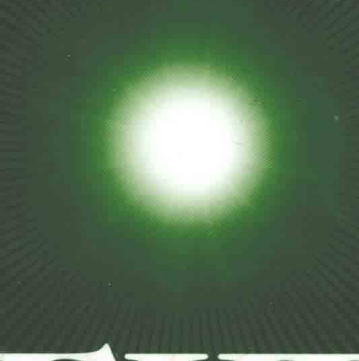




SEEKING CHANGES

THE ECONOMIC DEVELOPMENT
IN CONTEMPORARY CHINA



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CONTENTS

The Myth Behind China's Miracle <i>George J. Gilboy</i>	1
China at the Crossroads <i>Peter Nolan</i>	15
Rebalancing Growth in China: A Three-Handed Approach <i>Olivier Blanchard and Francesco Giavazzi</i>	46
China: Toward a Consumption-Driven Growth Path <i>Nicholas R. Lardy</i>	81
Three Poverties in Urban China <i>John Knight and Li Shi</i>	108
Environmental Stressors and Food Security in China <i>Jerry McBeath and Jenifer Huang McBeath</i>	136
China R&D: A High-Tech Field of Dreams <i>Kathleen A. Walsh</i>	184
The Energy Factor in China's Foreign Policy <i>Charles E. Ziegler</i>	206
Knowledge and Innovation in China: Historical Legacies and Emerging Institutions <i>Erik Baark</i>	236

The Myth Behind China's Miracle

*George J. Gilboy**

■ The phantom menace

China's sudden rise as a global trading power has been greeted with a curious mixture of both admiration and fear. Irrational exuberance about the country's economic future has prompted investors to gobble up shares of Chinese firms with little understanding of how these companies actually operate. Meanwhile, overestimates of China's achievements and potential are fueling fears that the country will inevitably tilt global trade and technology balances in its favor, ultimately becoming an economic, technological, and military threat to the United States. These reactions, however, are equally mistaken: they overlook both important weaknesses in China's economic "miracle" and the strategic benefits the United States is reaping from the particular way in which China has joined the global economy. Such misjudgments could drive Washington to adopt protectionist policies that would reverse recent improvements in U. S. – China relations, further alienate Washington from its allies, and diminish U. S. influence in Asia.

In fact, the United States and China are developing precisely the type of economic relationship that U. S. strategy has long sought to create. China now has a stake in the liberal, rules-based global economic system that the United States worked to establish over the past half-century. Beijing has opened its economy to foreign direct investment (FDI), welcomed large-scale imports, and joined the World Trade Organization (WTO), spurring prosperity and liberalization within China and across the region.

China's own choices along the road to global economic integration have

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reinforced trends that favor the continued industrial and technological preeminence of the United States and other advanced industrialized democracies. In its forced march to the market, Beijing has let political and social reforms lag behind, with at least two critical—and unexpected—consequences. First, to forest all the rise of a politically independent private sector, the Chinese government has implemented economic reforms that strongly favor state-owned enterprises (SOES), granting them preferential access to capital, technology, and markets. But reforms have also favored foreign investment, which has allowed foreign firms to claim the lion's share of China's industrial exports and secure strong positions in its domestic markets. As a result, Chinese industry is left with inefficient but still-powerful SOES, increasingly dominant foreign firms, and a private sector as yet unable to compete with either on equal terms.

Second, the business risks inherent in China's unreformed political system have bred a response among many Chinese managers—an "industrial strategic culture"—that encourages them to seek short-term profits, local autonomy, and excessive diversification. With a few exceptions, Chinese firms focus on developing privileged relations with officials in the Chinese Communist Party (CCP) hierarchy, spurn horizontal association and broad networking with each other, and forgo investment in long-term technology development and diffusion. Chinese firms continue to rely heavily on imported foreign technology and components—severely limiting the country's ability to wield technological or trading power for unilateral gains.

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. China's best hope for overcoming its technological and economic weaknesses lies in a renewed focus on domestic political reform. Thus, rather than lapse into shortsighted trade protectionism that could undermine current favorable trends, Washington should pursue a policy of "strategic engagement." Not simply engagement for its own sake, strategic engagement would explicitly acknowledge the advantages of U. S. technological, economic, and military leadership and seek to reinforce them, in exchange for increased prosperity and more security for China—, the more so now that China has a compelling economic interest in domestic political reform.

