

# Report for Congress

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## Foreign Direct Investment in China

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# Foreign Direct Investment in China

## Summary

This report provides an overview of global Foreign Direct Investment in the People's Republic of China, examines its effects on the Chinese economy, surveys U.S. FDI in China, and includes a discussion of policy implications for the United States. China, by far, is the largest recipient of FDI among emerging economies with an inflow of \$52.7 billion in 2002 and 424,196 foreign-affiliated firms operating in China representing paid-in foreign investment of \$448.0 billion. These firms account for about half of China's exports and imports. Nearly 1,500 U.S. companies from 41 states have direct investments of \$10 to \$34 billion in China.

For the U.S. Congress, foreign direct investment in China entails both oversight and regulatory issues. Some questions with respect to this investment are: (1) the extent to which FDI is contributing to China's economic growth and technology development, (2) the extent to which U.S. FDI in China is contributing to the U.S. trade deficit, (3) whether FDI inflows into China come at the expense of flows into other countries, (4) how FDI is affecting security concerns, and (5) whether FDI affects the export of sensitive technology to China.

Foreign direct investment has contributed about 13 % to China's economic growth, and most of China's modern technology, particularly in electronics, has been imported. With respect to trade, there is little doubt that the large surplus in China's trade has been generated largely by the surge in its exports of foreign brand-name manufactures often made in foreign-affiliated factories. As much as 80 to 90% of certain high technology exports originate from foreign affiliated firms there. In terms of the U.S. trade deficit with China, American companies there do export some of their output back to the American market, but most is sold in China. China has been attracting some FDI flows that otherwise could have gone to other developing countries. In essence, China's gain may be their loss.

In terms of security, the \$20 to \$34 billion in U.S. FDI in China combined with \$68 billion from Taiwan, and some \$300 billion from elsewhere is changing the calculus for hostilities and creating groups with a strong interest in stability both within China and between China and the United States, Taiwan, and other potential adversaries. Foreign direct investment in China affects security primarily through three avenues: its contribution to economic power, economic interests, and technology transfers. The more China grows, the more funds it is able to provide to its military and attain big-power status in the world. With respect to economic interests, foreign companies in China can serve both as hostages for Beijing and important pressure groups that can pursue their interests in maintaining stability with both Beijing and their home governments. With respect to sensitive technologies, in the U.S. case, it does not appear that prohibited U.S. technologies have been transferred through foreign affiliated companies, although the technologies in the electronics and aviation industries that have been transferred do have dual civilian and military uses. Such transfers are controlled by export control regimes. The highly publicized cases of satellite technology being allegedly illegally transferred to China involved direct transfers from U.S. corporations to Chinese companies. This report will be updated as circumstances warrant.

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# Foreign Direct Investment in China

As the People's Republic of China (PRC) has opened its markets and sought to modernize its economy, it has relied partly on foreign direct investment (FDI) – investments by foreign entities in affiliated companies.<sup>1</sup> China, by far, is the largest recipient of FDI among emerging economies with \$52.7 billion in FDI flowing into the country in 2002 (according to Chinese data). China, moreover, is expecting FDI inflows to double over the second half of the decade.<sup>2</sup> As of December 2002, there were 424,196 foreign-affiliated firms operating in China (34,171 approved in 2002) representing paid-in foreign investment of \$448.0 billion out of a contracted amount of \$828.1 billion.<sup>3</sup> They account for about half of China's exports and imports. U.S. companies have direct investments of \$10 to \$34 billion in China with nearly 1,500 firms whose headquarters are located in 41 different American states.<sup>4</sup>

For the U.S. Congress, foreign direct investment in China entails both oversight and regulatory issues. Some questions with respect to this investment are: (1) the extent to which FDI is contributing to China's economic growth and technology development, (2) the extent to which U.S. FDI in China is contributing to the U.S. trade deficit, (3) whether FDI inflows into China come at the expense of flows into other countries, (4) how FDI is affecting security concerns, and (5) whether FDI affects the export of sensitive technology to China.

FDI has both direct and indirect effects on China's economic growth. The indirect effects cannot be quantified, but they include demonstration effects (copying of processes, technology, and products by local businesses) and the easing of restrictions in various areas as Beijing gains experience in dealing with foreign businesses. As for direct effects, it has been estimated that foreign investment has contributed about 13%<sup>5</sup> to China's economic growth, and most of China's modern technology, particularly in electronics, has been imported.

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<sup>1</sup> Foreign direct investment is defined as investment in another country in which the investor exercises considerable control (with a minimum of 10% of the capital) over the enterprise. FDI includes reinvested earnings by an existing foreign affiliated firm.

<sup>2</sup> Goh, Sui Noi. China Expects to Draw \$174b of Foreign Investment a Year. *The Straits Times* (Singapore), January 3, 2003.

<sup>3</sup> China. Ministry of Foreign Trade and Economic Cooperation. Statistics About Utilization of Foreign Investment in 2002 (1-12) in China.

<sup>4</sup> China. Ministry of Foreign Trade and Economic Cooperation. U.S. Bureau of Economic Analysis. Caravel, Inc. *American Business in China, 2002-2003*. Torrance, CA, Caravel, Inc. 2002.

<sup>5</sup> Shan, Jordan. A VAR Approach to the Economics of FDI in China, *Applied Economics*, Vol. 34, No. 7, May 10, 2002, p. 885ff.

With respect to trade, there is little doubt that the large surplus in China's trade has been generated by the surge in its exports of foreign brand-name manufactures often made in foreign-affiliated factories. As much as 80 to 90% of China's high technology exports originate from foreign affiliated firms there. In the early period of liberalization, some foreign factories were allowed in the Chinese market only if they exported their output. In terms of the U.S. trade deficit with China, American companies there do export some of their output back to the American market. Most, however, is sold in China. In 1998, of the \$20 billion in total sales by U.S. majority-owned affiliates in China, 14% went to the United States, 69% was sold in China, and 17% went to other markets.<sup>6</sup> U.S. merchandise imports from and exports to majority-owned affiliates of American companies in China has been roughly in balance.

Other countries, both in Asia and elsewhere, have pointed out that China has been attracting FDI flows that otherwise could have come to their countries. In essence, these economies view China's gain as their loss. Such concerns have been raised in Singapore, Indonesia, Malaysia, Taiwan, South Korea, and Japan.<sup>7</sup> There is no doubt that China has attracted a rising share of world capital. In 2002, China received over 85% of net direct investment in the Asia/Pacific region<sup>8</sup> and has accounted for 20% of total FDI in developing economies. Some investment in China could have been diverted from domestic investment in Japan, Taiwan, and South Korea. Much of this investment, however, probably would have gone overseas anyway because of competitive pressures and rising labor costs and limited market expansion at home. Countries, such as Malaysia and Indonesia, however, may have lost somewhat in the bidding war to attract foreign investment. The aftermath of the Asian financial crisis and domestic political instability in Indonesia, however, also have played a strong role.

In terms of security, the \$10 to \$34 billion in U.S. FDI in China combined with \$68 billion from Taiwan, and some \$300 billion from elsewhere is changing the likelihood that hostilities with China will erupt and creating groups with a strong interest in stability both within China and between China and the United States, Taiwan, and other potential adversaries. Foreign direct investment in China affects security primarily through three avenues: its contribution to economic growth, technology transfers, and economic interests. The more China grows, the more funds it is able to provide to its military and attain big-power status in the world. In March 2002, China announced a 17.6% or \$3 billion increase in spending, bringing the publicly reported total to \$20 billion. According to the U.S. Department of Defense, China's total military spending is closer to \$65 billion, and annual spending could

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<sup>6</sup> U.S. Bureau of Economic Analysis. Operations of U.S. Multinational Companies. Preliminary Results from the 1999 Benchmark Survey. *Survey of Current Business*, March 2002, and supplementary tables.

<sup>7</sup> See, for example: Goh, Sui Noi. China Gobbles up \$87b in Investments. *The Straits Times* (Singapore), December 28, 2002.

<sup>8</sup> Institute of International Finance. Capital Flows to Emerging Market Economies. January 16, 2003. P. 1, 9.

increase in real terms over three- to four-fold by 2020.<sup>9</sup> FDI, however, contributes only indirectly to this military modernization. With respect to economic interests, foreign companies in China may serve both as hostages for Beijing and important pressure groups that can pursue their interests in maintaining stability with both Beijing and their home governments.

