government directly in the process, except in nations early in the development process.<sup>17</sup> It is an indirect, rather than a direct, role.

To this end, Porter (1990b, pp. 87–89) identifies some basic policy approaches that governments should embrace to play an important supporting role for the international competitiveness of national firms:

- *Focus on advanced, specialized factor creation.* These include specialized apprenticeship programs, university-industry research collaborations, industry association activities, and most importantly, company investments that ultimately create the factors that will yield competitive advantage.
- *Avoid intervening in factor and currency markets.* Governments should not pursue policies that intentionally drive up factor costs or the exchange rate. Rather, when market forces create rising factor costs or a higher exchange rate, the government should resist the temptation to push them back down.

- *Enforce strict product, safety, and environmental standards.* Stringent standards for product performance, product safety, and environmental impact pressure companies to improve quality, upgrade technology, and provide features that respond to consumer and social demands. When tough regulations anticipate standards that will spread internationally, they give a nation a head start in developing products and services that will be valuable elsewhere in the global economy.
- *Sharply limit direct cooperation among industry.* Cooperative research should be only indirect, channeled through independent organizations to which most industry participants have access. The most useful cooperative projects often involve fields that touch a number of industries and that require substantial R&D investments.
- *Promote goals that lead to sustainable investment.* Governments should encourage sustained investment in human skills, in innovation, and in physical assets. A key tool for raising the rate of sustained investment is a tax incentive for long-term capital gains incentives to new investment in corporate equity.
- *Deregulate competition.* Regulation of competition through the maintenance of state monopolies, controlling entry into an industry, or fixing prices results in reduced rivalry and innovation, as management focuses on dealing with regulators and protecting present market position. Furthermore, it makes the industry less dynamic and a less desirable buyer or supplier.
- *Enforce strong domestic antitrust policies.* Real national competitiveness requires governments to disallow mergers, acquisitions, and alliances that involve industry leaders. Furthermore, the same standards for mergers and alliances should apply to both domestic and foreign companies, and governments should favor internal entry over acquisition (unless it is small companies in related industries where there is a transfer of skills that could create competitive advantage).
- *Reject managed trade:* Rather than promoting innovation in a nation's industries, managed trade guarantees a market for inefficient companies. Government trade policy should pursue open market access in every foreign nation. Where government finds a trade barrier in another nation, it should concentrate its remedies on dismantling barriers, not on regulating imports or exports.

As Smit (2010) notes, Porter's Diamond framework does not replace the theory of comparative advantage or

strategic trade theory when evaluating country economic performance. According to Smit (2010, p. 123):

At most, it [Porter's "Diamond"] is a useful framework that provides management with a tool to identify country sources of competitive advantage that firms can leverage to enhance their internationally competitive positions. It can therefore not be used as a framework to devise trade policy with a view to enhancing the international competitiveness of a country.

By competitiveness, then, it "is meant the ability, under present conditions, of a country's producers [firms] to command world markets" (Adams, Gangnes, & Shachmurove, 2006: 103).

Given this analytic limitation of Porter's Diamond framework, that is, with a focus on the firm, the role of the Chinese government's recent industrial policy will be compared to Porter's recommended policy approaches, and the results will be subsequently evaluated for their long-term impact on Chinese national champions' internationally competitive positions.

#### **Government Intervention in Currency Markets**

Porter strongly recommends that national governments not actively intervene to keep their country's currency exchange rate low. It is alleged that the Chinese government began actively manipulating its currency, the RMB, in 2005, with the RMB estimated to be undervalued between 25 and 40%. While its' undervalued currency results in cheaper Chinese exports, and encourages FDI in China, in the longer term this monetary policy threatens trade policy retaliation from aggrieved nations. This trade policy retaliation can potentially stifle FDI, and the technology and knowledge transfers to higher-value, emerging industries, such as wind turbines in the clean energy sector, where existing Chinese technology lags behind that found abroad (Roberts, 2010a).