■ Open and opening

Recent debates about U. S.-China trade overlook the fact that the U. S. economic relationship with China is largely favorable and that it is conducted largely on U. S. terms. In particular, the focus on China's currency as a source of unfair trade advantage is misplaced, as economists Jonathan Anderson of UBS and Nicholas Lardy and Morris Goldstein of the Institute for International Economics have shown. Even a moderate appreciation of the yuan would make little difference to most U. S. firms and workers. Meanwhile, the currency issue obscures the significant economic and strategic benefits the United States now enjoys in its relations with China.

According to Morgan Stanley, low-cost Chinese imports (mainly textiles, shoes, toys, and household goods) have saved U. S. consumers (mostly middle- and low-income families) about \$ 100 billion dollars since China's reforms began in 1978. (Cheaper baby clothes from China helped U. S. families with children save about \$ 400 million between 1998 and 2003.) U. S. industrial firms such as Boeing, Ford, General Motors, IBM, Intel, and Motorola also save hundreds of millions of dollars each year by buying parts from lower-cost countries such as China, increasing their global competitiveness and allowing them to undertake new high-value activities in the United States. In an effort to save 30 percent on its total global sourcing costs, Ford imported about \$ 500 million in parts from China in 2003. General Motors has cut the cost of car radios by 40 percent by building them from Chinese parts. And although global sourcing can cause painful employment adjustments, the process can also benefit U. S. workers and companies. A recent independent study sponsored by the Information Technology Association of America found that outsourcing to countries such as China and India created a net 90,000 new U. S. jobs in information technology in 2003 and estimated that outsourcing will create a net 317,000 new U. S. jobs by 2008.

China is not just an exporter; it imports more than any other state in northeastern Asia. Although it had a \$ 124 billion trade surplus with the United States in 2003, it had significant trade deficits with many other countries and areas: \$ 15 billion with Japan, \$ 23 billion with South Korea, \$ 40 billion with Taiwan, and \$ 16 billion with the members of

the Association of Southeast Asian Nations (ASEAN). Most significantly, China is a large and growing market for domestically consumed imports (ordinary trade that excludes imported goods that are processed and reexported). Chinese imports for domestic consumption rose to \$187 billion in 2003, from \$40 billion in the mid-1990s. Discounting the processing and reexport trade, China ran a \$5 billion trade deficit in 2003, compared to a \$20 billion surplus just five years earlier. In industries it classifies as “high tech,” including electronic goods, components, and manufacturing equipment, China has averaged a \$12 billion annual deficit for the last decade.

Unlike other U. S. trading partners in Asia, such as Japan and South Korea, which spurned U. S. imports and investment for decades, China is also a large, open market for U. S. products. Although total U. S. exports have stagnated in recent years, U. S. exports to China have tripled in the last decade. They increased by 28 percent in 2003 alone (whereas overall U. S. exports went up by only 5 percent). In particular, China has become a staple market for advanced U. S. technology products. According to U. S. government data, U. S. aerospace exports to China were valued at more than \$2 billion in 2003—about 5 percent of total U. S. aerospace exports and nearly as much as comparable exports to Germany. U. S. firms exported \$500 million of advanced manufacturing equipment to China in 2003, more than they exported to France. And U. S. chip makers exported \$2.4 billion of semiconductors to China in 2003, the same amount they exported to Japan.

Furthermore, China allows foreign firms to invest in its domestic market on a scale unprecedented in Asia. Since it launched reforms in 1978, China has taken in \$500 billion in FDI, ten times the total stock of FDI Japan accumulated between 1945 and 2000. According to China’s Ministry of Commerce, U. S. firms have invested more than \$40 billion in more than 40,000 projects in China. Given its openness to FDI, China cannot maintain its domestic market as a protected bastion for domestic firms, something both Japan and South Korea did during their periods of rapid growth. Instead, it has allowed U. S. and other foreign firms to develop new markets for their goods and services, especially high-value-added products such as aircraft, software, industrial design, advanced machinery, and components such as semiconductors and integrated circuits.

