

APPENDIX E
EAST ASIA

Overview

East Asian textile and apparel suppliers covered by this report include Korea, Taiwan, China, and China's Special Administrative Regions (SARs)¹—Hong Kong and Macau. Except for Macau, these suppliers rank among the world's largest exporters of textiles and apparel, together accounting for one-fourth of world exports of such goods by value during 1997-2001. China and Taiwan became eligible for quota liberalization under the World Trade Organization (WTO) Agreement on Textiles and Clothing upon their accession to the WTO on December 11, 2001, and January 1, 2002, respectively. The United States eliminated quotas on articles integrated into the GATT regime during the three stages of integration for China and Taiwan, and will eliminate the remaining quotas on their goods as of January 1, 2005, the same date as that for other WTO members.² However, in a market access agreement that became part of China's WTO accession package, the United States can apply selective safeguards (quotas) on imports of textiles and apparel from China for 4 years beyond the termination of textile and apparel quotas for WTO members—that is, from January 1, 2005 through December 31, 2008. The agreement also states that no safeguards established during the 4-year period will remain in effect beyond 1 year, without re-application, unless both countries agree.³

China's exports of textiles and apparel grew by 17 percent during 1997-2001 to \$53 billion, making it the world's leading exporter of textiles and apparel with 16 percent of the total in 2001. In contrast, declines were recorded in textile and apparel exports during 1997-2001 for Hong Kong (6 percent), Korea (13 percent), Macau (8 percent), and Taiwan (23 percent). The divergent trade trend between China and the other East Asian suppliers reflected a shift in textile and apparel production from the relatively high-cost East Asian suppliers to China, which benefits from low production costs, high labor productivity, and an abundant supply of low-cost, skilled labor. The average cost per operator hour, including social benefits, in spinning and weaving for 2002 was \$0.69 in the coastal area of China, compared with \$6.15 in Hong Kong, \$5.73 in Korea, and \$7.15 in Taiwan.⁴ As such, Korea and Taiwan focus on producing more capital-intensive, high-quality textiles.

Companies in Hong Kong, Korea, and Taiwan are major investors in textile and apparel production worldwide, including in China and other countries in Asia, sub-Saharan Africa, Mexico, and the Caribbean Basin. In addition, the textile and apparel industries in Hong

¹ Hong Kong and Macau became SARs of China on July 1, 1997, and Dec. 20, 1999, respectively. The United States has separate quotas on imports from Hong Kong, Macau, and China.

² Committee for the Implementation of Textile Agreements, "Announcement of Import Limits for . . . Textile Products Integrated into GATT 1994 in the First, Second, and Third Stage" for China and Taiwan, published in the *Federal Register* of Dec. 28, 2001 (66 F.R. 67229 and 66 F.R. 67232, respectively).

³ The agreement incorporates the text of an agreement contained in a Memorandum of Understanding between the United States and China of Feb. 1, 1997, which provided that should China become a member of the WTO, the United States would grant China the same benefits on the same schedule accorded other WTO textile-exporting countries under the ATC.

⁴ Werner International Management Consultants, "Spinning and Weaving Labor Cost Comparisons 2002," Reston, VA.

Kong and Macau have largely become integrated with those in China through outward processing arrangements (OPAs). Industry sources report that approximately 90 percent of Hong Kong's apparel production is conducted through OPAs,⁵ whereby production of a garment occurs in both Hong Kong and China. A carefully planned, but small part of the apparel assembly process, is performed in Hong Kong so that the garment can be considered to have Hong Kong origin. For example, in the production of a woman's woven, long-sleeve shirt, only 3 of the 18 major sewing operations needed to be performed in Hong Kong in order for the shirt to be considered of Hong Kong origin.⁶ The other major sewing operations along with the many nonassembly operations involved in the production of the shirt, such as fabric inspection, packaging, and washing, are performed in China.

China supplanted Mexico as the largest foreign supplier of textiles and apparel to the United States in 2002, when its shipments rose 34 percent by value over the 2001 level to \$8.7 billion (5.0 billion square meters equivalent (SMEs)). Hong Kong was the third-largest supplier with shipments of \$4.0 billion (962 million SMEs), while Korea was the sixth-largest supplier at \$2.9 billion (2 billion SMEs) and Taiwan was the ninth-largest supplier at \$2.2 billion (1 billion SMEs).

⁵ Industry officials, interview by USITC staff, Hong Kong, Feb. 26, 2003.

⁶ The three operations performed in Hong Kong included sewing the shoulder seams, the arm hole/sleeve seams, and the side seams. Industry officials, presentations to USITC staff, Hong Kong, Feb. 28, 2003.

Overview

China is the world's largest exporter of textiles and apparel, accounting for 16 percent of the total in 2001, and likely will become the "supplier of choice" for many U.S. importers following quota elimination in 2005 because of its ability to produce almost any type of textile and apparel article at any quality level at competitive prices.² A U.S. industry source noted that "the breadth and variety of China's apparel production is unmatched in the world" and that Chinese apparel is sold at all price levels and in all types of stores, ranging from "the lowest-end, most price conscious discount stores" to "the most prestigious, highest-priced specialty and department stores."³ However, many U.S. importers said the uncertainty over whether safeguards (quotas) will be placed on U.S. textile and apparel imports from China likely will temper growth in sourcing from China, at least in the early years following quota elimination (see preceding section of this appendix for information on the China textile safeguards). To reduce the risk of sourcing from only one country, U.S. importers also plan to expand trade relationships with other low-cost countries as alternatives to China, particularly with India, which also has a very large manufacturing base to produce a wide range of textiles and apparel at competitive prices and a large supply of relatively low-cost skilled labor.

Industry Profile

China is the world's largest producer of textiles and apparel, which accounted for 10 percent of its manufacturing output in 2000 and 20 percent of its total exports in 2001.⁴ China is upgrading its production capacity in the textile and apparel sector, as evidenced by the fact that it was the world's largest investor in new spinning and weaving equipment during 1997-2001. China is highly price competitive in sector goods, largely reflecting its large supply of low-cost labor and raw materials, which have enabled the sector to attract foreign direct investment (FDI). Also, the sector is considered to have effective middle management and the technical know-how to produce a wide range of sector goods.

China's textile and apparel sector encompasses all segments of the supply chain, from the production of raw materials (e.g., cotton and manmade fibers) to the manufacture of yarns and fabrics and the processing of these inputs into final goods such as garments, carpets, home furnishings, and industrial textiles. According to the China National Textile Industry

¹ Prepared by Michael Barry, Office of Economics.

² Information on U.S. importers and other organizations interviewed by USITC staff in connection with this study is presented in appendix D and the opening section of chapter 3 of this report.

³ Carlos Moore, Senior Vice President, American Textile Manufacturers Institute, written submission to the Commission, Jan. 22, 2003.

⁴ Export information is based on United Nations data and industry data are from *China Economic and Trade Statistics 2001, Industrial Development Report* (translated from Chinese).

Council (CNTIC), the national federation of all textile-related industries in China, the sector comprises textiles, including knit apparel (62.0 percent of sector sales in 2002), woven apparel (31.5 percent), and manmade fibers (6.5 percent).⁵ Official Chinese statistics for 2001 show that the sector comprised about 21,000 enterprises with total output of \$116 billion and employment of 7.9 million workers, or 14.5 percent of Chinese industrial employment (table E-1, found at the end of this country profile). However, sector production and employment levels are believed to be much higher, because the official statistics include data only for “statistically sizable enterprises” (SSEs), or firms having an annual output of more than 5 million renminbi (RMB, approximately \$600,000). As such, the official statistics do not include data for the many small firms (mainly family-based production units) involved in production of sector goods in China.⁶ In 2002, CNTIC estimated that there were about 15 million workers in the Chinese textile and apparel sector, including both SSEs and small firms.