With respect to sensitive technologies, in the U.S. case, it does not appear that prohibited U.S. technologies have been transferred through foreign affiliated companies, although the technologies in the electronics and aviation industries that have been transferred do have dual civilian and military uses. Such transfers are controlled by export control regimes. The highly publicized cases of satellite technology being allegedly illegally transferred to China involved direct transfers from U.S. corporations to Chinese companies.<sup>10</sup>

## Background

China, as any other developing country, has needed foreign technology for its economic development. For the first two post-revolution decades, China remained suspicious of foreign capital and hoped that by importing foreign capital goods and using reverse engineering it could meet its technological needs. Such a policy had limited success even after the opening of China following President Nixon's visit to Beijing in 1972 and the gradual of normalization relations with the United States and other nations. Between 1972 and 1978, China imported equipment and a number of new plants from the industrialized West but found only limited success in developing indigenous technology through the reverse engineering route. Under Deng Xiaoping's economic reforms, attitudes toward foreign capital began to change. During the first stage (1979-83), foreign investment was restricted to four Special Economic Zones (Shenzhen, Zhuhai, and Shantou in Guangdong Province and Xiamen in Fujian Province). In spite of the incentives provided, the inflow of FDI remained low – an average of only \$360 million annually over the five-year period. During the second stage (1984-91), Hainan Island and fourteen coastal cities in ten provinces were opened to foreign capital.<sup>11</sup>

In 1990, the government eliminated time restrictions on the establishment of joint ventures, provided some assurances against nationalization, and allowed foreign partners to become chairs of joint venture boards. In 1991, China granted more preferential tax treatment for wholly foreign-owned businesses and contractual ventures and also for foreign companies that invested in selected economic zones or in projects encouraged by the state (such as energy, communications, and

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<sup>9</sup> U.S. Department of Defense. *Annual Report on The Military Power of the People's Republic of China*. July 2002.

<sup>10</sup> For details, see: CRS Report 98-485, *China: Possible Missile Technology Transfers from U.S. Satellite Export Policy – Actions and Chronology*, by (name redacted).

<sup>11</sup> Organization for Economic Cooperation and Development, *Main Determinants and Impacts of Foreign Direct Investment on China's Economy*, Working Papers on International Investment, No. 2000/4, December 2000, p. 4, 11.

transportation). In 2000 and 2001, China revised significantly its laws on foreign-owned enterprises and joint ventures. It eased export performance and domestic content requirements, attempted to make the legal framework more transparent, and ensured that foreign-investment-related enterprises would not be nationalized except under special circumstances. China's entry into the World Trade Organization in December 2001 also stimulated FDI flows into the country.

Financial incentives also are used by the central and regional governments to attract foreign investment. These include reductions in or exemption from central and local taxes and lowering of import duties on foreign-made equipment and construction materials.<sup>12</sup> In its designated priority areas, the government also gives preferential treatment to foreign investors. Currently such areas include agriculture, resource development, infrastructure, and export-oriented and high technology industries.<sup>13</sup> On the negative side, widespread corruption and bureaucratic hurdles continue to deter foreign investment, but the government is trying to remedy the situation by imposing harsh punishments on corrupt officials who are caught.

General aspects of China's market also have added to the attraction for foreign investment. With its 1.28 billion people and rapidly rising incomes and purchasing power, China presents a huge potential market. Per capita incomes around Shanghai and in Guangdong province already have reached an estimated US\$5,000. China also possesses a comparatively well-developed social infrastructure, including a compulsory nine-year education system that has helped provide a supply of reasonably literate workers with some technical competence. Labor is abundant, wages low, strikes uncommon, and discipline problems are rare. The eastern and coastal regions of China, moreover, include sufficient transport and communications facilities for foreign investors to export goods or distribute them within China.

In its 2002 FDI Confidence Index survey of top corporate decision-makers, A.T. Kearney (a business consulting firm) found that "confidence in China is booming." For the first time since the survey began, in 2002 China surpassed the United States to become the destination most likely to attract investment. More than any other country, investors held a more positive outlook toward China, with 46% more optimistic about the Chinese market than in the previous year. They are also expected to commit more first-time investments to China than to any other country.<sup>14</sup>

The surge in FDI into China coincided with a similar trends worldwide. The second half of 1990s saw an unprecedented increase in the world outflow of foreign capital – a more than six-fold increase from an annual average of \$225 billion during 1990-95 to \$1,492 billion in 2000. According to the *World Investment Report* (WIR), there were three forces at work – all related to globalization. First, many governments liberalized capital flows into their national economies. This allowed

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<sup>12</sup> For example, in certain cases, foreign-invested enterprises pay no taxes for the first two profitable years and pay half the taxes owed for the ensuing three years.

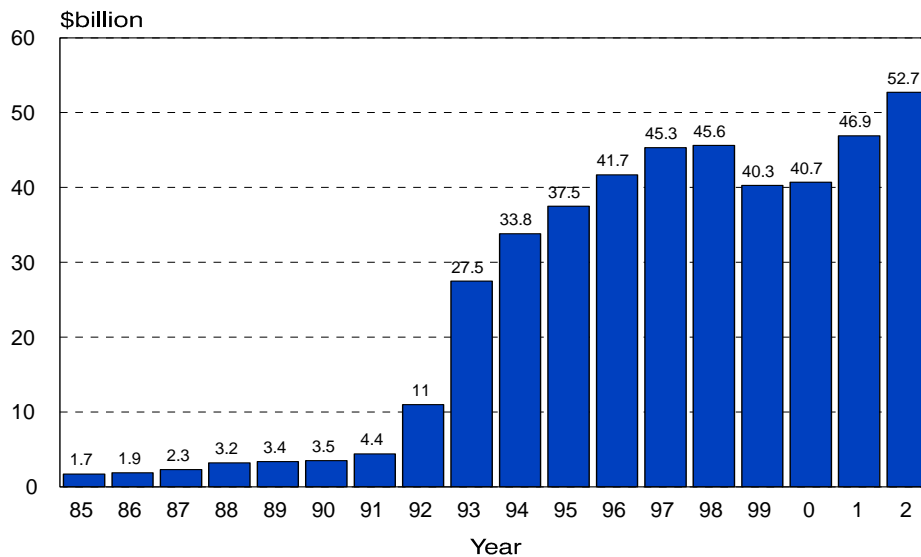
<sup>13</sup> OECD (2000), *op. cit.*, p.15.

<sup>14</sup> Global Business Council and A.T. Kearney, *FDI Confidence Index*, Vol. 5, September 2002, p. 24.



foreign investment to enter more freely. The process was further accelerated by the privatization of government-owned enterprises in both developed and developing countries. Second, increasing costs of production and various technological developments induced enterprises to spread their operations and risks internationally. Concurrently, the cost of transportation and communications fell, thereby enabling firms to locate their production processes in different parts of the world and to supply products, parts, and accessories from long distances. Finally, increasing competition forced enterprises to enter new markets at an early stage and to transfer some production there to “nationalize the product” and to reduce production costs. These forces also were at work for FDI in China.

**Figure 1. Foreign Direct Investment in China, 1985-2002**



Source: China. Ministry of Foreign Trade and Economic Cooperation

As shown in Figure 2, after averaging around \$2 billion per year during 1984-88, FDI flows into China rose dramatically in the 1990s to \$46.9 billion in 2001 and further to \$52.7 billion in 2002 (according to Chinese statistics). In 2001, FDI inflows to China accounted for 6% of the world total and 22% of inflows into developing economies. (See Appendix A.) These FDI flows have been increasing in recent years despite global recessionary conditions that caused total world FDI flows to drop nearly by half in 2001.

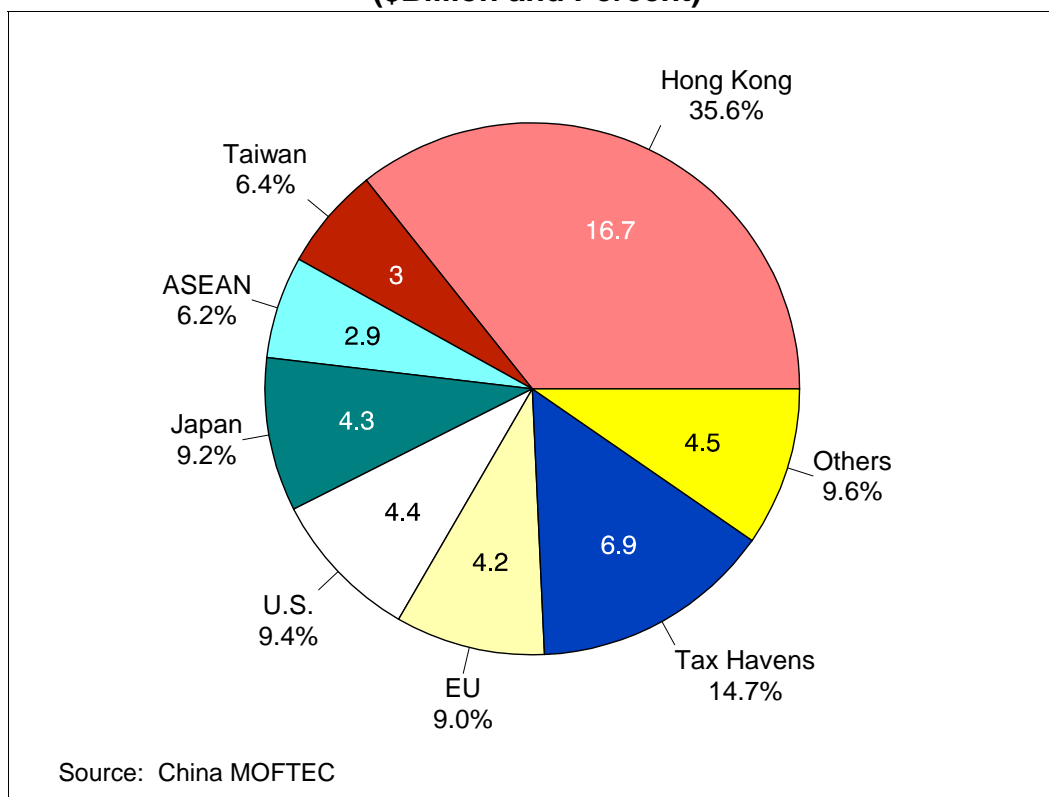
Chinese statistics on FDI, however, differ considerably from those of other nations. For example (as discussed later in this report), the U.S. Department of Commerce shows American direct investment in China at less than a third of the level that Beijing reports.