#### **Product Standards as Barriers to Domestic Entry**

Porter views the development of leading-edge product standards domestically as contributing to such national product standards being commercially accepted on a global basis. Chinese national industrial policy, operationalized in government-mandated technical standards, is increasingly being used to protect its domestic companies from foreign competitors, including their indigenous Chinese operations. The perception of many FIEs is that the Chinese government is abusing the WTO's Agreement on Technical Barriers to Trade, which only allows for mandatory technical domestic standards related to the protection of public welfare (i.e., environment,

health, and safety). This form of domestic protectionism does not lead to the long-term acceptance of such a commercially incompatible mandated technical standard (and product), such as the WLAN standard, in the global marketplace (Kogan, 2005).

### **Sustainable Investment: Innovation through Preferential Procurement Policies**

Since 2009, the Chinese government has been promoting domestic industrial innovation through priority or mandatory state procurement preferences for Chinese-owned companies covering six high-technology product categories: information technology related; computers; communication, including mobile phones; office equipment, including scanners; software; new energy equipment; and new energy efficient products.<sup>18</sup> These procurement preferences were ostensibly established to help develop Chinese-owned technology and IP and may provide initial markets for Chinese national champions, but they also risk long-term consequences in that they deter FIEs from investing, or otherwise limiting their investment, in China. Such FDI consequences of these preferential procurement policies, especially if enforced by provincial and municipal governments, may include withholding access to important IP and state-of-the-art knowledge of process innovations from potential joint ventures with Chinese technology-based enterprises.

### **Controlling Foreign Entry into Domestic Industries**

Over the past five years, the Chinese government has initiated a series of official industrial policies that increasingly restrict FDI in a wide range of industries that are populated by national champions. Foreign investment is limited to minority ownership (or other ownership prohibitions) in the agricultural, automobile, chemicals, machinery, paper, securities, shipbuilding, steel, and telecommunications industries, among others. Another contentious issue related to FDI is direct offsets, whereby agreements to transfer some of the production along with the related expertise and technology are required of foreign suppliers to Chinese companies. Another regulatory barrier to FDI involves business licensing requirements, particularly as it applies to insurance companies (e.g., limits on the number of branch operations) and foreign banks (e.g., minimum capital requirements). Finally, a general disincentive to foreign investment in China is the Unified Enterprise Income Tax Law, which became effective on January 1, 2008, and takes a tougher stance toward encouraging FDI. Porter views the controlling of entry into domestic industries as inhibiting rivalry and competition, as well as making the industry less dynamic

and innovative, critical components for a successful global champion.

### **Restrictive Cross-Border Merger and Acquisition Reviews**

As noted, the recently enacted Antimonopoly Law contains language indicating that the M&A review process include protection of existing competitors and the effect on the national economy. Furthermore, under Article 27 of the Antimonopoly Law, one factor that the Antimonopoly Law Enforcement Authority (ALEA) considers in its merger and acquisition review process is the impact of the industry concentration on China's economic development. In addition to the Antimonopoly Law, Article 12 of the Rules on Mergers and Acquisitions of Domestic Enterprises by Foreign Investors requires foreign investors to report to the government any transactions in which they will acquire control of domestic entities in key economic sectors, adversely affect national economic security, or a famous Chinese brand. What still remains uncertain, however, is whether the ALEA decision to reject Coca-Cola's acquisition of Huiyuan Juice is based on a political desire to protect so-called iconic Chinese brands (i.e., "national champions") and will be a precedent for future merger and acquisition decisions. Contrary to the Chinese competition laws and policy, Porter recommends that identical standards for M&As be applied to both domestic and FIEs to nurture real national competitiveness for designated national champion firms planning to become global competitors.