Thanks to this appetite for imports, powerful domestic coalitions, particularly China's growing ranks of urban consumers and its most competitive firms, will continue to favor trade openness. Chinese consumers pride themselves on driving foreign-brand cars and using mobile phones and computers with circuits that were designed and manufactured abroad. Many Chinese firms resist protectionism, because they need to import critical components for their domestic operations and fear retaliation against their exports. For example, in the 1990s, China's machine tool and aircraft industries failed to secure effective state protection in the face of opposition from domestic firms that preferred imports, and they suffered significant decline as a result.

As an open economy and a large importing country, China could be an ally of the United States in many areas of global trade and finance. Already, Beijing has displayed a willingness to play by WTO rules. It has charged Japan and South Korea with unfair trade practices—markets the United States has also long sought to crack open. China initiated 10 antidumping investigations in 2002 on products with import value of more than \$7 billion, and another 20 investigations in 2003. China is now a leading promoter of regional trade and investment regimes, including a free trade zone with ASEAN and a bilateral free trade agreement with Australia, one of the United States' closest allies in the Pacific region. Already, Beijing's proposals on regional economic cooperation seem far more relevant to most Asian nations than do Washington's.

The final benefit the United States enjoys from China's global economic integration is in the long-term, patient battle to promote liberalism in Asia. Foreign trade and development have spurred advancements in Chinese commercial law, greater regulatory consultation with Chinese consumers, slimmed-down bureaucracies, and adherence to international safety and environmental standards. Although it is still limited, the people's freedom to debate economic and social issues has increased, especially in the robust financial media. This process of liberalization is incomplete and uneven, but it is in the interest of both China and the United States to see it continue.

■ Outside in

Despite these benefits, business and political leaders in the United States now fear that China's growing share of world exports, especially of high

technology and industrial goods, signals the rise of yet another mercantilist economic superpower in northeastern Asia. But these concerns are unwarranted, for three reasons. First, China's high-tech and industrial exports are dominated by foreign, not Chinese, firms. Second, Chinese industrial firms are deeply dependent on designs, critical components, and manufacturing equipment they import from the United States and other advanced industrialized democracies. Third, Chinese firms are taking few effective steps to absorb the technology they import and diffuse it throughout the local economy, making it unlikely that they will rapidly emerge as global industrial competitors.

A close look at the breakdown of China's exports by type of producing firm puts China's economic rise in perspective. Foreign-funded enterprises (FFES) accounted for 55 percent of China's exports in 2003. In this respect, China diverges from the typical Asian success story. According to Huang Yasheng of the Massachusetts Institute of Technology, FFES accounted for only 20 percent of Taiwan's manufactured exports in the mid-1970s and only 25 percent of South Korea's manufactured exports between 1974 and 1978. In Thailand, the FEES' share dropped from 18 percent in the 1970s to 6 percent by the mid-1980s.

As shown in the figure on the next page, the dominance of foreign firms in China is even more apparent in advanced industrial exports. While exports of industrial machinery grew twentyfold in real terms over the last decade (to \$ 83 billion in 2003), the share of those exports produced by FFES grew from 35 percent to 79 percent. Exports of computer equipment shot from \$ 716 million in 1993 to \$ 41 billion in 2003, with the FFES' share rising from 74 percent to 92 percent. Likewise, China's electronics and telecom exports have grown sevenfold since 1993 (to \$ 89 billion in 2003), with the FFES' share of those exports growing from 45 percent to 74 percent over the same period. This pattern repeats itself in almost every advanced industrial sector in China.

The data featured in the figure highlight another trend that rein forces China's dependence on foreign investment and the growing gap between FFES and domestic Chinese companies. In the 1990s, Beijing permitted a new FDI trend to develop: a shift away from joint ventures and toward wholly owned foreign enterprises (WOFES). Today, WOFES account for 65 percent of new FDI in China, and they dominate high-tech exports.