China’s textile and apparel sector is concentrated in the coastal areas of the country. In 2002, five coastal provinces (Zhejiang, Jiangsu, Guangdong, Shandong, and Fujian), along with the city of Shanghai, accounted for 79 percent of SSE sector shipments and 82 percent of China’s exports of textiles and apparel by value.⁷ Exports accounted for about one-third of sector output in 2001.⁸

Industry structure and performance

Textiles

China accounted for an estimated 29 percent of world fiber consumption in 2001, roughly triple that of India.⁹ China’s textile industry has grown substantially during the past decade. Between 1990 and 2002, China’s production of cotton yarn (including blends) grew at an average annual rate of 8.8 percent, to 8.5 million tons, while its production of cotton and manmade-fiber fabrics grew at an average annual rate of 4.6 percent, to 32.2 billion meters.¹⁰

⁵ Information in paragraph is mainly from CNTIC, “Outlines of the Textile Industry in China” (briefing paper prepared for USITC staff), Feb. 19, 2003.

⁶ For example, there reportedly were 250,000 small firms in Zhejiang Province alone employing more than 1.4 million workers in 2001 (CNTIC, “Outlines of the Textile Industry in China,” pp. 8 and 18).

⁷ CNTIC, “Outlines of the Textile Industry in China,” p. 8.

⁸ Representatives of CNTIC, interview by USITC staff, Beijing, Feb. 16, 2003.

⁹ Based on data from Fiber Economics Bureau, Inc., *Fiber Organon*, Nov. 2002, and Geerdes International, Inc., Richmond, VA, facsimile to USITC staff, Feb. 4, 2003. See table 1-5 in chapter 1 of this report for data on world fiber consumption by regions and selected countries.

¹⁰ CNTIC, “Outlines of the Textile Industry in China.”

China's textile industry consists mostly of state-owned enterprises (SOEs), which reportedly have excess capacity and employment, and use outdated technology.¹¹ Facing enormous losses in the textile industry, the Chinese government implemented a "reform equals rescue" plan in 1998 in an effort to increase production efficiencies and reduce redundant costs in the industry. The SOEs eliminated 1.5 million jobs and large numbers of obsolete spindles, and installed newer production technologies.¹² Nevertheless, in 2001, slightly more than 90 percent of the installed spinning capacity in the cotton sector (excluding open-end rotors) was more than 10 years old.¹³

China's large fabric-weaving industry reportedly is beset by low fabric quality and limited fabric variety, design, and innovation.¹⁴ ***¹⁵ China has been the world's largest purchaser of new weaving equipment in recent years, accounting for 58 percent of world shipments of new shuttleless looms in 2000-01 and 72 percent of the total in 2002.¹⁶ According to CNTIC, China's imports of textile machinery tripled from slightly less than \$1.2 billion in 1998 to \$3.5 billion in 2002.¹⁷ Nevertheless, shuttleless looms represent only about 20 percent of China's installed weaving capacity overall and one-third of the installed looms in the cotton sector.¹⁸ Moreover, capacity utilization rates reportedly are low, averaging 30 percent in the cotton weaving segment of the industry.¹⁹

CNTIC officials stated that a major concern of the Chinese textile industry is the dyeing and printing segment, which uses old equipment and has weak management and marketing skills, and an "irrational structure of products" in which producers focus solely on low-end products for domestic consumption.²⁰ According to the Chinese Dyeing and Printing Association, the dyeing and finishing segment consists mostly of private firms rather than SOEs. During the 1990s, China commonly exported grey (unfinished) fabric to Korea and Hong Kong for dyeing and printing, and then re-imported the fabric for cutting and sewing

¹¹ U.S. Department of State telegram 2711, "SOE Reform: China Textile Industry Leads the Way!?" prepared by U.S. Embassy, Beijing, Mar. 24, 2000, and Zhiming Zhang, "Textiles and Apparel in China: Competitive Threat or Investment Opportunity?" *Textile Outlook International* (United Kingdom: Textiles Intelligence Ltd.), Sept.-Oct. 2002, p. 92.

¹² Representatives of the Chinese State Economic and Trade Commission, interview by USITC staff, Beijing, Feb. 16, 2003, and U.S. Department of State telegram 3981, "China's Textile Industry After Quotas," prepared by U.S. Embassy, Beijing, Apr. 30, 2002.

¹³ International Textiles Manufacturers Federation (ITMF), *International Textile Machinery Shipment Statistics* (Zurich), vol. 25/2002, p. 12.

¹⁴ Representatives of the Chinese Cotton Textile Association, interview by USITC staff, Beijing, Feb. 19, 2003.

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¹⁶ ITMF, *International Textile Machinery Shipment Statistics*, vol. 25/2002, and selected back issues.

¹⁷ CNTIC, "Outlines of the Textile Industry in China," p. 13.

¹⁸ CNTIC, "Outlines of the Textile Industry in China," p. 20, and representatives of the Chinese Cotton Textile Association.

¹⁹ Representatives of the Chinese Cotton Textile Association.

²⁰ Representatives of the Chinese Dyeing and Printing Association, interview by USITC staff, Beijing, Feb. 20, 2003.

into final goods. As China expanded its imports of dyestuffs and dyeing and printing equipment, this phenomenon has significantly decreased.²¹ Chinese industry officials stated that printing of multiple colors or patterns is more difficult than simple dyeing operations and that the Chinese industry is not yet able to produce functional fabrics with “nature-like” patterns.²² Despite concerns about Chinese fabric quality, local fabrics account for about 40 percent of the fabrics used by apparel producers in Guangdong, which has a large export-oriented apparel industry.²³ U.S. apparel importers also report using Chinese cotton fabrics (e.g., denim) in apparel made for the U.S. market.

The knitting segment is dominated by SOEs and generally consists of small firms that supply the low-end domestic market and larger firms having better equipment that generally supply export markets. Industry officials believe that future growth in the knitting segment will be driven by China’s expanding domestic market.²⁴ According to industry officials, the knitting segment lacks high-end production and suffers from low quality, limited technical advancement and innovation, weak marketing and management skills, and sometimes an unsteady supply of raw materials.²⁵ However, the knitting segment has been purchasing new equipment to upgrade its operations. During 2000-02, China accounted for 27 percent of world purchases of new circular knitting machines.²⁶ Although China accounted for only 7 percent of world shipments of flatbed knitting machines in 2000-01, Hong Kong, whose industry is closely linked to that of China, accounted for 20 percent of world purchases.²⁷

Apparel

China’s apparel industry consists mainly of small, mostly privately owned firms making low value-added garments on contract to foreign and Hong Kong buyers.²⁸ The available data suggest that exports account for more than 60 percent of industry output. Guangdong is China’s major producer of apparel for export, accounting for one-third of the country’s apparel exports in recent years. About 70 percent of Guangdong’s apparel firms produce for export, with exports totaling about \$10 billion in 2001. Guangdong has roughly 30,000 apparel plants employing about 5 million workers. Its apparel industry uses mostly imported materials (60 percent of the total), mainly from Taiwan, Korea, Italy, and Japan. The remainder (40 percent) of the inputs comes from local suppliers.

²¹ Ibid. Between 1998 and 2002, China’s imports of dyestuff rose by 52 percent (CNTIC, “Outlines of the Textile Industry in China”).

²² Representatives of the Chinese Dyeing and Printing Association.

²³ U.S. Department of State telegram 3981, “China’s Textile Industry After Quotas,” prepared by U.S. Embassy, Beijing, Apr. 30, 2002.