### **Discriminatory Patent Law Requirements**

Under the recent Third Amendment of the Chinese Patent Law, a major issue confronting FIEs is the compulsory licensing of a patented invention if the Chinese government finds that the patent holder has not commercially exploited the patent sufficiently, or if the patent itself is deemed to restrict competition. Unless the SIPO issues clarifying rules for implementing this legislation, FIE patent holders will be at constant risk of a compulsory license requirement. Another issue for FIEs to consider under the Third Amendment is foreign license filing requirements for patent applications based on inventions "completed" in China. Thus, in managing R&D business activities in China, FIEs (with research occurring in different countries on the same invention) are confronted with the SIPO requirements—making it problematic on where they should file their first patent application. Porter would consider such trade barriers as contrary to promoting indigenous innovation among Chinese national champions, leading to long-term inefficiencies in the domestic marketplace and negatively impacting

*Unless the SIPO issues clarifying rules for implementing this legislation, FIE patent holders will be at constant risk of a compulsory license requirement.*

Chinese company competitive advantage in the global marketplace.

## Discussion

In the introduction of this article, a series of related research questions are posed addressing China's recent industrial policy, particularly as it addresses the nation's most recent 10th, 11th, and 12th (2001–2005, 2006–2010, and 2011–2015) five-year economic policy plans. These questions include:

- Are these recent public policies a continuation of an evolution in Chinese industrial policy planned to enhance the international competitiveness of China's national champions in the long-term?
- Is this a recent and substantive change in a government policy previously encouraging FDI (and domestic economic growth) into China?
- Or could this be the culmination of a national industrial policy that has “nurtured” the development of SOEs since the late 1980s, who represent the Chinese government's anointed national champions?
- Are the foreign government and private sector criticisms of these alleged Chinese protectionist policies leading to an adverse change in FIE decisions regarding FDI in China?

These questions go to the nature of China's long-term competitiveness of its national champions, and to what extent that Chinese government policies are evolving to domestic protectionism that adversely affects FIEs' competitive position in the Chinese economy.

In evaluating the long-term competitiveness of China's national champions, the explicit nature of Chinese

government policymakers in choosing the “pillar” or “strategic” industries in its 10th and 11th five-year economic policy plans has been crucial in the development of targeted government economic policies adversely impacting FIEs. Within strategic industries, the Wen administration's 11th and 12th five-year economic policy plans further refine its economic policies, ranging from M&A restrictions in competition policy to indigenous innovation procurement policies to foreign direct investment restrictions. These policies promote the rise of designated Chinese national champions (within these strategic sectors) to ultimately compete with major FIEs on a global scale. Contrary to what many foreign government officials and MNE executives believe are recent, aberrant protectionist economic policy changes instigated by the Chinese government, the empirical policy evidence supports the position that China's recent trends in protectionist domestic policies are carefully planned and integral to the nation's long-term industrial policy. Indeed, in a January 2010 letter addressed to senior US government officials, including the U.S. secretary of state and the US trade representative, the heads of 19 US business and industry associations warned against the “[s]ystematic efforts by China to develop policies that build their domestic enterprises at the expense of U.S. firms and U.S. intellectual property ...” (Information Technology Industry Council, 2010).<sup>19</sup> This recognition of the latest phase of an evolving industrial policy designed to build national champions, however, is generalizable to any foreign firm, or its IP, presently operating in China.

The role of the Chinese government's recent industrial policy, as compared to Porter's recommended government policy approaches, may not augur as well in the long-term for China's national champions. First, the Chinese government has been actively manipulating its currency, the RMB, estimated to be undervalued between 25% and 40%, thus risking trade policy retaliation and the stifling of FDI (and the technology and knowledge transfers to emerging Chinese industries). Second, while Porter views the development of leading-edge product standards domestically as contributing to national product standards being commercially accepted on a global basis, Chinese government-mandated technical standards continue to be used for protection of domestic companies from foreign competition. Third, government procurement policies have been established to help develop Chinese-owned technology and IP and may provide initial markets for Chinese national champions, but they also risk deterring or limiting FIEs from investing in China, thus withholding access to important IP and process innovations from joint ventures with Chinese technology-based enterprises.