## Sources of FDI Inflow into China

Most FDI into China comes from either “Greater China” or from the three major industrialized markets: the United States, Japan, and the European Union. Hong

Kong continues to be the number one source. (Even though Hong Kong reverted to Chinese sovereignty in 1991, it still is counted as a “foreign” entity for trade and capital flows.) In 2001, Hong Kong provided \$16.7 billion or 36% of China’s total of \$46.9 billion of actually utilized FDI. Much of Hong Kong’s investment in

**Figure 2. Sources of Foreign Direct Investment in China, 2001  
(\$Billion and Percent)**



China, however, actually is Chinese capital doing a “round trip” to take advantage of investment incentives and protections for foreign investors.<sup>15</sup> Taiwan provided another 6.4% of the FDI and Macao 0.6%. Some of Taiwan’s FDI in China also flows through Hong Kong or offshore tax havens. Singapore provided 4.6%. Hence, nearly 47% of the officially tabulated FDI inflows into China originated in areas sometimes designated as the Greater China region. Other major investors in 2001, were the United States with 9.4%, Japan with 9.2%, and the EU with 9.0%. The offshore tax havens account for nearly 15% of total FDI flows into China, but this FDI actually originates from countries such as the United States, the EU, Japan, Taiwan, or even the PRC, but for various reasons was routed through tax havens such as the Bahamas, Virgin Islands, Cayman Islands, Bermuda, and Western and Eastern Samoa.

<sup>15</sup> Estimates of “round tripping” FDI range from 25 to 36%. See: Lloyd-Smith, Jake. Foreign Investment Is Hugely Overstated by Mainland. *South China Morning Post*, November 19, 2002.

## FDI by Enterprise Type

In the early stages in which foreign capital was allowed to enter China, the main vehicles of entry were joint (equity) ventures, cooperative joint ventures, and wholly foreign-owned enterprises. In joint ventures, capital was provided by two or more parties who managed the enterprise and shared in the risk according to their contributions to the capital. In the cooperative joint ventures, much of the capital was provided by the foreign partner, while land, building, and workable assets were provided by the domestic side. The nature and degree of participation and the sharing of risk were established in the contract. On the stipulated date of termination of the contract, all the assets became the property of the Chinese side. In wholly owned ventures, the foreign firm put up all the capital.

In the 1980s, 42% of all FDI into China was invested in cooperative joint ventures and 39% in joint (equity) ventures. Hence, 80% of all FDI inflows came into joint ventures of one or the other type. Investments into wholly foreign-owned enterprises accounted for only 10% of the FDI inflows. Another 10% entered in other forms such as compensation trade or international leasing, etc. (See Table 1).

**Table 1. Foreign Direct Investment in China by Type  
1979-2002**  
(in percentage)

Year	Joint Ventures	Cooperative Joint Venture	Wholly Foreign-owned	Others
1979-89	38.7	41.9	9.7	9.7
1990	41.0	19.0	37.1	2.9
1995	43.5	19.5	36.9	0.1
1996	43.5	19.5	36.6	0.4
1997	40.6	23.7	34.6	1.1
1998	33.3	22.4	41.8	2.7
1999	32.3	16.5	50.7	0.5
2000	35.8	15.9	46.8	1.2
2001	33.6	13.2	50.9	2.8
2002	28.4	9.6	60.2	1.8

**Source:** China. Ministry of Foreign Trade and Economic Cooperation. Statistics About Utilization of Foreign Investment in China. Various years.

During the 1990s, the relative importance of cooperative joint ventures declined significantly. In 2002, they accounted for less than 10% of FDI inflows. The share

of joint equity enterprises went up during the first half of the 1990s reaching around half of total inflows in 1991 after which they declined, initially slowly, but by 2002 were only 28%. Typically in joint enterprises, the Chinese partner was able to contribute expertise on land and labor acquisitions and political connections necessary to navigate the Chinese bureaucratic system. As the enterprise developed, however, such skills became less and less important relative to management and operational skills provided by the foreign partner. Currently, more and more foreign companies are opting to establish wholly-owned enterprises over which they have complete control. On the other hand, Chinese authorities, with their growing experience in dealing with foreign enterprises, have become more confident in allowing them to operate without a native partner. In addition, the authorities in Beijing – first, keen to enter the World Trade Organization (WTO) and, then, required by WTO rules – have been changing their regulatory regime to make it more consistent with their WTO commitments. The share of wholly owned enterprises in FDI rose to 60% by 2002 and is likely to continue to rise.

### FDI Utilization by Sector

By far the largest share of FDI inflows into China – almost two-thirds – has been invested in manufacturing. Foreign investment has moved into China not only to take advantage of the rapidly growing domestic market for consumer goods but also to take advantage of the resources in China to manufacture and assemble products – particularly parts and accessories – to be exported to world markets. Japanese, South Korean, and Taiwanese corporations, for example, which were facing rising costs for labor and production in their home markets and elsewhere in Asia have relocated some of their production to China.

The sectoral mix of FDI, moreover, is shifting away from traditional labor-intensive industries. In the 1980s, textiles and footwear were dominant destinations for FDI, but as shown in Table 2, in 2001, less than 5% went into textiles. Pharmaceuticals accounted for three times as much – 15%. Electrical machinery, transport equipment, as well as telecommunications industries are now becoming much more important. Real estate received nearly 11% of total FDI inflow in 2001. The production and supply of electricity and water received nearly 5%, and social services, including the hotel industry, accounted for another 5%.

**Table 2. Foreign Direct Investment into China by Sector, 2001**

Sector	Amount (billion dollars)	Share (percent)
<b>National Total</b>	<b>46.9</b>	<b>100.0</b>
Manufacturing	30.9	65.9
Electrical Power, Gas and Water Supply	2.3	4.8
Transportation, Storage, Postal and telecommunication Services	0.9	1.9

Sector	Amount (billion dollars)	Share (percent)
Wholesale/Retail Trade, Catering Services	1.1	2.4
Real Estate	5.3	10.9
Travel and Entertainment	2.6	5.5
Other Sectors	2.8	5.8

**Source:** China Ministry of Foreign Trade and Economic Cooperation.

## Geographical Distribution of FDI Into China

Following the pattern of China's industrialization, most of the foreign investment is concentrated in the coastal regions in the east. As much as 88% has been invested into China's eastern region, while only 9% has gone into the Central region, and 3% into the Western region.<sup>16</sup> (See Table 3) Initially, China's official policy was to allow foreign capital mainly in the Special Economic Zones in Guangdong (bordering Hong Kong) and Fujian (north of Guangdong facing Taiwan) provinces. During the 1980s, Guangdong province had absorbed almost half of the FDI in China, and even in 1990s its share remained at a quarter of the total FDI stock.

**Table 3. Geographical Distribution of Foreign Direct Investment in China, 1980s and 1990s**  
(in percent)

Regions	1983-98	1980s	1990s
Eastern	87.8	90.0	87.6
Central	8.9	5.3	9.2
Western	3.3	4.7	3.2

**Source:** Taube, Markus and Mehmet Ögütçü, *Main Issues on Foreign Investment in China's Regional Development: Prospects and Policy Challenges* (Paris: OECD, 2000), Table 3, p. 7.

While the government initially directed FDI into the east coastal areas, economic forces also played a key role in determining the destination of FDI flows. China's eastern coastal regions have the largest concentrations of population with major cities such as Beijing, Shanghai, and Guangzhou. Rates of growth there have been the most rapid, and they have well-developed roads and rail networks as well as access to major ports and shipping routes. Many people in these regions also have close connections with overseas Chinese, since vast numbers of these emigrant

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<sup>16</sup> OECD (2000), *op. cit.*, p. 8.