²⁴ Representatives of the Chinese Knitting Industrial Association, interview by USITC staff, Beijing, Feb. 20, 2003.

²⁵ Ibid.

²⁶ ITMF, *International Textile Machinery Shipment Statistics*, vol. 25/2002, and selected back issues.

²⁷ Ibid.

²⁸ Information in paragraph is from U.S. Department of State telegram 3981, “China’s Textile Industry After Quotas.”

Official Chinese statistics for 2001 show that China's apparel industry comprised nearly 8,000 firms with an average of 300 employees each; however, the statistics exclude the many small apparel firms. The industry comprises three different groups of operations: (1) factories run by overseas Chinese investors, primarily based in Hong Kong, in joint ventures mainly in Guangdong, and which are China's major apparel exporters; (2) SOEs, which sell their output mostly for local consumption, and (3) the former state-owned, now privatized "town and village" enterprises, which essentially make up China's "domestic apparel industry."²⁹ In general, the town and village firms are owned and operated by local managers, who typically were the managers of the plants when they were SOEs. The town and village firms tend to operate at a much higher level of efficiency than the SOEs and have lower overhead than the factories owned by the overseas Chinese, which incur Hong Kong-based overhead. In addition, the low overhead of town and village firms reflects their "lean" management structure.

China has significant competitive advantages in apparel production, including low labor costs, high labor productivity, and access to local supplies of raw materials. In general, sewing skills are considered to be very good in China, as is its middle management, which has the day-to-day responsibility for maintaining the reliability of product quality and supply and ensuring the flexibility to change orders as needed. The availability of fabric, trim, and findings (e.g., buttons) is considered an advantage in sourcing apparel from China, because almost all the raw materials needed to make apparel are produced there. According to U.S. retailers, China also has competitive shipping times. For example, shipping times to the west coast of the United States generally average between 12 and 18 days from China, Hong Kong, and Taiwan, but as much as 45 days from some member countries of the Association of South East Asian Nations (ASEAN). Chinese apparel producers tend to be highly flexible in making samples and small runs. Nevertheless, wage rates in the apparel industry are rising, as are other costs of production, such as land prices, training, social fees, and shipping costs.³⁰ Chinese officials stated that the apparel industry would benefit from greater innovation, design, marketing, and production of higher end goods.³¹

China remains attractive to U.S. buyers because Chinese firms tend to offer more value-added services, react faster to changes in fashion and retailer demands, and meet customer product standards better than producers in other parts of the world. Currently, most Chinese apparel exports are made in response to orders received, often with samples and materials supplied by clients. China has few internationally recognized brand names and few experienced apparel designers. There is evidence that this is changing and that China is starting to participate more actively in design and innovation.

²⁹ Information in remainder of paragraph is from Merrill Weingrod, President, China Strategies, Providence, RI, and Linsun Cheng, Professor, University of Massachusetts - Dartmouth, interview by USITC staff, Feb. 4, 2003.

³⁰ Representatives of Shenzhen Textile Industry, interview by USITC staff, Shenzhen, China, Feb. 21, 2003.

³¹ Representatives of CNTIC, interview by USITC staff.

Factors of production

Raw materials

China has a competitive local supply of raw materials, including fibers, yarns, fabrics, and trim. Although China ranks among the world's largest producers of cotton and manmade fibers, it still imports large quantities of these fibers, as well as wool fibers (especially from Australia), as its domestic supply is insufficient to meet domestic demand. China has abundant supplies of other fibers such as ramie, silk, and angora rabbit hair, and is promoting the production of these fibers. China ended all price supports for domestic cotton in the fall of 1999 and Chinese cotton prices fell to \$1,145 per ton by year end 1999, from \$2,350 in 1997.³² The Cotton Textile Association in China stated that the price of cotton in China at the beginning of 2003 equaled or exceeded world prices and that raw materials accounted for 70 percent of China's production costs for cotton fabrics.³³

China has been upgrading production technologies in the manmade-fiber sector. Chinese sources stated that manmade-fiber production capacity has increased at an average annual rate of 18.3 percent in the past 5 years.³⁴ Chinese industry representatives report challenges in acquiring the needed chemical inputs³⁵ and that Chinese manmade-fiber facilities, although numerous, are much smaller than those in Taiwan and Korea, which benefit from significant economies of scale and lower production costs.³⁶ Officials in Taiwan and Korea believe that Chinese investment in the manmade-fiber industry will enable China to "catch up" with Taiwan and Korea in 2 to 3 years.³⁷ Much of the equipment in China's manmade-fiber industry is obsolete, resulting in lower productivity, higher costs, and more pollution than that associated with modern equipment. Chinese firms produce only a limited variety of fibers, and much of their production is of basic or commodity fibers. Research and development has lagged world markets, resulting in less competitive fibers produced domestically. Many manmade-fiber firms are SOEs that carry large debt burdens and obligations to retired workers.³⁸

³² U.S. Department of State telegram 2711, "SOE Reform."

³³ Zhiming Zhang, "Textiles and Apparel in China," p. 90, and representatives of the Chinese Cotton Textile Association.

³⁴ Representatives of the Chinese Chemical Fiber Association, interview by USITC staff, Beijing, Feb. 16, 2003.

³⁵ Representatives of the State Economic and Trade Commission (SETC), interview by USITC staff, Beijing, Feb. 16, 2003.

³⁶ Zhiming Zhang, "Textiles and Apparel in China," p. 91.

³⁷ Industry representatives, interviews by USITC staff, Beijing and Shenzhen, China; Hong Kong; Taipei, Taiwan; and Seoul, Korea, Feb.-Mar. 2003.

³⁸ Industry representatives, interviews by USITC staff, Beijing and Shenzhen, China; and Hong Kong. Also see Zhiming Zhang, "Textiles and Apparel in China," p. 91.

Labor

CNTIC data show that approximately 15 million people worked in the Chinese textile and apparel sector during 2002. Labor availability in China appears enormous. According to a U.S. Government report, China has a “chronic and growing labor surplus” of about “23 million people laid off ‘temporarily’ in the state sector or approximately 150 million surplus rural workers who make up a ‘floating population’ that migrates between agriculture and urban jobs and that are at other times unemployed.”³⁹

China ranks among the world’s lowest cost producers of textiles and apparel, reflecting low wage rates and high productivity levels.⁴⁰ According to U.S. firms, although wage rates are higher in China than in such countries as Bangladesh, India, and Vietnam, productivity is considered much higher in China, making its overall labor cost lower. In 2002, hourly compensation of apparel production workers averaged \$0.68 in China, compared with less than \$0.50 in Bangladesh, India, Indonesia, and Pakistan; roughly \$1.50 in Guatemala and Honduras; and \$2.45 in Mexico (see table 3-1 in chapter 3 of this report for more information on wage rates of selected countries).⁴¹ In the textile industry, hourly compensation averaged \$0.69 in the coastal areas of China, compared with \$5.73 in Korea, \$7.15 in Taiwan, and \$0.57 in India. In general, sewing skills in China are considered to be very good. As such, U.S. apparel companies and retailers often import garments from China, as well as other East Asian countries, that require more sewing and construction, complex operations, and detailed work.