Fourth, the Chinese government has initiated industrial policies that increasingly restrict FDI in a wide range of industries populated by national champions, a policy that Porter views as inhibiting rivalry and competition, as well as making the industry less dynamic and innovative, critical components for a successful global champion. We also argue that these indigenous innovation policies may fall under red or yellow light subsidies, thereby distorting competition and violating provisions of the WTO Subsidies Agreement (see articles 3–7). Fifth, contrary to both the Antimonopoly Law and Rules on Mergers and Acquisitions, Porter recommends that identical standards for evaluating M&As be applied to both domestic and FIEs, prerequisites to nurture the level of competitiveness for designated national champion firms to become global competitors. Finally, under the recent Third Amendment of the Chinese Patent Law, a major issue confronting FIEs is the compulsory licensing of a patented invention under certain commercial circumstances, a policy that Porter would consider contrary to promoting indigenous innovation among Chinese national champions, leading to long-term inefficiencies in the domestic marketplace, and negatively impacting company competitive advantage in the global marketplace.

Chinese industrial policy is not based in certain fundamental attributes of Porter's Diamond, specifically the often limited home-market demand for a strategic industry's products or services, and the lack of intensity of domestic rivalry, in particular, as an intense domestic market rivalry drives firms to continually innovate. In the case of China, the designation of "national champions" is established through centralized Chinese government five-year economic plans, and not by Chinese national champions emerging through intense competition and rivalry in the domestic market. The development of national champions is thus built primarily upon an export market. This is contrary to the successful industrial policy model for another Asian economic power, Japan, which has developed a large number of internationally competitive firms in different high value-added industries, including automotive, construction equipment, consumer electronics, machine tools, shipbuilding, and steel manufacturing, all the result of intense competition in the Japanese home market, with the "winners" becoming globally competitive MNEs (Porter, 1990a).

The recent evolution in Chinese industrial policy, notably since China became a member of the WTO and President Hu Jintao and Premier Wen Jiabao acquired power in 2002 (as well as tracking the last two five-year economic plans), have left MNEs less positive on China as a home for foreign investment (Roberts, 2010a). As

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mentioned earlier, FDI into China increased by 127% over the first eight years of this past decade, but one has to wonder whether that figure could have been higher. Moreover, in the past couple of years, the Chinese government's policy of "squeezing" FIEs for access to patented technologies and trade secret process innovations, in return for their companies' product access to domestic markets, has intensified. Those FIEs who have entered into joint ventures with Chinese national champions have often found that transferring their technology and knowledge of their manufacturing process to their Chinese partners may have opened the door to these companies attempting to compete in the global marketplace on lower prices for a nearly identical, high-value-added, technology-based product.

On the surface, this may appear to be naiveté on the part of foreign executives; however, it is not. The lure of gaining access to the growing Chinese marketplace is allowing the Chinese government to negotiate this technology and knowledge transfer with FIEs. There is a dichotomy to these policies in that, on the one hand, market access is being granted by certain government agencies to FIEs wishing to operate in China; however, on the other hand, other Chinese government agencies are instituting new regulations and policies that are

restricting market access. Moreover, many individual FIE executives are reluctant to publicly criticize such discriminatory regulations or policies out of fear of angering the Chinese government, or in the case of legal action (e.g., for patent infringement), refrain from legal action “because they believe the justice system favors domestic enterprises” (Roberts, 2010a, p. 36). As one foreign FIE attorney stated: “The Chinese are very good at smashing

the nail that sticks up” (Roberts, 2010a, p. 36). In conclusion, it appears that the seduction of access to the Chinese marketplace continues to drive many FIE executives to be negotiated out of their technology, trade secrets, and IP, while not adequately factoring into their decision-making calculus the potential long-term, competitive threats from Chinese national champions to their own high value-added products in the global marketplace.