Chinese can trace their ancestry to the coastal areas. One study indicates that three-quarters or more of the total FDI in China had come from overseas Chinese.<sup>17</sup>

In Guangdong province, for example, proximity to Hong Kong played a large role in attracting FDI. Economic reform in China virtually coincided with a substantial rise in wage levels, rents, and overhead costs in Hong Kong. This motivated Hong Kong industries to relocate to the neighboring Guangdong province with its plentiful supply of labor, land, and electricity. Also historically, the two areas have had close relationships. When China was more closed, Hong Kong was Guangdong's window to the world and provided technology, capital, and management skills for companies there. Many of the Chinese in Hong Kong came from Guangdong province. Both populations speak Cantonese (rather than Beijing's Mandarin). In preparation for Hong Kong's reversion to China in 1997, moreover, the policy of Beijing was to open its territory bordering Hong Kong to foreign investment and trade in order to reduce the economic gap between Guangdong and Hong Kong and stem pressures to emigrate there.<sup>18</sup> The same is true of Fujian province. Many in Taiwan came from that province, speak the same Chinese dialect, and share business methods and culture.

The boom in economic development and modernization in the eastern coastal regions of China, however, has generated huge disparities in income, standards of living, and opportunities between the eastern regions and those in the middle and west. For Beijing, this is a potentially explosive situation partly because more ethnic minorities (e.g., Muslims in the Xinjiang Uighur Autonomous Region and Tibetans) live in the non-coastal regions and because the promise of higher-paying jobs in the east is luring migrants by the millions from other parts of China. The state-owned enterprises in the non-coastal regions and the rust-belt Northeast, moreover, often are losing in the competitive battle with more efficient plants along the middle and southern coast. This is causing considerable labor unrest.

In partial response to the regional disparities, Beijing's policy on attracting foreign investment now emphasizes the lagging middle and western Chinese regions. These currently are given priority in selecting industries from China's Master List of desirable industries, in procuring domestic financing, and in offering higher levels of allowable foreign participation in joint ventures. The central government, moreover, is providing a cut of 15% in business income taxes and is giving priority to the funding of infrastructure projects for FDI in these regions.<sup>19</sup>

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<sup>17</sup> Wei Zhang. Why Is Foreign Investment in China Concentrated in the Coastal Region? *Harvard Asia Quarterly*, Summer 2000, October 14, 2002.

<sup>18</sup> Interview by Dick Nanto with members of the Peoples' Congress of Guangdong Province in December 1998.

<sup>19</sup> People's Republic of China. Ministry of Foreign Trade and Economic Cooperation. China's Attracting Foreign Investment Policy.

## U.S. Direct Investment In China

U.S. multinational corporations have joined with those from other nations in investing directly in affiliated companies in China. A huge gap exists, however, between U.S. and Chinese data. According to U.S. data, at the end of 2001, the United States had \$10.53 billion (historical cost basis) in direct investment in China. According to Chinese data, since 1990, utilized FDI (as opposed to contracted FDI) from the United States totaled \$33.97 billion.

**Table 4. U.S. Direct Investment in China, 1990-2001**  
(billion dollars)

Year	Foreign Direct Investment (Utilized) From the U.S. (Chinese Data)		U.S. Direct Investment in China (U.S. Data)	
	Annual Inflow	Cumulative Since 1990	Change in Position	Position (Cumulative)
1990	0.45	0.45	-0.08	0.35 <sup>a</sup>
1991	0.32	0.77	0.08	0.43 <sup>a</sup>
1992	0.51	1.28	0.13	0.56 <sup>a</sup>
1993	2.06	3.34	0.37	0.92 <sup>a</sup>
1994	2.49	5.83	1.64 <sup>b</sup>	2.56
1995	3.08	8.91	0.20	2.76
1996	3.44	12.35	1.09	3.85
1997	3.24	15.59	1.30	5.15
1998	3.90	19.49	1.20	6.35
1999	4.22	23.71	1.60	7.95
2000	4.38	28.09	1.91	9.86
2001	4.86	32.95	0.67	10.53

**Sources:** China, Ministry of Foreign Trade and Economic Cooperation. U.S. Bureau of Economic Analysis.

<sup>a</sup> Data not linked to post-1993 data that was adjusted by the 1994 Benchmark Survey.

<sup>b</sup> The 1994 Benchmark Survey picked up investments with assets or sales between \$3 million and \$15 million that had not been reported in previous annual surveys.

The differences between the two sets of figures have not been reconciled, but they likely can be traced to: differences in reporting criteria; U.S. investments originating in or going through offshore U.S. affiliated companies (particularly in

Hong Kong); investments that fell under the U.S. threshold for counting; more complete data gathered by the U.S. Department of Commerce on repaid loans and other data internal to companies that are not generally accounted for by the Chinese ministry that approves foreign investments; changes in exchange rates; and overstatements of investment amounts by local Chinese officials and foreign investors. Both sets of data, however, indicate that U.S. FDI in China has been increasing. According to Chinese figures, in 1990, the flow of American FDI into China was only about \$456 million; by 2000, it had reached \$4.4 billion; and in 2001 it rose to almost \$ 4.7 billion. In a similar manner, U.S. figures show an increase from a few hundred million per year in the early 1990s to nearly \$2 billion in 2000.

The United States has been the second largest source of FDI for China (next only to Hong Kong) and during 1999-2001 accounted for an average of about 10.5% of China's total inflows (using China's figures). China, however, is not a major location for all U.S. FDI. In 2001, U.S. FDI there amounted to only 0.76% of U.S. FDI worldwide. U.S. FDI in Hong Kong accounted for another 2.1% of total U.S. FDI abroad for a total for both China and Hong Kong of only 3%. Most U.S. FDI goes to other developed economies in Europe, Japan, and Canada.

The United States collects data on the operations of its multinational corporations that includes affiliated companies in China. For 2000, the value of total assets of nonbank foreign affiliates of U.S. companies in China (10% or more American owned) was \$32.12 billion, up from \$18.59 billion in 1997. Of these amounts, the total for majority owned (50% or more U.S. owned) foreign affiliates was \$28.69 billion in 2000, up from \$14.36 billion in 1997.<sup>20</sup> These values for total assets include investments by the non-U.S. partner and exclude the value of banks in China affiliated with U.S. companies. The U.S. affiliated companies reported 252,400 employees (0.03% of China's labor force) earning an average of US\$6,846 per year. They produced \$3.94 billion in gross product (value added) which accounted for 0.4% of China's nominal gross domestic product. In terms of total Chinese employment and output, therefore, U.S. affiliated firms are still but a dot on the large Chinese landscape.

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<sup>20</sup> Mataloni, Raymond J., Jr. U.S. Multinational Companies, Operations in 2000. *Survey of Current Business*, December 2002. P. 39-41.



**Major U.S. Corporations in China**

ABB	DuPont	Intel
Lucent	NCR	American Express
Motorola	Kmart	Coca-Cola
Westinghouse	Daimler-Chrysler	Boeing
IBM	GM	KPMG
CIGNA	Ford	Citigroup
Xerox	FMC	Schenker
GE	Kodak	DHL
ARCO	Nike	UPS
Caterpillar	AT&T	Kraft
McDonalds	Novell	Microsoft
		Hyatt

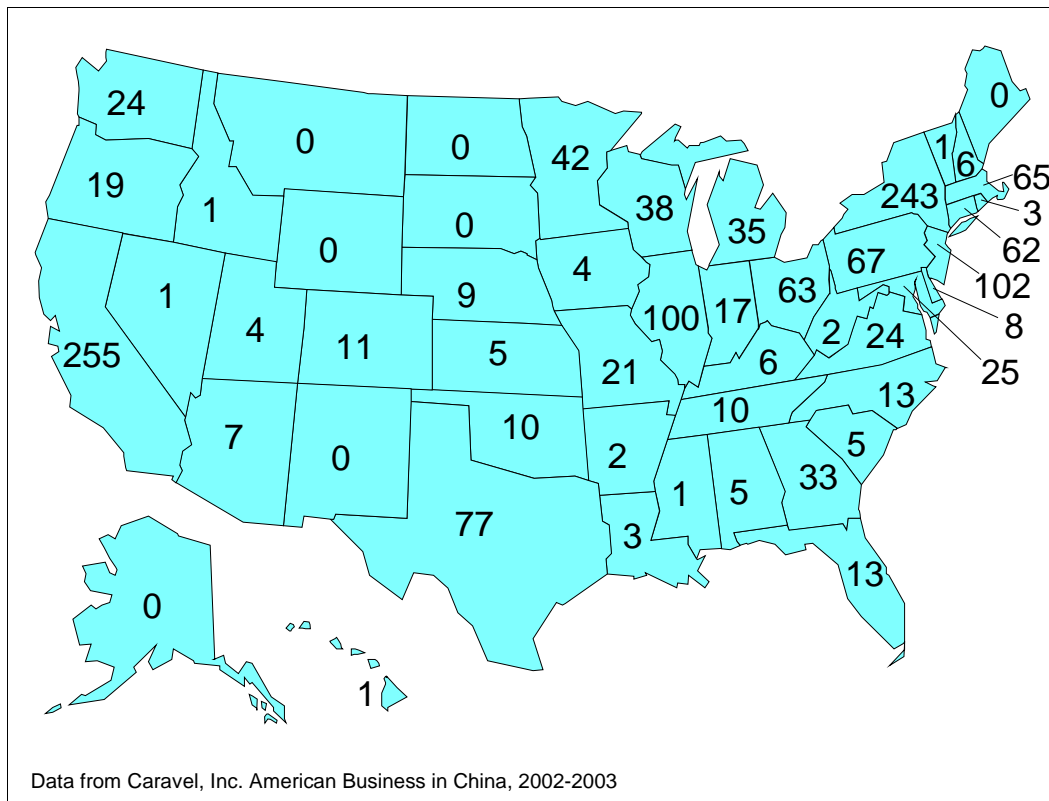
**Source:** Caravel, Inc., *American Business in China*, 2002-2003.