But they are much less inclined to transfer technology to Chinese firms than are joint ventures. Unlike joint ventures, they are not contractually required to share knowledge with local partners. And they have strong incentives to protect their technology from both domestic and other foreign firms, in order to capture a greater share of China's domestic markets. As a result, according to the most recent Chinese government statistics for high-tech industries (pharmaceuticals, aircraft and aerospace, electronics, telecommunications, computers, and medical equipment), FFES increased their total share of high-tech exports from 74 percent to 85 percent between 1998 and 2002. But perhaps more significant, in the same period, they increased their share of total domestic high-tech sales from 32 percent to 45 percent, while the share of that market held by China's most competitive industrial firms, SOES, fell from 47 percent to 42 percent.

Finally, the data in the figure reveal that China's private firms are not yet significant global players. Despite more than two decades of economic reform, China's leading domestic industrial and technology companies are still primarily SOES. Although they remain inefficient and dependent on government-subsidized loans, they account for the bulk of advanced industrial production in China, boast the country's best research and development (R&D) capability, and spend the most resources to develop and import technology. Their preferential access to markets and resources has blocked the rise of private industrial firms. Likewise, collective firms owned by provincial and local governments have failed to emerge as major players in China's advanced industrial and technology sectors.

■ Particular and exceptional

One of the key reasons that state, collective, and private firms in China lag behind FFES is that they have failed to invest in the type of long-term technological capabilities that their Japanese, South Korean, and Taiwanese predecessors built during the 1970s and 1980s.

Developing technology is a difficult and uncertain process. Neither large capital investments nor a significant stock of existing science and engineering capability can guarantee success. To create commercially viable products and services, firms must monitor and access new forms of knowledge, understand evolving market trends, and respond rapidly to

changing customer demand. Firms that can develop strong links to research institutions, financiers, partners, suppliers, and customers have an advantage in acquiring, modifying, and then commercializing new technology. Such horizontal networks are essential conduits for knowledge, capital, products, and talent.

Yet China's unreformed political system suppresses such independent social organization and horizontal networking and instead reinforces vertical relationships. China remains a fragmented federal system, its fractious regions unified by a single political party. The CCP controls all aspects of organized life, including industry associations, leaving few avenues for firms to work together for legitimate common interests. This structure drives business leaders to focus on building relationships through CCP officials and the bureaucracy. Although market reforms have brought more rules to the Chinese economy, without institutional checks and balances or direct supervision, CCP officials still exercise wide discretion in defining and implementing those rules, especially at the local level. They can, and often do, manipulate economic policies to pursue particular local goals. Some engage in this "particularism" because they are corrupt, others because they directly own or operate firms. Most, however, do it because the political elite encourages them to: understanding that local economic growth promotes social and political order, the CCP tolerates, and even rewards, officials who use any means to produce local investment and employment. But this often results in fragmented national industries and wasteful overlapping investment.

Chinese business leaders at both public and private firms recognize that an economy dominated by particularism is a risky business environment. Markets are fragmented; rules constantly shift under manipulation by government officials; and political obstacles prevent firms from associating, sharing risk, and taking collective action. To cope with these uncertainties, Chinese business has developed a distinctive industrial strategic culture over the past two decades—a set of values or guidelines about what strategies "work" in this environment. First, in response to the "particular" application of policy, Chinese firms routinely focus on obtaining "exceptional" treatment from key officials: special access to markets or resources, exemptions from rules and regulations, or protection against predation by other officials. Second, to maximize these exceptional benefits, as well as

to avoid entanglements with other firms and their patrons, many Chinese companies shun collaboration within their industry, especially if such collaboration crosses regional or bureaucratic boundaries. Third, they generally favor short-term gains over long-term investments. Finally, Chinese firms tend to engage in excessive diversification in order to mitigate the potential damage of fratricidal price competition created by excess production capacity and overlapping investments.

■ Nodes without roads

This industrial strategic culture is rational and effective given the current structure of politics and business environment in China. (These features echo patterns of interaction between authoritarian officialdom and merchant enterprise that were established in China's first period of industrialization in the Qing dynasty 150 years ago.) But China's industrial strategic culture weakens the competitiveness of Chinese firms and it may have damaging economic repercussions down the road. Most Chinese industrial firms focus on short-term gains and, despite increasing operational efficiency, sales revenues, and profits, have not increased their commitment to developing new technologies. Their total spending on R&D as a percentage of sales revenue has remained below one percent for more than a decade. R&D intensity (R&D expenditure as a percentage of value added) at China's industrial firms is only about one percent, seven times less than the average in countries of the Organization for Economic Cooperation and Development (OECD).