Domestic market

A number of factors have been cited in the rapid growth of the domestic textiles and apparel market in China. First, with 1.3 billion people, China is the world’s most populous country. China’s GDP has grown nearly 8 percent annually in recent years and this rapid growth translates into higher incomes and higher rates of consumption. This is especially true for the more than 900 million Chinese citizens who live in the rural west of China, where development lags that of the eastern coastal cities. As Chinese Government policies attempt to raise the incomes of the rural west, the textile industry expects to find more demand and higher consumption rates.⁴² Chinese industry representatives uniformly reported that the focus of Chinese textiles and apparel producers in the coming decade will be the growing domestic market.⁴³ The China Textile Council reports that currently, the domestic market

³⁹ U.S. and Foreign Commercial Service, “FY 2003 Country Commercial Guide for China” (sec. 1, Economic Trends and Outlook), found at <http://www.buyusainfo.net>, retrieved May 28, 2003.

⁴⁰ Industry representatives, interviews by USITC staff, China, Hong Kong, Taiwan, and Korea, Feb.-Mar. 2003.

⁴¹ Data on hourly compensation in the paragraph, which include fringe benefits, are from Werner International Management Consultants, “Spinning and Weaving Labor Cost Comparisons 2002,” Reston, VA, and Jassin-O’Rourke Group, “Global Competitiveness Report: Selling to Full Package Providers,” New York, NY.

⁴² Industry representatives, interviews by USITC staff, Beijing, Hong Kong, and Taipei, Feb.-Mar. 2003.

⁴³ Chinese industry representatives, interviews by USITC staff, Beijing, Feb. 2003.

accounts for approximately two-thirds of Chinese production and this share is expected to increase, even when textile quotas are eliminated.⁴⁴

Second, Chinese economic development has created new opportunities for textile producers in China. Several Chinese officials and industry representatives cite functional fabrics or industrial fabrics as a future growth area. As more roads and north-south highways are being built to connect the booming cities of the coast and to reach the western regions, demand grows for special industrial and nonwoven fabrics needed to line the roadways and shoulders of roads to prevent erosion. Similarly, to increase agricultural efficiency in feeding the enormous population, certain functional fabrics are used to prevent erosion, conserve moisture, and control unwanted weeds. As developments continue, use of industrial fabrics is expected to rise.⁴⁵

Finally, China has recently undertaken significant housing reforms. A result is that a much greater percentage of Chinese consumers now own their own homes instead of simply residing in state-owned residences. Chinese industry representatives consider this a significant opportunity for more domestic sales. Homeowners are more likely to buy curtains, fabric sofas and furniture, textile rugs and carpeting, bedspreads, sheets, and similar products associated with owning a home.⁴⁶ Housing reforms combined with growing incomes constitute a significant growth opportunity for Chinese home textiles.

Investment

CNTIC data on investment in the textile and apparel sector for 2000 show that there was foreign investment in 5,336 enterprises (3,061 apparel firms, 2,063 textile firms, and 212 manmade-fiber firms).⁴⁷ In 2000, these enterprises had \$31.8 billion in gross output, \$30.0 billion in sales, and \$1.3 billion in profit. Contracted foreign investment totaled \$2.0 billion, while actual investment was \$1.37 billion. Hong Kong accounted for more than 70 percent of the investment in the Chinese textile and apparel sector, followed by Taiwan with 10 percent. Most of the investment was in the eastern coastal region; however, Chinese officials hope to promote further investment in the less developed western regions of the country.⁴⁸ In recent years, China has relied on FDI to finance equipment upgrades in the sector, especially in the cotton textile industry.⁴⁹

⁴⁴ Ibid.

⁴⁵ Chinese officials and industry representatives, interviews by USITC staff, Beijing, Feb. 2003.

⁴⁶ Ibid.

⁴⁷ Unless otherwise noted, investment data are from Zhiming Zhang, "Textiles and Apparel in China," pp. 110-111.

⁴⁸ Chinese textile authorities, interviews by USITC staff, Beijing, Feb. 2003.

⁴⁹ Chinese officials and industry representatives, interviews by USITC staff, Beijing, Feb. 2003.

Government Policies

Domestic policy

China's textile industry has undergone extensive restructuring since 1998, when the Government began a massive reform to improve operations in SOEs, many of which had been losing money since 1993.⁵⁰ As a part of its reform efforts, the Government closed hundreds of unprofitable factories, merged money-losing factories with more successful ones, and permitted hundreds of enterprises to declare bankruptcy. Enterprises filing for bankruptcy were allowed to write off bad debts. To assist the industry, the Government established a \$1.5 billion reserve fund in 1998 and added unspecified amounts to this fund in the following years. As part of the plan, the industry has laid off more than 1.5 million workers⁵¹ and scrapped 10 million obsolete spindles. In 2000, the State Textile Bureau stated that China committed \$2.4 billion in grants to the industry's top 200 firms and \$1.7 billion in bank loans to finance technological upgrades. The Government also pledged \$1.8 billion in support and \$1.2 billion in bank loans to the industry as a whole.

More recently, CNTIC⁵² implemented a "Fabrics China" campaign in an effort to modernize the textile industry.⁵³ According to the plan, the 600 "best" mills are to be organized into 24 groups. CNTIC indicated that the fabric industry needs to upgrade into higher value-added fabrics and replace its current quality standards with international standards. CNTIC is also trying to play a role as an "intermediary" between the fabric mills and foreign buyers.

Trade policies

China's quotas were originally administered by the Ministry of Foreign Trade and Economic Cooperation (MOFTEC) and allocated only to enterprises which had been granted the official right to export. In recent years, the quota allocation system has changed. Quota allocation is administered jointly between MOFTEC and the China Chamber of Commerce for the Import and Export of Textiles. According to Chinatex officials in Beijing, there are three systems used today for allocating quotas. In the first method the Chamber of Commerce offers historically "high fill" quota categories for bidding. The first bid takes place in October, when approximately 80 percent of the following year's quota open for bidding is purchased. Bidding opens again in March, and most categories are filled by that time. The Chamber offers a third bid in July and August for those categories that have gone unfilled.⁵⁴ The second method used to allocate quotas is a "first-come-first-served" system, which is reserved for those quota categories with lower fill rates in the previous year. The

⁵⁰ Unless otherwise noted, information in paragraph is from U.S. Department of State telegram 2711, "SOE Reform."

⁵¹ U.S. Department of State telegram 3981, "China's Textile Industry After Quotas."

⁵² According to U.S. Department of State telegram 3981, "China's Textile Industry After Quotas," although the Government of China no longer officially manages the textile industry, CNTIC is staffed with former textile ministry officials.

⁵³ U.S. Department of State telegram 3981, "China's Textile Industry After Quotas."

⁵⁴ Chinese industry representatives, interviews by USITC staff, Beijing, Feb. 2003.

final method for quota allocation is the MOFTEC assignment method. For an undetermined number of quota categories, the Chinese trade authorities assign free quotas to a selected list of textile and apparel enterprises. Chinese authorities report that the share of quotas allocated by this third method is “very small.”⁵⁵

WTO accession and safeguard provisions

As a part of its WTO accession bid, China signed a bilateral trade agreement with the United States in November 1999. China signed similar bilateral agreements with the EU and other WTO Working Party members before becoming a full member of the WTO in December 2001. As a member of the WTO, China will participate in the 2005 phaseout of quotas mandated by the WTO Agreement on Textiles and Clothing (ATC). Quotas that presently restrict Chinese exports to the United States and the EU will be removed, providing greater market access for Chinese goods. As part of its accession, China has committed to a wide range of market-access and trade barrier concessions, including a number of textile- and apparel-specific provisions. China’s WTO protocol package includes product-specific and textile-specific safeguard mechanisms designed to prevent injury that U.S. or other WTO members’ industries and workers might experience based on import surges (see the “overview” at the beginning of this appendix for information on the textile-specific safeguard mechanism).