The U.S. companies with affiliates in China include many of the large multinational corporations in the United States. The U.S.-China Business Council has 220 members. The Caravel company's list of U.S. firms operating in China in 2002 totaled 1,466 companies (up from 1,383 in 2000) with 570 in Beijing, 448 in Shanghai, and 223 in Guangdong province across the border from Hong Kong. The American states in which the headquarters of the parent company investing directly in China were concentrated in the West Coast, industrialized mid-West, Mid-Atlantic, and Texas. As shown in Figure 3, the greatest number of U.S. companies were headquartered in California (255), New York (243), New Jersey (102), Illinois (100), Texas (77), Pennsylvania (67), Massachusetts (65), Ohio (63), and Connecticut (62).<sup>21</sup>

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<sup>21</sup> Caravel, Inc. *American Business in China*, 2002-2003. Torrance, CA, Caravel, Inc. 2002. The total does not include U.S. firms operating in Hong Kong (536) or Taiwan.

**Figure 3. Headquarters Offices by State of U.S. Companies in China 2002**



American companies have established affiliates in China for a number of different reasons. In a 2002 U.S. General Accounting Office survey of 551 American companies, the highest percentage of respondents indicated that establishing a presence in China was an important goal (103 respondents), with increasing exports to China (79 respondents) and taking advantage of low labor costs (76 respondents) also important. Other goals were expanding a regional base in China and expanding or establishing a distribution network there.<sup>22</sup> (See Table 5)

The U.S. corporations interviewed for the GAO Survey, while expressing their mild optimism regarding China's willingness or ability to implement its WTO commitments, also highlighted what they felt were their main concerns. These included five commitment areas related to the rule of law reforms and implementation: (1) the consistent application of laws, regulations, and practices; (2) protection of intellectual property rights; (3) enforcement of contracts and judgement settlement of disputes; (4) independence of judicial bodies; and (5) equal treatment between Chinese and foreign entities. Other areas of concern were the transparency of laws, regulations, and practices – a reform which the respondents felt that China might find difficult to implement – and all aspects of interaction between government and business, including subsidies to Chinese firms, non-tariff barriers, as well as China's application of safeguards against U.S. exports.

<sup>22</sup> GAO, *World Trade Organization: Selected U.S. Company Views About China's Membership*, GAO-02-1056, September 2002, p. 2.

**Table 5. U.S. Company Goals in China, 2002**

<b>Company Goals</b>	<b>Number of Respondents</b>	<b>Percent of Respondents</b>
Establish a presence for the future	103	55
Increase exports to China	79	42
Benefit from low labor cost	76	40
Expand a regional base	56	30
Expand a distribution network in China	44	23
Establish a distribution network in China	43	23
Benefit from foreign investment incentives	37	20
Benefit from the cost or quality of raw materials in China	36	19
Establish a regional base in China	35	19
Other	21	11

**Source:** U.S. General Accounting Office, *World Trade Organization: Selected U.S. Company Views about China's Membership*, September 2002, Table 3, p. 15.

The respondents were more hopeful that WTO-related reforms would be implemented reasonably successfully at the national level (and in major cities) but felt that implementation at local levels would be much more difficult. Local officials are often more interested in protecting local businesses and jobs and reportedly often either evade laws or circumvent them. For example, in intellectual property rights enforcement, China has already enacted reforms aimed at an overall improvement in IPR protection, but local companies, even when owned by local governments, are known to have copied foreign products and packaging. With respect to copyright violations, enforcement by local officials often is imperfect even after a foreign company wins a case in the courts.<sup>23</sup>

## **U.S. FDI Position by Industrial Sector**

According to U.S. data, as much as two-thirds of the stock of U.S. FDI in China is invested in manufacturing – more than 50% of which is in the electronic and electrical equipment sector. Another 12% is invested in petroleum, 8% in banking and finance, and 5% in wholesale trade. (See Appendix B). Worldwide, manufacturing accounts for about 27% of U.S. foreign direct investment. The reason for the high percentage of U.S. FDI in China in manufacturing is to take advantage

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<sup>23</sup> GAO, *World Trade Organization: Selected U.S. Company Views about China's Membership*, September 2002, pp 20-5, 28.

of the large and rapidly growing domestic market combined with the abundant supply of low-cost labor. U.S. retailers also are locating to China to service the expanding consumer market. Wal-Mart, for example, has 20 joint-venture stores there including 16 supermarket centers and three Sam's Club warehouse sales operations.<sup>24</sup>

## Effects of U.S. FDI in China on U.S. Trade

One of the criticisms of foreign investment in China and other countries is that it "exports U.S. jobs" and worsens the U.S. balance of trade. One study found that U.S. investment in China broadens China's production base for exporting goods back to the United States and will result in an even greater U.S. trade deficit with that country.<sup>25</sup> U.S. companies in China do export some of their output back to the American market, but most is sold in China. According to the U.S. Bureau of Economic Analysis, in 1998, of the \$20 billion in total sales by U.S. majority-owned affiliates in China, 14% went to the United States, 69% was sold in China, and 17% went to other markets. Of the \$1.1 billion in electrical and electrical equipment produced by these majority-owned affiliates, however, 44% was sold to the United States. Also of the \$7.6 billion in computer and electrical products manufactured, 23% was exported to the United States. (See Table 6)

In terms of the question of how much U.S. and foreign firms in China are contributing to the growing U.S. merchandise trade deficit with that country, this deficit has grown from \$10 billion in 1990 to \$61 billion in 1998 and to \$83 billion in 2001 (a projected \$100 billion in 2002 based on January-November data). The \$83 billion deficit in 2001 accounted for 20% of the overall U.S. trade deficit of \$411.9 billion. In 2001, the largest sectoral deficits with China were \$16.3 billion in electrical machinery (including \$2.1 billion in radio receivers), \$12.2 billion in toys and sports equipment, \$9.7 billion in footwear, \$9.7 billion in machinery, and \$7.4 billion in furniture/bedding.<sup>26</sup> The deficits in these five sectors totaled \$55.3 billion or 66% of the total U.S. deficit with China for that year. The rapid growth of some of these sectoral deficits is remarkable. The U.S. trade balance with China in electrical machinery went from a surplus of \$16.0 billion in 1990 to a deficit of \$16.3 billion in 2001. This industry is highly dependent on foreign inputs for design, marketing, and research and development.<sup>27</sup> Likewise, in machinery, a surplus of \$11.0 billion 1990 dropped to a deficit of \$9.7 billion in 2001.

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<sup>24</sup> Wal-Mart. International Operations. On Internet at: [<http://www.walmartstores.com>].

<sup>25</sup> Burke, James. *U.S. Investment in China Worsens Trade Deficit*. Economic Policy Institute Briefing Paper, Washington, DC, May 2000.

<sup>26</sup> Data are by Harmonized System codes.

<sup>27</sup> U.S. Department of Commerce. *U.S. Commercial Technology Transfers to the People's Republic of China*. 1998. P. v.  
[<http://www.bxa.doc.gov/osies/DefMarketResearchRpts/TechTransfer2PRC.html>]

**Table 6. Sales of Majority Owned Affiliates of U.S. Corporations in China by Industry, 1998**  
(billion dollars and percent)

Item	Total	To the United States		In China		To Other Countries	
		Amt.	%	Amt.	%	Amt.	%
Total Sales	20.04	2.70	13.5	13.84	69.1	3.50	17.5
Total Manufacturing	14.96	2.48	16.6	9.22	61.6	3.26	21.8
Computer & Electrical Products	7.57	1.77	23.4	3.28	43.3	2.52	33.3
Industrial Machinery & Transport Equip.	1.33	0.14	10.5	1.10	82.7	0.09	6.77
Electrical/Electrical Equipment	1.10	0.48	43.6	0.40	36.4	0.22	20
Chemicals	2.69	0.01	0.37	2.40	89.2	0.28	10.4

**Source:** U.S. Bureau of Economic Analysis. Operations of U.S. Multinational Companies. Preliminary Results from the 1999 Benchmark Survey. *Survey of Current Business*, March 2002, and supplementary tables.