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## Notes

1. Eden & Lenway (2001) point out the “Janus face” of globalization (and MNEs): On the one hand, MNEs are recognized as important agents of change for globalization, instigating the “creative destruction” that diffuse new, socially beneficial technologies throughout the world economy. On the other hand, while MNEs have goals directed to profit maximization, nation-states have broader goals focused on job creation, tax revenue generation, economic development, and maintaining a high (and increasing) standard of living for its citizenry.
2. The volume of FDI inflows into China has been spectacular, totaling \$488 billion (over the period 1988 to 2003), with 271,963 MNEs operating in-country (Tang, Selvanathan, & Selvanathan, 2008).
3. There are many definitions of industrial policy. A broad definition of industrial policy focuses on the public programs and private-sector institutional relationships that impact a country's economic development and international competitiveness (Lehne, 2001). A narrow definition of industrial policy (and one adopted by the authors in this article) has a national government initiating public policies aimed at improving a country's economy through their impact on specific industrial sectors (i.e., by choosing “national champions”). According to Noland & Pack (2003, p. 10) specific examples of industrial policy instruments include:

“credit directed at specific sectors with below-market interest rates for long-term and working capital, sectorally differentiated profit taxes, subsidized electricity rates, research and development subsidies, control of the entry and exit of firms, export targets, and highly differentiated tariffs and nontariff barriers.”

4. Huang (2008), in his study, argues that the urban biased government policies initiated in the early 1990s have skewed the Chinese economy and significantly hindered stable private sector growth. Huang (2008) is highly critical of the popular view that China's economy has become increasingly receptive to private enterprise over the 30 years of the reform period, instead suggesting a contrarian view of a resurgent state sector sidelining the vibrant, sustainable, and equitable economic development characteristic of China in the early to middle 1980s.

5. According to data compiled by the Economist Intelligence Unit (2007), the number of SOEs declined to 24,961 by 2006.

6. Certain of these subsidies may be in violation of WTO policies.

7. Wang & Zhang (2009) question the efficacy of the new Antimonopoly Law cross-border M&A review process: “The review process in MOFCOM is not transparent, so it is not clear how MOFCOM will substantially review any particular transaction and what legal principles, arguments and analytical methods MOFCOM will consider, including how economic analysis and data enter into the analysis.”

8. On December 10, 2009, trade associations from Canada, Europe, Japan, South Korea, and the United States asked the Chinese ministries responsible for issuing the November document related to procurement of indigenous innovation-related products to delay implementation of the administrative rules laid out in the circulars and engage with representatives of industry on how to advance China's science and technology goals and promote innovation through a fair and transparent selection process (The US-China Business Council, 2010).

9. There is a question as to what type of export subsidy the current currency manipulation may fall under. As a rule of thumb, the WTO categorizes subsidies into three distinct groupings: green light, yellow light, and red light subsidies. These provisions established in the Agreement on Subsidies and Countervailing Measures (hereinafter SCM Agreement) (World Trade Organization, 1995) are commonly referred to as the "Traffic Light" subsidies categories. Green light subsidies are allowed by the WTO and are typically neutral and provide objective support to home country industries often with built-in "sunset provisions" (Folsom, Gordon, & Spanogle, 2002). Green light subsidies may include research and development subsidies, regional subsidies, and environmental subsidies (Folsom et al., 2002). Red light subsidies are actionable before the WTO due to their being "de facto" export and import subsidies (World Trade Organization, 1995). Yellow light subsidies fall somewhere in-between green light and red light subsidies. These subsidies are not insulated from dispute and are actionable before the WTO if they cause injury to an industry in another country (World Trade Organization, 1995). Furthermore, "[m]ost subsidies fall within the actionable category. In a dispute over an actionable subsidy, a challenge has to prove that the subsidy does one of three things: that it causes harm to the domestic industry; that it impairs or nullifies the benefits derived from its WTO membership, such as when a subsidy deprives a member of market access because its goods are priced out of the market; or that it causes 'serious prejudice' to the member. Serious prejudice can be claimed if a domestic producer or producers are negatively affected by the subsidy in the subsidizing country or in other countries, for example, when they lose market share" (Global Subsidies Initiative, 2010).