Foreign Trade

China’s trade surplus in textiles and apparel fell from \$32.2 billion in 1997 to slightly less than \$31.0 billion in 1998 and 1999, and then rose significantly to \$38.1 billion in 2000 and \$39.5 billion in 2001 (table E-1). China’s textile and apparel exports followed a similar pattern, declining from \$45.5 billion in 1997 to about \$43 billion in 1998 and 1999, and then increasing to \$53.3 billion in 2001. A trade observer attributed the decline in 1998 and 1999 to a downturn in the global economy and the impact of the Asian financial crisis, during which many of China’s competitors devalued their currencies, making their products more competitive in foreign markets.⁵⁶ Although China’s exports of textiles and apparel rose by 17 percent during 1997-2001, their share of China’s total merchandise exports fell from 25 percent to 20 percent in the period. China’s textile and apparel imports also followed a similar trend, although they declined slightly in 2001, to \$13.8 billion, for a gain of 3 percent during 1997-2001. Most of China’s sector exports consisted of apparel, while most of its sector imports consisted of textile articles. For manmade fibers, China posted a trade deficit of almost \$2.0 billion in 2001, up from slightly less than \$1.0 billion in 1999, but down from \$3.2 billion in 1997.

China’s largest export markets for textiles and apparel are Japan, Hong Kong, the United States, and the European Union (EU). A large part of the apparel exports go to the United States and the EU. Much of China’s textiles exports, most of which are exported for dyeing

⁵⁵ Ibid.

⁵⁶ Zhiming Zhang, “Textiles and Apparel in China,” p. 103.

and finishing, are sent to neighboring Asian countries. China's largest import suppliers include Japan, Taiwan, Korea, and Hong Kong. The bulk of these imports are fabrics not produced in China; fabrics produced in quantities insufficient to meet demand; or fabrics which have been dyed and finished in other countries.

China's exports of textiles and apparel to markets with quota limitations (the United States, the EU, and Canada) accounted for 22 percent of China's total textile and apparel exports in 2001 (table E-2). These quota markets accounted for 17 percent of China's total textile exports and 25 percent of China's total apparel exports in 2001.

U.S. imports from China

U.S. imports of textiles and apparel from China fluctuated during 1997-2001, rising from an annual average of 2.0 billion square meters equivalent (SMEs) (valued at approximately \$6.0 billion annually) during 1997-99 to an annual average of 2.2 billion SMEs (\$6.5 billion annually) in 2000-01, and then rose by 125 percent to almost 5.0 billion SMEs (\$8.7 billion) in 2002. Apparel accounted for 32 percent (1.6 billion SMEs) of the quantity but 64 percent (\$5.6 billion) of the value of total U.S. textile and apparel imports from China in 2002. Textiles and textile products accounted for the remainder of the sector imports from China in 2002, representing 68 percent (3.4 billion SMEs) of the total quantity but 36 percent (\$3.2 billion) of the total value. Between 1997 and 2002 the quantity of apparel from China increased by 65 percent and the quantity of imports of textiles and textile products from China rose by 196 percent, with most of the increase in both apparel and textiles occurring in 2002.

The 2002 increase in U.S. imports of Chinese textiles and apparel is in large part due to the removal of quotas for a series of U.S. categories after China joined the WTO at the end of 2001. U.S. imports increased significantly in 2002 in the following categories for which China now has quota-free access to the U.S. market: babies' apparel (category 239), brassieres (categories 349 and 649), robes (categories 350 and 650), luggage and flat goods (category 670), and knit fabric (category 222) (table E-3).⁵⁷

U.S. quotas and quota utilization rates

U.S. imports of textiles and apparel from China are subject to group limits and product-specific limits (quotas). In 2002, three of the four group limits were filled by more than 90 percent.⁵⁸ These three group limits included most imports from China subject to quota that year. Thus, virtually all textile and apparel products not yet integrated into the GATT under the ATC (all goods subject to quota elimination in 2005) were subject to binding quotas in

⁵⁷ Also see table 3-3 in chapter 3 of this report for additional data on U.S. imports of textile and apparel products integrated into the GATT.

⁵⁸ The three group limits having "fill rates" of more than 90 percent accounted for almost all (99.9 percent) of China's total group limits for 2002.

2002. Table E-4 shows quota utilization for selected products that were also subject to an aggregate quota limit under the Group 1 quota.⁵⁹

An important factor in the final price of textile and apparel goods in the United States is the quota price charged to importers.⁶⁰ For goods coming from China, Chinatex reported that quota rents are paid to the Chinese Textiles Chamber of Commerce, which administers the quota system in cooperation with MOFTEC.⁶¹ Chinese officials report that prices are determined on the market and paid to the chamber. Officials acknowledged awareness of a secondary “black market” for quotas, but stressed it was illegal in China and not widely used. Private industry representatives suggest the opposite. According to some U.S. retailers, quota is widely available on the secondary market, and prices are quoted on the Internet. Some industry representatives suggested the prices on the secondary market are sometimes significantly higher than those on the official market administered by the Chinese Textiles Chamber of Commerce. The official prices were not available. Table E-4 shows a sampling of quota prices listed on the secondary market and their export tax equivalent (ETE). The ETE can add significantly to the cost of the exported good. In some cases (e.g., cotton trousers), the ETE exceeded 60 percent of the pre-quota price of the good.

The EU had 42 quotas on imports of textile and apparel products (mostly apparel) from China in 2002. Of these quotas, 25 were filled by 90 percent or more. The major restricted products were woven fabrics of cotton and synthetic fibers; T-shirts, turtlenecks, and other knit shirts; woven and knitted trousers, slacks, and shorts; woven blouses and shirts; knitted underpants and briefs; and brassieres.

⁵⁹ The sum of the individual product quotas in Group 1 exceed the aggregate Group 1 quota. As such, even though some of the individual quotas in Group 1 were not fully utilized in 2002, they were still fully restricted by the group quota.

⁶⁰ U.S. industry representatives, interviews by USITC staff, Hong Kong, Feb. 2003.

⁶¹ Information in remainder of paragraph is mainly from Chinese industry representatives, interviews by USITC staff, Beijing, Feb. 2003.

Table E-1
China: Statistical profile of textile and apparel sector and foreign trade, 1997-2001