As noted earlier in this report, foreign affiliated firms account for the vast proportion of electronics-related and other high-technology exports from China. U.S. majority owned firms there, however, do not appear to have contributed directly to this rising bilateral trade deficit through their production. According to U.S. data on the operations of majority owned American affiliated firms in China, in 1998, they shipped \$1.96 billion in product to the United States. At the same time, U.S. companies shipped \$1.95 billion in product to them for a rough balance in the two-way trade.<sup>28</sup> Much of the rise in Chinese exports to the United States, therefore, has originated from foreign affiliates from other countries and from Chinese-owned companies. U.S. investment in China, however, can displace potential U.S. exports to China, as affiliates are established to manufacture and sell U.S. brand name products that traditionally have been made at home.

Some of the rising U.S. trade deficit with China also is being transferred from other economies in Asia. Foreign-owned firms from Hong Kong, South Korea, Taiwan, Japan, and other markets that traditionally have accounted for much of the U.S. overall trade deficit also have been investing in production facilities in China. Nike, for example, contracts the production of its footwear made in China from

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<sup>28</sup> Matalonli, Raymond J., Jr. and Daniel R. Yorgason. Operations of U.S. Multinational Companies, Preliminary Results from the 1999 Benchmark Survey. *Survey of Current Business*, March 2002. Note: The 2000 survey suppressed data on imports to avoid disclosure of data of individual companies.

assembly plants owned by companies from South Korea and other Asian nations. Many of these companies have moved factories there from their home markets in order to lower production costs. For example, U.S. imports of footwear from China rose from \$1.48 billion in 1990 to \$9.77 billion in 2001. Over the same period, imports of footwear from South Korea dropped from \$2.56 billion to \$0.10 billion. Likewise for furniture, U.S. imports from China rose from \$0.14 billion in 1990 to \$5.02 billion in 2001, while over the same period, those from Taiwan fell from \$1.01 billion to \$0.76 billion.

## **U.S. Multinationals and Chinese Labor**

A concern of U.S. labor interests has been that workers in China are subject to substandard conditions in the workplace. Such activity not only may violate basic labor and human rights, but it may provide Chinese exports a competitive edge in world markets or violate U.S. trade laws. The general picture of labor conditions in China is mixed. Beijing has passed some labor laws, but enforcement seems lax. Independent unions are not allowed, and some labor leaders have been jailed.

In general, those who study labor conditions in China note that relatively good working conditions exist in American-operated manufacturing facilities. Much of the production for American subsidiaries in China, however, is contracted to East Asian affiliated companies there. Some of the worst cases of worker exploitation reportedly have occurred in those plants. The types of abuse reported physical punishment, verbal humiliation, severe restrictions on movement, lack of rest, limited and short breaks, long working days without overtime pay, poor health and safety conditions, and lack of compensation for injury. Companies also may use financial leverage to compel workers not to quit. In some cases, employers have required workers to pay a deposit that is not refunded if they leave, or they may extend loans that must be repaid through a long period of payroll deductions.<sup>29</sup>

Some U.S. companies have addressed the problem of labor conditions in contracting factories by adopting codes of conduct, codes of ethics, or corporate conduct guidelines for their affiliates, suppliers, or subcontractors in China. These include Levi Strauss, Mattel, Nike, Reebok, Avon, Dole Food, and Toys R Us. Still, working conditions in China are difficult to monitor – when production is subcontracted – and enforcement always is a problem – particularly when workers are heavily dependent on their employers.<sup>30</sup>

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<sup>29</sup> See: CRS Report RL31164, *China: Labor Conditions and Unrest*, by (name redacted). Also see: Pomfret, John, In China, No Workers' Paradise, *Washington Post*, January 11, 2000. U.S. Department of State, The Bureau of Democracy, Human Rights, and Labor. Country Reports on Human Rights Practices: China (Includes Hong Kong and Macau), March 4, 2002.

<sup>30</sup> One more successful company in China has been Mattel. It has instituted independent monitoring by a group of leading experts and provides wages and working conditions that compare favorably with those of other multinational corporations. See Stephen Frost and May Wong, *Monitoring Mattel in China*, edited version of the full report by the Asia Monitoring Research Center. Asian Labor Update [[www.amrc.org.hk/achives](http://www.amrc.org.hk/achives)].

Some organizations have investigated factories in China producing for export. Among the investigating organizations, the National Labor Committee (NLC) located in New York and some non-governmental organizations in Hong Kong (such as the Hong Kong Christian Industrial Committee and the Asia Monitor Resource Center), claim to have found numerous violations of basic worker rights and poor working conditions.<sup>31</sup> The cited factories, however, tended not to be U.S.-owned but often contracted with U.S. companies to manufacture brand-name products.

## **Effects of Foreign Direct Investment on China's Domestic Economy**

FDI (including reinvested earnings of affiliates) has come to play an important role in the Chinese economy. The problem in determining the precise role of FDI in recent Chinese economic development, however, is that it has been part of the general opening of the economy to the world and a more market-based economic system. In terms of quantifiable indicators, foreign affiliates now account for nearly a quarter of industrial value-added, nearly a fifth of the tax revenue, and almost half of all exports from China.<sup>32</sup> FDI inflows account for 10 to 15% of China's total gross fixed capital formation. Several econometric studies have attempted to estimate how much FDI has contributed to Chinese economic growth. Since FDI still accounts for a relatively small percentage of total investment in fixed capital, it naturally will have a small quantifiable effect on gross domestic product. A recent study concluded that about 13% of the changes in China's output can be traced to changes in FDI levels. The same study found that FDI had a larger effect on China's exports – a finding that would be expected given the large role of foreign affiliated firms in exports.<sup>33</sup>

Foreign affiliates are, by far, the largest source of China's exports of high-technology products. In 2000, 93% of all exports of electronic circuits came from foreign affiliated companies. In data processing, office machines, and related products, the share of foreign affiliates was as high as 85% and in mobile phones (transmitter-receiver apparatus) as high as 96%.<sup>34</sup> FDI also played a major role in the drastic change in the composition of Chinese exports. In 1985, primary products and resources-based manufactures accounted for 49% of all exports. By 2000, their share had dropped to 12%, while the share of high-technology exports grew from 3% in

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<sup>31</sup> National Labor Committee. *Made in China: The Role of U.S. Companies in Denying Human and Workers Rights*. Also, *Toys of Misery: A Report on the Toy Industry in China*, January 2002. On Internet at [<http://www.nlcnet.org>]. Hong Kong Christian Industrial Committee. *Working Conditions in Chinese Factories making Disney Products*. Hong Kong, February 1999.

<sup>32</sup> UNCTAD (2002), WIR,2002, *op. Cit.*, p. 56.

<sup>33</sup> Shan, Jordan. A VAR Approach to the Economics of FDI in China, *Applied Economics*, Vol. 34, No. 7, May 10, 2002, p. 885ff.

<sup>34</sup> UNCTAD (2002), WIR,2002, *op. Cit.*, Table VI.7, p. 166.

1985 to 22% in 2000.<sup>35</sup> (See Table 7) This structural change in China's exports toward higher technology, more dynamic, and higher value added products played a role in the increase in China's share of world trade, which rose from 1.6% in 1985 to 6% in 2000. (See Appendix B)

**Table 7. China's Export Structure, 1985-2000**  
(Percent Share)

Category of Product	1985	1990	1995	2000
Primary Products	35.0	14.6	7.0	4.7
Manufactures based on Natural Resources	13.6	8.2	7.4	6.9
Manufactures not based on Natural Resources	50.0	76.2	84.6	87.1
Low Technology	39.7	53.6	53.5	47.6
Medium Technology	7.7	15.4	16.9	17.3
High Technology	2.6	7.3	14.2	22.4
Others	1.4	0.8	1.0	1.1

**Source:** U.N. Conference on Trade and Development, *World Investment Report, 2002*, Annex Table VI.5, pp. 162.

From a macroeconomic perspective, FDI plays a dual role in easing the foreign exchange constraint faced by most developing nations. This constraint is the lack of foreign exchange to pay for imports and repay past borrowing that places bounds on the rate of economic growth and has been at the heart of financial crises that have occurred in Latin American, Asian, and African nations. A nation generates foreign exchange by exporting more than it imports and by attracting capital for direct and portfolio investment. In 2001, China added \$43 billion to its foreign exchange reserves (a total of \$286 billion at the end of 2002). This \$43 billion was generated primarily by a \$17.4 billion current account surplus (including a \$34 billion merchandise trade surplus) and a \$37.4 billion net direct investment inflow (inflows minus outflows of \$9.7 billion) that offset a \$19.4 billion deficit in portfolio investment.<sup>36</sup> FDI contributed both to China's surplus in investment inflows and to its surplus in trade. Without FDI, China would probably have faced a severe shortage of foreign exchange and likely would have had to curtail its rapid growth. This creates a dependency by Beijing on foreign investors who play a critical role in breaking China's foreign exchange constraint and in modernizing Chinese industries and export structure.