Focusing on short-term returns has also guided China's imports of industrial technology. Chinese firms tend to import technology by purchasing foreign manufacturing equipment, often in complete sets such as assembly lines. Throughout the 1980s and 1990s, hardware accounted for more than 50 percent of China's technology imports, whereas licensing, "know-how" services, and consulting accounted for about 9 percent, 5 percent, and 3 percent, respectively.

Although China has recently begun importing more "soft technology"—mainly in the form of licenses for the use of imported equipment—the knowledge embodied in it must be absorbed and mastered (or, in technology parlance, "indigenized") before it can become an effective basis

for domestic innovation. Chinese firms remain weak in this regard. Over the last decade, large and medium-sized Chinese industrial firms have spent less than 10 percent of the total cost of imported equipment on indigenizing technology. Indigenization spending at state firms in the sectors in which China is most often cited as a rising power (telecom equipment, electronics, and industrial machinery) is also low (at 8 percent, 6 percent, and 2 percent of the cost of imported equipment, respectively). This is far lower than the average for industrial firms in OECD countries, which amounts to about one-third of total technology import spending. The practice of Chinese firms also stands in contrast to spending patterns in Asian countries such as South Korea and Japan in the 1970s and 1980s, when they were trying to catch up with the West. Industrial firms in those countries spent between two and three times the purchase price of foreign equipment on absorbing and indigenizing the technology embodied in the hardware.

Chinese firms have also failed to develop strong domestic technology supply networks. In 2002, Chinese firms devoted less than one percent of their total science and technology budgets (which include technology imports, renovation of existing equipment, and R&D) to purchasing domestic technology. China's best firms are among the least connected to domestic suppliers: for every \$100 that state-owned electronics and telecom firms spend on technology imports, they spend only \$1.20 on similar domestic goods. Thus Chinese technology suppliers do not enjoy a strong "demand pull" from the best domestic firms to stimulate their own innovative capabilities; they are relegated primarily to serving rural enterprises and less competitive state-owned enterprises. And because FFES use their investments in China as technology "snakeheads" (a Chinese term for portals), through which they bring product designs, advanced manufacturing equipment, and high-value components from foreign firms or their China subsidiaries, they too are poorly linked to Chinese domestic technology markets.

Industrial collaboration and horizontal networking are also rare, prompting Chinese firms to run their R&D projects in relative isolation. In the most recent national R&D census in 2000, Chinese industrial firms reported that they spent 93 percent of their \$2.7 billion total R&D outlay

in-house, but only 2 percent on collaborative activities with universities and less than 1 percent on projects with other domestic firms. China's research institutes are increasingly insular, too, especially since market reforms have forced them to commercialize their operations. In 2000, only 38 of China's 292 national industrial research institutes devoted more than one-third of total activities to collaborative projects, even though these institutes are specifically tasked with diffusing technology. Instead, many are becoming competitors of the firms they are supposed to serve. A 2003 World Bank report found that many Chinese engineering research centers have been mass-producing and marketing the products of their research for their own financial gain, rather than diffusing these technologies through patents.

Failed collaborations have also plagued China's attempts to commercialize domestic innovations. Julong Technologies, the firm that developed China's first digital telecom switching equipment, is no longer a major telecom-equipment player due to conflicts among its research, production, and marketing arms, which came under the influence of competing political officials. China's homegrown mobile telephone standard, TD-SCDMA, has received central government support, but thus far none of China's major telecommunications operators have agreed to commit to it, preferring a foreign standard, WCDMA, instead.