Item	1997	1998	1999	2000	2001
Textile and apparel share of manufacturing					
value-added (percent)	12.2	11.9	11.5	9.6	(¹)
Number of textile and apparel establishments	45,600	19,300	18,900	18,900	21,144
Number of textile and apparel workers (1,000)	10,649	8,590	7,772	7,592	7,890
Installed spinning capacities:					
Short-staple spindles (1,000)	42,456.0	42,456.0	33,826.0	34,435.0	35,483.9
Long-staple spindles (1,000)	3,871.0	3,871.0	3,878.0	3,600.0	3,600.0
Open-end rotors (1,000)	578.2	578.2	593.6	623.8	711.5
Installed weaving capacities for the cotton system:					
Shuttleless looms (number)	45,800	45,800	58,700	60,930	82,900
Shuttle looms (number)	687,500	687,500	637,500	594,500	578,400
Purchases of large circular knitting machines	(¹)	1,007	1,675	3,600	2,587
Average total labor cost per operator hour:					
Coastal China	(¹)	(¹)	(¹)	² \$0.69	³ \$0.69
China, other than in coastal areas	(¹)	(¹)	(¹)	(¹)	³ \$0.41
Mill fiber consumption:					
Cotton (1,000 metric tons)	5,118.2	4,704.2	4,766.1	4,804.0	5,210.6
Wool (1,000 metric tons)	262.7	267.0	271.1	304.2	314.4
Manmade fibers (1,000 metric tons)	5,935.2	7,056.2	8,121.9	9,316.4	10,211.2
Total (1,000 metric tons)	11,316.1	12,027.4	13,159.1	14,424.6	15,736.2
Production of selected products:					
Manmade fibers (1,000 metric tons)	4,609.0	5,100.0	6,020.4	6,941.6	(¹)
Synthetic fibers (1,000 metric tons)	4,176.3	4,604.2	5,542.2	6,395.0	(¹)
Rayon fibers (1,000 metric tons)	432.7	481.5	464.0	547.0	(¹)
Yarn (1,000 metric tons)	5,618.0	5,420.0	5,704.8	6,574.7	(¹)
Cotton and manmade-fiber fabric (million meters)	24,873.0	24,100.0	25,000.0	27,725.0	(¹)
Cotton fabric (million meters)	11,886.0	11,427.0	11,846.0	13,922.0	(¹)
Cotton blend fabric (million meters)	7,162.0	8,158.0	8,030.0	8,306.0	(¹)
Manmade-fiber fabric (million meters)	5,825.0	4,515.0	5,124.0	5,472.0	(¹)
Printed and dyed fabric (million meters)	14,139.0	14,652.0	16,045.0	15,871.0	(¹)
Wool fabric (million meters)	388.1	268.1	275.5	279.0	(¹)
Ramie fabric (million meters)	110.9	42.8	93.5	(¹)	(¹)
Linen fabric (million meters)	34.9	39.2	35.5	(¹)	(¹)
Silk fabric (million meters)	6,523.0	6,386.0	6,956.0	4,692.0	(¹)
Apparel (million units)	7,999.0	8,665.0	9,545.0	10,641.0	(¹)
Foreign trade in textiles and apparel:					
Exports:					
Textiles (million dollars)	13,851.3	12,780.9	13,013.7	16,115.5	16,780.1
Apparel (million dollars)	31,685.3	29,900.5	29,945.4	35,944.6	36,496.5
Total (million dollars)	45,536.6	42,681.4	42,959.1	52,060.2	53,276.6
Imports:					
Textiles (million dollars)	12,254.1	11,071.3	11,064.3	12,816.4	12,560.4
Apparel (million dollars)	1,104.6	1,059.3	1,088.7	1,173.3	1,258.3
Total (million dollars)	13,358.7	12,130.5	12,153.0	13,989.8	13,818.6
Trade balance:					
Textiles (million dollars)	1,597.2	1,709.6	1,949.4	3,299.1	4,219.7
Apparel (million dollars)	30,580.7	28,841.2	28,856.7	34,771.3	35,238.2
Total (million dollars)	32,177.9	30,550.9	30,806.1	38,070.4	39,458.0

Table E-1- Continued
China: Statistical profile of textile and apparel sector and foreign trade, 1997-2001

Item	1997	1998	1999	2000	2001
Foreign trade in manmade fibers:					
Exports (<i>million dollars</i>)	806	609	979	1,085	751
Imports (<i>million dollars</i>)	3,964	2,402	1,938	2,846	2,703
Trade balance (<i>million dollars</i>)	-3,158	-1,793	-959	-1,761	-1,952

¹ Not available.

² National average.

³ Represents 2002 data for the textile industry in China. For the apparel industry, the average hourly compensation (including fringe benefits) was \$0.88 for coastal China and \$0.68 for China, other than in coastal areas.

Note.—Because of rounding, figures may not add to totals shown.

Source: Industry data from International Textile Manufacturers Federation (Zurich), *International Textile Machinery Shipment Statistics*, vol. 25/2002, and selected back issues; *Chinese Economic and Trade Statistics 2001*; *China Textile Industry Development Report 2001/2002* (translated from Chinese); Geerdes International, Inc., Richmond, VA; Werner International Management Consultants, "Spinning and Weaving Labor Cost Comparisons 2002," Reston, VA; and Jassin-O'Rourke Group, "Global Competitiveness Report: Selling to Full Package Providers," New York, NY. Trade data are United Nations data as reported by China.

Table E-2
China: Exports of textiles and apparel, by selected markets, 1997-2001

Item and market	1997	1998	1999	2000	2001
	<i>Million dollars</i>				
Textiles (SITC 65):					
Quota markets:					
United States	855	928	1,033	1,211	1,200
European Union	1,026	1,110	1,086	1,420	1,473
Canada	116	121	125	162	177
Subtotal	1,997	2,160	2,244	2,793	2,850
All other:					
Hong Kong	5,350	4,608	4,192	4,861	4,870
Japan	1,697	1,423	1,543	1,859	1,962
Korea	1,092	820	994	1,126	1,074
Other	3,715	3,771	4,042	5,476	6,024
Subtotal	11,854	10,621	10,770	13,322	13,930
Grand total	13,851	12,781	13,014	16,116	16,780
Apparel (SITC 84):					
Quota markets:					
United States	3,527	3,654	3,775	4,673	4,773
European Union	2,800	2,918	3,016	3,544	3,696
Canada	317	359	409	538	583
Subtotal	6,644	6,931	7,199	8,755	9,052
All other	25,041	22,970	22,746	27,190	27,444
Grand total	31,685	29,900	29,945	35,945	36,497
Textiles and apparel:					
Quota markets:					
United States	4,383	4,582	4,807	5,884	5,973
European Union	3,826	4,028	4,102	4,964	5,169
Canada	433	480	534	700	760
Subtotal	8,642	9,091	9,443	11,548	11,902
All other	36,895	33,591	33,516	40,512	41,375
Grand total	45,537	42,681	42,959	52,060	53,277
	<i>Percent</i>				
Share of exports going to quota markets:					
Textiles	14	17	17	17	17
Apparel	21	23	24	24	25
Average	19	21	22	22	22

Note.—Because of rounding, figures may not add to totals shown.

Source: Compiled from United Nations data.

Table E-3

Textiles and apparel: U.S. general imports from China, by specified product categories,¹ 1997-2002

Cat. No.	Description	1997	1998	1999	2000	2001	2002
————— 1,000 square meters equivalent —————							
0	Textiles and apparel, total	2,094,944	1,943,215	2,035,487	2,217,897	2,210,674	4,963,259
1	Apparel	947,376	910,256	910,407	929,159	975,980	1,565,247
2	Textiles	1,147,569	1,032,959	1,125,080	1,288,738	1,234,695	3,398,012
11	Yarns	28,165	13,759	24,507	27,647	21,624	31,594
12	Fabrics	437,960	352,865	381,711	405,317	331,065	612,640
14	Other miscellaneous articles	681,444	666,336	716,862	855,774	882,006	2,753,778
30	Cotton textiles and apparel	984,302	909,719	968,172	946,997	943,623	2,000,000
40	Wool textiles and apparel	18,820	19,792	19,686	23,352	26,752	27,182
60	Manmade-fiber textiles and apparel	752,484	692,784	702,362	758,110	766,071	2,529,103
80	Silk blend/veg fiber textiles/apparel	339,338	320,921	345,267	489,439	474,228	565,610
222	Knit fabric	6,998	7,857	1,384	523	391	86,241
223	Nonwoven fabric	587	330	649	566	161	16,551
224	Pile and tufted fabric	23,467	16,696	9,204	8,133	9,969	12,783
226	Cheesecloth, batistes, lawns, voile	9,485	9,101	9,114	8,934	6,956	12,992
229	Special purpose fabric	8,848	5,074	7,326	7,200	7,044	51,983
237	Playsuits	44,076	44,746	27,075	50,404	55,972	54,244
239	Babies' apparel	18,857	18,378	19,893	22,092	20,374	188,630
313	Cotton sheeting fabric	41,718	31,257	43,312	42,023	33,217	47,469
314	Cotton poplin and broadcloth fabric	64,594	47,137	49,597	47,763	47,234	61,285
315	Cotton printcloth fabric	148,456	121,748	150,121	138,799	97,336	148,397
317	Cotton twill fabric	13,425	6,600	19,745	17,959	20,717	19,297
326	Cotton sateen fabric	147	1,282	1,581	2,263	2,287	6,119
330	Cotton handkerchiefs	3,621	4,086	3,687	3,256	5,557	8,224
331	Cotton gloves	16,743	15,194	13,415	19,028	15,431	49,707
334	Other cotton coats, men/boys	13,012	9,432	9,993	11,296	10,293	13,797
335	Cotton coats, women/girls	14,411	7,254	9,002	16,750	14,822	14,176
336	Cotton dresses	4,866	6,762	7,955	5,327	5,400	9,099
338	Cotton knit shirts, men/boys	9,449	7,987	6,355	6,295	6,471	8,107
339	Cotton knit shirts, women/girls	5,766	5,636	9,892	8,844	9,362	8,979
340	Cotton not knit shirts, men/boys	17,814	16,485	14,514	17,490	15,709	21,250
341	Cotton not knit blouses	8,342	7,062	10,164	6,881	9,883	9,684
342	Cotton skirts	2,495	3,441	5,138	3,980	4,631	4,585
345	Cotton sweaters	4,014	3,501	4,454	4,427	4,070	3,664
347	Cotton trousers, men/boys	22,587	22,091	22,148	16,252	20,166	16,156
348	Cotton trousers, women/girls	16,910	15,072	14,593	11,617	18,680	25,376
349	Cotton brassieres	8,721	10,155	11,641	12,612	8,404	11,180
350	Cotton robes	7,506	7,765	7,742	5,453	9,368	58,422
351	Cotton nightwear	23,588	24,680	26,726	17,711	34,764	25,349