<sup>35</sup> *Ibid.*, p. 161.

<sup>36</sup> Global Insight, Detailed Forecast, Balance of Payments, January 8, 2003.



Another effect of FDI in China and the price competitiveness of Chinese exports has been the possibility that China is exporting deflation to the world economy. Currently, Hong Kong, Japan, Singapore and, to a lesser extent, the United States and Europe have been grappling with the effects on deflation on their economies. The theory is that China's low-priced exports of products also manufactured in other nations is driving down prices and causing weakness in consumption and depressing profits.<sup>37</sup> The low prices for China's exports can be maintained primarily because China's currency is pegged to the dollar, and this peg can be sustained because of China's surplus in trade, inflows of FDI, and the government's accumulation of foreign exchange. Some analysts have cast doubts on the ability of China to export deflation, but on a microeconomic basis, the undercutting of prices by imports from China is being observed in many countries in many industries.<sup>38</sup> Between January 1, 1995 and June 30, 2002, 23 nations had initiated 278 anti-dumping cases against imports from China. These included India with 51 cases, the European Union with 38, the United States with 37, Argentina with 27, and Australia with 14 cases.<sup>39</sup>

## Security Concerns

Foreign direct investment in China affects security primarily through three avenues: its contribution to economic growth which funds China's military, technology transfers, and economic interests.

With FDI contributing to rising economic power, China can devote more resources to its military, although in view of growing domestic needs, military spending has been taking second place to economic expansion and modernization. In March 2002, China announced a 17.6% or \$3 billion increase in military spending, bringing the publicly reported total to \$20 billion. According to the U.S. Department of Defense, China's total military spending is closer to \$65 billion, and annual spending could increase in real terms over three- to four-fold by 2020.<sup>40</sup> FDI, however, contributes only about 10 to 15% of the growth in GDP underlying this projected rise in military expenditures.

An important rationale for multinational corporations to invest abroad is that they hold technology, intellectual property, or manufacturing processes that can generate more potential profits by establishing an affiliated firm in a foreign country than at home. Virtually all foreign direct investments involve some transfer of

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<sup>37</sup> Wade, Christian. China's Neighbors Fear Export of Deflation. United Press International, December 20, 2002.

<sup>38</sup> Bank of China. Is Deflation Made in China? Economic Forum. October 2002. On Internet at [<http://www.tdctrade.com/econforum/boc/boc021001.htm>]. Wade, Christian. China's Neighbors Fear Export of Deflation. United Press International, December 20, 2002.

<sup>39</sup> World Trade Organization. AD Initiations: Importing Country vs Exporting Country from 01/01/95 to 30/06/02. China had more than twice as many cases as any other country.

<sup>40</sup> U.S. Department of Defense. *Annual Report on The Military Power of the People's Republic of China*. July 2002.

technology – whether embodied in machinery and parts or used to develop processes in the host country. The technology also may leak to other companies in the host country who then may become competitors in world markets. In the case of China, the question is whether foreign direct investment is enhancing the competitiveness of Chinese exports to the point where U.S. firms and American security are being threatened.

A 1998 study conducted by the U.S. Department of Commerce (Bureau of Industry and Security) investigated how technology transfers to China have affected U.S. commercial competitiveness and U.S. security. The report concludes that, generally speaking, “China at present poses no direct threat to U.S. economic competitiveness in high-tech industries. However, if current projections by Chinese and international financial institutions are correct, China will be a major competitor and world economic power in a decade or two.” The report also concludes that the United States is paying the “most for the privilege of access to China’s market in terms of lost potential exports and job opportunities.”<sup>41</sup> In short, U.S. firms producing in China could be selling products there from their Chinese factories rather than from sources in the United States.

The report further states that in the automobile sector, technology transfers (by companies such as Daimler Chrysler and General Motors) have upgraded Chinese domestic capabilities, yet the industry or its future spin-offs are not likely to undermine U.S. security interests in the near future. In the case of aircraft manufacturing know-how, the report concludes that the Chinese are learning more from the joint ventures with European Union companies than from American firms. A potential risk of military spin-offs exists because the same Chinese firms that have co-production agreements with foreign firms also produce military aircraft. Air traffic control or global positioning systems developed for the civilian aviation sector also may assist in upgrading military capabilities. However, as the Commerce Department report points out, “China’s abilities and reputation in terms of military aircraft manufacturing and reverse engineering capabilities are notoriously poor and do not seem to have improved.” The report also points out that foreign technology transfers would do little to alleviate the chronic problems of China’s existing antiquated military aircraft, limited training, and combat experience, or the Chinese military’s bureaucratic and logistic problems.<sup>42</sup>

In the case of satellite technology, China has made some progress and has 8% of the market for international commercial satellite launches. U.S. exports of satellite technology, as is the case with other sensitive, dual-use technologies, are controlled by U.S. export laws. Those American firms accused of providing space technology to China (Hughes Electronics, Boeing Satellite Systems, and Loral Space &

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<sup>41</sup> U.S. Department of Commerce, *U.S. Commercial Technology Transfers to the PRC*, op. cit., p. 94.

<sup>42</sup> *Ibid.*, pp. 54-55, 59-60.

Communications) allegedly provided assistance directly to the Chinese company that launched satellites rather than by transferring technology to subsidiaries in China.<sup>43</sup>

In the electronics and telecommunication sectors, technology transfers have enabled China to catch up in some electronics-related sectors, but in most cases the technology transfers are in form of co-production and assembly and in terms of access to “soft” technologies. In the electronic sector China still mostly produces “relatively low-tech electrical or electronic products such as televisions, refrigerators, radios, and electric fans. In semiconductors, China has made considerable progress but it still lags behind world leaders in producing the latest generation of computer chips. China’s capabilities are the most developed in computer hardware, particularly assembly.”<sup>44</sup>

A 2000 Aston University (Birmingham, UK) Asian Business Research Institute study arrives at similar conclusions. It found that even where technological capability is being transferred most of the EU companies interviewed felt that it would take more than three years, and in some cases more than ten years, before China could replicate the technologies. These companies, therefore, felt shielded from the immediate threat of Chinese competition. In the meantime, European companies stated that they intend to stay ahead mainly through their own investment in research and development.<sup>45</sup> This accords with England’s experience during the Industrial Revolution when it attempted to prohibit the export of its technologies. Such efforts were futile. Flows could only be slowed – not stopped.

A related concern is whether the United States is developing a dependency on Chinese imports that might undermine the U.S. defense industrial base.<sup>46</sup> Also, some U.S. businesses are assessing their risk of relying on China for such a large proportion of their supply of final and intermediate products. Could political turmoil in China, hostilities along the Taiwan Strait, or other disruption threaten their corporate operations? Some U.S. businesses reportedly are curtailing their investments in China to limit risk and diversify supply.<sup>47</sup> As shown in Table 8, however, for broad categories of high-technology products and parts, China provides no more than 17% of U.S. imports. It is the number two supplier for electronic

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<sup>43</sup> For details, see: CRS Report 98-485, *China: Possible Missile Technology Transfers from U.S. Satellite Export Policy – Actions and Chronology*, by (name redacted). Mintz, John. Firms Accused of Giving Space Technology to China. *Washington Post*, January 1, 2003. P. A7.

<sup>44</sup> U.S. Department of Commerce, *U.S. Commercial Technology Transfers to the PRC*, *op. cit.*, pp. 62, 78-9.

<sup>45</sup> David Bennett, Xiaming Liu, David Parker, Fred Steward and Kirit Vaidya. *Technology Transfer to China: A Study of Strategy In 20 EU Industrial Countries*. Birmingham: Asian Business School Research Institute, 2000, pp. 26-7

<sup>46</sup> U.S.-China Security Review Commission. Report to Congress of The U.S.-China Security Review Commission – The National Security Implications of The Economic Relationship Between the United States and China. July 2002.