10. On June 19, 2010, China's central bank issued a brief statement that promised greater flexibility in its currency, although there were no specific measures mentioned in this statement (People's Bank of China, 2010).

11. The Chinese government, in its *Catalogue Guiding Foreign Investment in Industry*, lists the industrial sectors where FDI is encouraged, restricted, or prohibited across the economy (Frisbie, 2010). Under the *2012 Catalogue Guiding Foreign Investment in Industry*, released on December 24, 2011, and taking effect on January 30, 2012, the National Development and Reform Commission and Ministry of Commerce (2011) have moved alternative energy cars, electrical machinery, Internet equipment and some service industries into the "encouraged" category to attract FDI. Specific industrial policies, such as a preferential tax structure or streamlined regulatory approval process, are utilized by the national and local governments to encourage this type of FDI (Back & Galbraith, 2011).

12. According to Herrstadt (2008, p. 3): "Direct offsets involve technology and/or production directly related to the purchased product. For example, the production of part of a fighter jet is transferred to another country in return for that country purchasing the fighter jet."

13. These qualifying requirements include the following: (1) possess independent ownership of core intellectual property rights; (2) provide products and/or services within high-technology areas encouraged by the government; (3) have incurred R&D expenses exceeding the minimum required percentage of annual sales revenue; (4) have income from high- or new technology products and/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 (Poon, 2009).

14. The Chinese government annually issues over 10,000 new technical standards governing a variety of industries – more than the rest of the world combined (Roberts, 2010a). As part of China's World Trade Organization agreement they pledged to adopt 2,000 international standards per year within the first five years (Weeks & Chen, 2003).

The Standards Administration of China issued a much awaited 2010 National Standards-Setting and Revision Plan that outlines standards set (1,195 items) and standards revised in 2010 (1,101 items) (American Chamber of Commerce in the People's Republic of China, 2011b). In a survey conducted by the United States International Trade Commission (2011), US intellectual property-intensive firms identified "China-specific technical standards" as one of two top policy areas as current problems.

15. Also, as Gupta and Wang (2011) note: "In many other cases, a Chinese filer 'patents' a foreign invention in China with the goal of suing the foreign inventor for 'infringement' in a Chinese legal system that doesn't recognize foreign patents."

16. Porter's (1990a) indirect, supportive role of government in his research study has received criticism from Stopford & Strange (1991), and Van den Bosch and De Man (1994). Davies and Ellis (2000, p. 1189) summarize what they view as Porter's "failings" in his research study: "Sustained prosperity may be achieved without a nation becoming 'innovation-driven,' 'strong diamonds' are not in place in the home bases of many internationally successful industries and inward foreign direct investment does not indicate a lack of 'competitiveness' or low national productivity."

17. The PRC became the world's second largest economy in the world, as second quarter 2010 gross domestic product rose to \$1.335 trillion for China, as compared to \$1.286 trillion for Japan (which previously held this position since 1968) (Hosaka, 2010). According to Hosaka (2010), after three decades of rapid industrialization, China no longer qualifies as a nation that is "early in the development process."

18. Such government procurement policies are not technically in violation of WTO rules, since the Chinese government has not yet signed onto the agreement covering government procurement (although the Chinese government plans on signing the agreement—with a requested phase-in period of 15 years) (Roberts, 2010a).

19. Economic sanctions imposed against China for both geopolitical and economic competitiveness reasons by the U.S. government date back to the Korean War. Yang, Askari, Forrer, & Teegeen (2004, p. 1048) classify these sanctions in three major categories: (1) US laws and regulations that apply to China but are not exclusive to China; (2) multilateral sanctions that the U.S. leads or participates in that apply to China but are not exclusive to China; and (3) US sanctions imposed specifically on China, although such sanctions may not necessarily be unique for China.

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