See footnotes at end of table.

Table E-3—Continued
Textiles and apparel: U.S. general imports from China, by specified product categories,¹ 1997-2002

Cat. No.	Description	1997	1998	1999	2000	2001	2002
		————— 1,000 square meters equivalent —————					
352	Cotton underwear	18,013	15,728	19,049	11,840	20,028	14,478
359	Other cotton apparel	73,009	77,139	76,489	64,415	56,747	142,293
360	Cotton pillowcases	5,452	5,269	5,292	4,670	5,946	5,357
361	Cotton sheets	21,350	26,457	23,598	18,635	26,324	27,207
362	Cotton bedspreads and quilts	38,436	49,514	46,604	39,245	45,524	51,385
363	Cotton terry and other pile towels	10,513	7,840	7,151	10,004	10,034	10,352
369	Other cotton manufactures	257,323	253,554	259,301	260,752	269,893	719,891
446	Wool sweaters, women/girls	2,936	2,893	3,004	2,813	3,100	3,156
447	Wool trousers, men/boys	1,078	1,135	1,046	1,140	754	1,128
465	Wool floor coverings	4,240	5,301	5,240	6,359	5,864	6,556
600	Textured filament yarn	173	52	1	7	13	9,222
604	Yarn of synthetic staple fiber	6,255	2,604	2,706	2,849	1,910	408
606	Non-textured filament yarn	3,940	0	0	3	2	3,803
611	Woven fabric, artificial staple	7,037	4,968	4,582	4,621	2,626	3,098
613	Manmade-fiber sheeting fabric	3,052	4,381	3,530	3,777	3,431	9,926
614	Manmade-fiber poplin/broadcloth	14,560	11,884	9,113	9,478	12,973	15,838
615	Manmade-fiber printcloth fabric	20,762	18,353	11,364	19,355	19,662	31,004
617	Manmade-fiber twill/sateen fabric	18,462	17,318	11,832	12,229	7,956	18,031
631	Manmade-fiber gloves	3,826	3,055	2,803	4,017	4,197	15,108
632	Manmade-fiber hosiery	412	661	678	551	2,213	20,658
634	Other manmade coats, men/boys	22,100	16,636	20,610	24,064	25,703	27,287
635	Manmade-fiber coats, women/girls	23,000	18,246	20,252	25,009	27,650	25,496
636	Manmade-fiber dresses	20,433	16,101	24,743	16,227	21,683	28,726
638	Manmade knit shirts, men/boys	16,166	11,938	8,170	7,184	11,983	7,085
639	Manmade knit shirts, women/girls	19,298	22,722	23,897	16,374	31,334	26,677
640	Manmade not knit shirts, men/boys	29,200	36,046	29,610	24,338	32,607	29,804
641	Manmade-fiber not knit blouses	18,085	12,175	15,699	16,789	18,728	16,147
642	Manmade-fiber skirts	4,638	5,168	5,654	4,319	5,460	7,886
643	Manmade-fiber suits, men/boys	2,076	2,124	2,231	2,134	1,806	2,286
644	Manmade-fiber suits, women/girls	10,456	14,183	13,335	12,878	14,058	15,989
645	Manmade-fiber sweaters, men/boys	2,433	1,370	1,195	1,878	2,706	2,559
646	Manmade-fiber sweaters, women/girls	23,973	22,332	14,534	24,169	26,279	22,760
647	Manmade-fiber trousers, men/boys	27,413	21,845	23,914	25,842	17,904	29,074
648	Manmade-fiber trousers, women/girls	17,746	16,183	19,612	15,990	16,875	21,080
649	Manmade-fiber brassieres	3,978	4,028	4,132	3,725	4,337	31,140
650	Manmade-fiber robes	4,762	4,954	4,608	5,617	5,081	34,101
651	Manmade-fiber nightwear	36,538	32,626	34,098	38,943	35,888	36,392
652	Manmade-fiber underwear	40,486	32,581	39,097	42,017	43,102	38,494
653	Manmade down-fill coats, men/boys	11,774	9,729	9,917	14,117	11,655	14,920
654	Manmade down-fill coats, women/girls	4,154	5,530	11,971	14,369	9,760	14,092
659	Other manmade-fiber apparel	76,362	78,944	83,348	85,131	73,110	133,498

See footnotes at end of table.

Table E-3—Continued

Textiles and apparel: U.S. general imports from China, by specified product categories,¹ 1997-2002

Cat. No.	Description	1997	1998	1999	2000	2001	2002
		————— 1,000 square meters equivalent —————					
666	Other manmade-fiber furnishings	53,181	58,339	51,819	52,699	64,585	769,873
669	Other manmade-fiber manufactures	45,110	36,200	33,252	38,969	40,823	181,383
670	Manmade-fiber handbags/luggage	94,515	94,211	114,379	118,650	105,745	672,698
836	Dresses, silk blends/vegetable fibers . . .	8,478	13,485	12,089	10,359	7,242	12,721
838	Knit shirts, silk blends/vegetable fibers . .	5,650	6,220	9,224	6,400	9,386	33,363
840	Shirts, not knit, silk/vegetable fibers	9,819	8,379	7,702	7,578	7,865	28,089
845	Sweaters, other vegetable fibers	111,080	106,180	88,861	100,618	105,768	98,211
847	Trousers, silk blends/vegetable fibers . . .	12,796	18,833	20,216	23,091	13,890	32,442
870	Luggage of silk blends/vegetable fibers . .	142,094	120,427	121,849	138,776	132,262	135,117
899	Other, silk blends/vegetable fibers	4,718	4,009	41,990	156,010	160,695	157,737

¹ To administer the U.S. textiles and apparel quota programs, articles are grouped under 3-digit category numbers, which cover many 10-digit statistical reporting numbers under which goods are classified for statistical purposes in the Harmonized Tariff Schedule of the United States (HTS). The 1-digit and 2-digit numbers represent specific levels of import aggregation for articles covered by the quota program (e.g., the number "1" represents total imports of apparel, while "31" represents total imports of cotton apparel).