<sup>47</sup> William C. Vocke, Jr., University of Wisconsin, Milwaukee, speaking of certain businesses in Milwaukee in 2002.

apparatus for line telephones, office machines, and computers, but numerous other suppliers are available. In semiconductors, integrated circuits, and cathode ray tubes, it ranks even lower among import suppliers and accounts for less than 7% of total imports of those products. A major disruption in supplies from China, however, could cause severe shortages of toys and footwear. China provides 82% of U.S. imports of miscellaneous toys, scale models, and puzzles (HS9503) and 57% of U.S. imports of footwear with leather uppers (HS6403). The retail operations of Payless Shoes, for example, could be severely hampered, since it relies on China for 80% of its supply of shoes.<sup>48</sup>

**Table 8. U.S. Dependence on China for Certain Defense-related Products, 2001**

<b>Harmonized System Product Category</b>	<b>Importer Rank</b>	<b>Imports in 2001 (\$million)</b>	<b>Percent of Total U.S. Imports of Product</b>
8517 Electronic Apparatus for Line Telephone & Parts	2	2,080.6	16.8
8473 Office Machines & Parts	2	3,969.6	15.8
8471 Computers & Components	2	5,965.2	12.5
8541 Semiconductors, Diodes	4	239.4	6.0
8525 Transmission Apparatus for Radio Tele. Etc., TV Camera & Rec.	5	1,377.4	6.5
8540 Thermal CLD Cathode Ray Tubes	10	12.7	1.3
8542 Integrated Circuits	13	415.4	1.6

**Source:** Ranking from World Trade Atlas. Data from U.S. Department of Commerce.

The second security-related issue that stems from the growing FDI in China relates to the vested economic interests of U.S. and other foreign companies there. If hostilities with China should break out, the factories and other physical plant in the Chinese economy could serve not only as “hostages” for Beijing but also a source of expertise, employment, and foreign exchange that Beijing could scarcely afford to lose. The foreign affiliated firms also can become a strong interest group that may pressure Beijing and their respective home governments to avoid political or military actions that could disrupt their businesses. The continued growth of FDI in China depends heavily on the confidence of investors that China will remain stable, will institute reforms, and will comply with the conditions of its accession to the World

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<sup>48</sup> Payless ShoeSource. *2001 Annual Report*. P. 20.

Trade Organization. This is seen by many to place an incentive on Beijing to seek peaceful solutions to foreign policy issues but, at times, also places U.S. businesses in a position of attempting to protect their investments by siding with Beijing on certain issues (such as opposing economic sanctions).

One likely place that hostilities might occur involving China is along the Taiwan Strait. Investment relations between the PRC and Taiwan, therefore, are playing an increasingly important role in maintaining stability on both sides. Taiwanese businesses have invested an officially recognized \$68.8 billion in the mainland since 1990, primarily in the coastal provinces of Fujian and Guangzhou and in Shanghai. Private estimates place the figure at as high as \$100 billion.<sup>49</sup> Most of this investment was routed through Hong Kong or tax havens both to avoid political complications and to secure incentives and protection accorded foreign investors. The Taiwanese government estimates that more than 400,000 Taiwanese business-related persons and their families are now residing in China. There are about 3 million visits by Taiwanese to the mainland each year. Thousands of businessmen have married women from the PRC. According to a prominent Taiwanese politician, the strategy of China has been to facilitate this investment and to allow Taiwanese companies to earn higher profits than comparable investments from other nations. Taiwan's ruling Democratic People's Party is concerned over the security implications of this investment. It also worries that some of the investment is zero sum – it displaces investment that would have occurred at home. While the mainland is growing at 7 to 8%, Taiwan's growth rate has dropped in half to about 3%. China's development, on the other hand, appears to be giving Beijing more confidence and less incentive to use the Taiwan issue to generate nationalism (and political support) at home.<sup>50</sup>

The growing investment, trade, and business relations between Taiwan and the mainland have compelled the two governments to open ties further. In 2003, one-way air charters between Shanghai and Taipei for the Chinese New Year were initiated. (Taiwan still requires the charters to stop briefly in Macao or Hong Kong.) Businesses are pressuring the governments to expand the so-called three mini-links in transportation, direct mail, and trade currently between the Mainland and the offshore islands of Kinmen, Matsu, and Penghu. Most observers foresee such economic ties growing over time.

In summary, foreign direct investment is hastening two processes in China: its integration into the global economy and the modernization of its industries. FDI contributes to both these processes by providing technology, management skills, and marketing while also easing constraints on foreign exchange by boosting exports and inflows of capital. FDI contributes to economic growth. This provides the means for China to modernize in various respects – including its military. Meanwhile, FDI provides captive foreign entities for Beijing should hostilities break out but also creates strong pressure groups both within China and in other nations of the world.

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<sup>49</sup> Ling, Koh Chin. Taiwan Companies Invested \$66.8 Billion in China Since 1990. Bloomberg News. January 16, 2003.

<sup>50</sup> Meeting with Antonio Chiang, Deputy Secretary General, National Security Council, Taipei, January 7, 2003.

These groups have direct financial interest in maintaining stability, amicable Sino-foreign relations, and liberalized trade. FDI by Taiwan's businesses, in particular, may be changing the calculus for hostilities along the Taiwan Strait. As the Taiwanese economy becomes more integrated with that of the mainland, pressures rise to ease restrictions on interaction between them and to reach an amicable solution to the current stalemate.

**Appendix A. Foreign Direct Investment Inflows by Recipient  
Region and Economy, 1990-2001**  
(in billion dollars)

<b>Regions or Economies</b>	<b>1990-95 Annual Average</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>
World	225.3	386.1	478.0	694.5	1,088.3	1,491.9	735.1
<b>Developed Economies</b>	145.0	219.9	267.9	484.2	837.8	1,227.5	503.1
U.S.	40.8	85.5	103.4	174.4	283.4	300.9	124.4
France	16.3	22.0	23.2	31.0	47.1	42.9	52.6
Germany	4.2	6.6	12.2	24.5	54.8	195.1	31.8
Netherlands	8.1	16.7	11.1	32.0	41.3	52.5	50.5*
U.K.	17.5	24.4	33.2	74.3	88.0	116.6	53.8
<b>Developing Economies</b>	74.3	152.7	191.0	187.8	225.1	237.9	204.8
China	19.4	40.2	44.2	43.8	40.3	40.8	46.8
Hong Kong	4.9	10.5**	11.4**	22.8	22.4	66.6	27.4
Taiwan	1.2	1.9	2.2	0.2	2.9	4.9	4.1
Brazil	2.0	10.8	19.0	28.9	28.6	32.8	22.5
Mexico	8.0	9.9	14.0	11.9	12.5	14.7	24.7

**Source:** U.N. Conference on Trade and Development, *World Investment Report, 2002*, Annex Table B.1, pp. 303-6.

\* Preliminary data.

\*\* Estimates.

**Appendix B. China's Competitiveness in World Trade as  
Indicated by Market Shares, 1985-2000**

(in percent)

China's Products	1985	1990	1995	2000
<b>I. World Market Share</b>	1.6	2.8	4.8	6.1
1. Primary Products	2.4	2.6	2.5	2.3
2. Manufactures based on Natural Resources	1.1	1.3	2.1	2.7
3. Manufactures Not based on Natural Resources	1.5	3.4	6.1	7.8
Low Technology	4.5	9.1	15.5	18.7
Medium Technology	0.4	1.4	2.6	3.6
High Technology	0.4	1.4	3.6	6.0
4. Others	0.7	0.7	1.4	1.8

**Source:** U.N. Conference on Trade and Development, *World Investment Report, 2002*, Annex Table VI.5, pp. 162.



## Appendix C. U.S. Foreign Direct Investment Position in China by Industry, 2001

(in billion dollars and percent)

Industry	Amount	Percent
All Industries	10.5	100.0
Petroleum	1.3	12.4
Manufacturing Total	7.0	66.7
Food and Allied Products	0.2	1.9
Chemical and Allied Products	0.6	5.7
Primary and Fabricated Metals	0.2	1.9
Industrial Machinery and Equipments	1.2	11.4
Electronic and Electrical equipment	3.7	35.2
Transport Equipment	0.4	3.8
Other Manufacturing	0.7	6.7
Wholesale Trade	0.5	4.8
Depository Institutions	0.2	1.9
Finance (not Depository Institutions), Insurance, and Real Estate	0.6	5.7
Services	0.2	1.9
Other Industries	0.6	5.7

**Source:** U.S. Department of Commerce

**Note:** Data are on a historical cost basis.

**Appendix D. U.S. And Total Foreign Direct Investment in China,  
1990-2001**  
(billion dollars)

<b>Year</b>	<b>U.S. FDI in China</b>	<b>Total FDI in China</b>	<b>Percent</b>
1990	0.45	3.48	13.1
1991	0.32	4.37	7.4
1992	0.51	11.01	4.6
1993	2.06	27.51	7.5
1994	2.49	33.77	7.4
1995	3.08	37.52	8.2
1996	3.44	41.72	8.2
1997	3.24	45.26	7.2
1998	3.90	45.46	8.6
1999	4.22	40.32	10.5
2000	4.38	40.71	10.8
2001	4.86	46.88	10.4
<b>TOTAL</b>	<b>32.97</b>	<b>377.99</b>	<b>8.7</b>

**Source:** U.S.-China Business Council based on data from China, Ministry of Foreign Trade and Economic Cooperation.

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