Given the political perils of challenging competitors and their local patrons, few Chinese firms develop alliances with or invest in companies in other provinces. One recent survey of 800 companies that have conducted domestic mergers and acquisitions found that 86 percent of them invested in firms within their own city and 91 percent invested in firms within their own province. Strong local political ties tend to isolate a region from the rest of the economy, which helps explain why Chinese firms are often small and the country's industries fragmented. For example, a recent study performed for the State Council (China's cabinet) revealed that Chinese managers regard the country's two most politically powerful technology and industrial hubs, Beijing and Shanghai, as leading centers of local protectionism in China. Among the industries most affected by such protectionism were pharmaceuticals, electrical machinery, electronics goods, and transport equipment. SOES and private firms suffered the most, FFES the least—which suggests that the burden of particularism falls

most heavily on Chinese firms.

To avoid the difficulties of developing interregional supply chains while securing short-term profits, Chinese firms tend to engage in excessive diversification—also with damaging results. Many of China's most famous firms have made unsuccessful forays into ancillary businesses: Haier (from household appliances into computers, mobile phones, and televisions), Fangzheng (from computers into tea, steel, software, and financial services), and Shougang (from steel into banking, auto assembly, and semiconductors). Huawei, China's best technology firm and maker of network equipment, has recently made a questionable entry into the mobile-handset market, where sales prices and margins have fallen dramatically for the last five years and 37 licensed vendors produced excess inventories of 20 million phones in 2003.

Together, China's institutions and the industrial choices of local firms have restricted the ability of Chinese firms to develop new products and services. The share of total sales revenues accounted for by new products at Chinese industrial firms was flat, at about 10 percent, throughout the 1990s. (In contrast, new products account for 35 percent to 40 percent of sales revenue for industrial firms in OECD countries. Chinese firms lag behind firms in other developing countries as well: in 2000, for example, new products accounted for about 40 percent of total sales revenues in Brazil's electrical machinery industry.) And because of overlapping investments, fragmentation, and the weakness of industry associations, even those firms in China that make new products often find themselves engaged in vicious price competition, which prevents them from reaping high returns from their innovations.

Rather than thinking of China as yet another Asian technological and economic "giant," it may be more useful to regard it, like Brazil or India, as a "normal" emerging industrial power. Thanks to the interaction of political structure and industrial culture, China's twenty first-century technological and economic landscape looks like a pattern of "nodes without roads"—a few poorly connected centers of technological success. Burdened by these peculiarities, China has yet to lay the domestic institutional foundations for becoming a technological and economic superpower. Without structural political reforms, its ability to indigenize, develop, and diffuse technology will remain limited. And most of its

industrial firms will struggle to realize exiguous margins at the lower reaches of global industrial production chains.

■ Strategic engagement

Given these limits on China's potential to threaten the global balance of economic power, the United States should resist the false promise of protectionism, whether in the form adopted by the Bush administration (rhetorical jabs at the Chinese currency peg) or that recommended by the AFL-CIO labor federation (calls for tariff protection in the guise of better rights for Chinese workers).

Rather, recognizing both the challenges and the opportunities presented by China's industrial landscape, Washington should pursue a policy of strategic engagement with Beijing. The purpose of this policy would be to bolster U. S. technological, economic, and political leadership, while helping China become more prosperous, stable, and integrated into global economic networks. Pursuing it will require simultaneously strengthening the basis for U. S. technological and manufacturing mastery in the United States and promoting U. S. exports, investment, and liberal values abroad.

The United States should revitalize manufacturing at home, for example. Tax cuts are no panacea; the United States needs focused policies to strengthen R&D, reduce legal and health care costs, and improve education. Innovation is critical to growth, but R&D spending in the United States has declined in relative terms from 60 percent of world R&D in the 1960s to 30 percent today. Meanwhile, although U. S. manufacturing productivity has risen by 27 percent in the last five years, health care premiums have risen by 34 percent and litigation costs by about 33 percent, according to the National Association of Manufacturers.

To maintain its lead abroad, the United States should push its products into the portal opened by its investment "snakeheads" in developing markets. It currently lags behind competitors in doing so: while Japan and the EU exported \$ 79 billion and \$ 49 billion in goods to China in 2003, the United States exported only \$ 37 billion. Both the U. S. government and U. S. industry must do more to help small and medium-sized U. S. firms reach out to China's markets.

The United States must accept that China is a work in progress and