Source: Compiled from official statistics of the U.S. Department of Commerce, found at <http://otexa.ita.doc.gov/>.

Table E-4

Textiles and apparel: China's fill rates of adjusted U.S. quota levels, selected products, 2000-2002

		Fill rates			Quota prices ¹	
		2000	2001	2002	Value ²	ETE ³
		Percent filled			US dollars	Percent ad valorem
<u>Cotton apparel</u>						
334	Other men's and boys' coats	83.0	68.0	87.9	36.00	27.9
335	Women's and girls' coats	94.8	94.9	92.5	41.00	27.1
338/339	Knit shirts and blouses	89.0	89.8	92.6	15.50	27.4
338/339 (S)	Knit tops, including tanktops	98.4	95.5	92.7	33.00	(⁴)
340	Men's and boys' shirts, not knit	84.4	78.1	97.3	29.00	64.0
341	Women's and girls' shirts, not knit	74.2	85.6	92.0	31.00	44.8
342	Skirts	82.5	90.1	94.8	39.00	60.4
347/348	Trousers and shorts	75.7	88.0	97.6	41.50	64.0
351	Nightwear and pajamas	66.6	98.0	85.7	24.00	44.0
352	Underwear	70.5	100.0	86.1	7.00	29.7
359 C	Coveralls and overalls	65.1	65.0	89.7	2.80	(⁴)
<u>Wool apparel</u>						
434	Other men's and boys' coats	67.1	96.5	96.1	80.00	23.0
445/446	Sweaters	95.2	100.0	95.0	78.00	25.6
<u>Manmade-fiber apparel</u>						
635	Women's and girls' coats	90.0	97.9	86.8	45.00	24.0
636	Dresses	69.2	79.9	87.6	37.50	13.8
638/639	Knit shirts	66.4	97.6	90.2	23.00	41.6
640	Men's and boys' shirts, not knit	82.9	90.5	87.2	15.00	43.3
641	Women's and girls' shirts, not knot	87.1	95.0	86.3	15.50	23.8
642	Skirts	78.7	78.9	93.8	36.00	55.9
648	Women's and girls' trousers and shorts	86.8	82.0	92.0	24.50	34.1
651	Nightwear and pajamas	97.6	91.8	87.4	16.00	26.2
659 H	Headwear	94.0	84.1	92.1	4.50	(⁴)

¹ Quota prices are black market quota prices. Official quota prices quoted by the Chinese Textiles Chamber of Commerce are not available.

² Prices are per dozen, except for category 659-H, which is per kilogram.

³ Export tax equivalents calculated using customs average unit value per category and the quota price per category.

⁴ Not available.

Note.--For all the products listed above, U.S. imports from China are subject to an aggregate ("group 1") quota covering a large number of different products subject to quota. China filled more than 95 percent of this aggregate quota in each of the years 2000-02. The sum of the individual product quotas in group 1 exceed the aggregate group 1 quota. As such, although some individual quotas were not fully utilized, they were still fully restricted by the group quota.

Source: Compiled from official statistics of the U.S. Department of Commerce, Office of Textiles and Apparel, except as noted.

Hong Kong¹

Overview

Although much of Hong Kong's production of textiles and apparel has moved to China and other low-cost supplying countries in recent years, the sector continues to play an important role in Hong Kong's economy through its OPAs,² some domestic sector production, and its role as a global apparel sourcing hub. Although Hong Kong's economy is largely dominated by the service sector (accounting for 85 percent of Hong Kong's gross domestic product (GDP) in recent years), textile and apparel manufacturing and trading companies account for a large part of the remainder, specifically 5.3 percent of Hong Kong's GDP in 2000.³ The textile and apparel sector directly employed over 56,000 people, approximately one-third of Hong Kong's industrial workforce, and an additional 108,000 persons are employed by textile and apparel trading companies involved in textile and apparel import-export trade. The textile and apparel sector also accounted for 52 percent of Hong Kong's total domestic exports in 2001, when Hong Kong was the world's second-largest exporter of apparel.⁴

Hong Kong has taken advantage of its strategic location and advanced port facilities and infrastructure to become a hub for global apparel sourcing, including a portal for world textile and apparel trade with China. Its textile and apparel companies, primarily the apparel companies, act as headquarters for firms which manage foreign operations and provide services. Hong Kong firms offer full package production and are "efficient in managing production and performing services, such as order placement, product development, material sourcing, quality control, marketing, trade financing, and logistic arrangement."⁵ Many U.S. and European Union (EU) retailers source apparel directly from Hong Kong, either through their own buying offices there or through Hong Kong apparel or trading companies. Firms producing apparel with Hong Kong origin generally concentrate in more sophisticated, higher value-added operations and most use OPAs with factories in China. U.S. apparel firms reported that Hong Kong's and China's apparel production workers are highly skilled sewers. However, an industry source in Hong Kong noted that most Hong Kong sewers are in their 40s and 50s and that the young people in Hong Kong are not moving into apparel production, but seeking white collar professional jobs.

Hong Kong's production of apparel through OPAs is directly related to the existence of global quotas⁶ on Hong Kong's and China's apparel shipments to developed country markets—primarily, the EU and the United States. The shift from utilizing OPAs to producing

¹ Prepared by Jackie W. Jones, Office of Industries.

² For more information on OPAs, see the "overview" at the beginning of this appendix.

³ U.S. Department of State telegram 2138, "Hong Kong's Textile Industry After Quotas," prepared by U.S. Consulate, Hong Kong, Apr. 22, 2002.

⁴ The export shares for textiles and apparel of the countries covered by the study are shown in chapter 1 of this report, table 1-1 and figure 1-2.

⁵ "Hong Kong and China Economies," http://www.tdc.org.hk/main/industries/t2_2_4.htm, p. 1.

⁶ Includes quotas placed on Hong Kong's shipments to the European Union (EU), Canada, and the United States.

totally in China is largely dependent upon the future use of safeguards by the United States and the EU on rapidly increasing textile and apparel shipments from China to these developed country markets.

Industry Profile

Industry structure and performance

Textiles

Hong Kong's textile industry is concentrated in cotton spinning, denim weaving, knit-to-shape panel knitting, fine-gauge cotton knit production, and dyeing and finishing.⁷ It is a major supplier to Hong Kong's apparel industry, having the ability to supply local apparel manufacturers' quick turnaround operations with both local textile production and also with production offshore, especially in China. To improve their competitiveness, some Hong Kong textile companies have formed partnerships with Chinese companies and have shifted their production operations to China.

Hong Kong's production of textiles, including denim fabrics, has declined considerably in recent years. Increased environmental regulations and rising production costs have been the impetus for a shift in textile production and finishing from Hong Kong to offshore locations—China and other southeast Asian countries that offer lower production costs and less stringent environmental regulations. For example, a representative of a U.S. apparel firm in Hong Kong stated that the printing and dyeing segment of Hong Kong's textile industry is moving to Shanghai, where that segment of the industry is expanding and developing its quality.

Between 1997 and 2001, the number of establishments producing textiles⁸ in Hong Kong declined by 28 percent, to 1,283, and the number of textile production workers decreased by one-third, to 15,045 persons (table E-16).⁹ Textile output declined by 29 percent during 1996-99, to \$26.6 billion (in producer prices). The major segments of Hong Kong's textile industry are knitting mills, with output of \$15.2 billion and accounting for 57 percent of total textile output in 1999, and spinning, weaving, and finishing mills, with output of \$10.7 billion and accounting for 40 percent of the total.

⁷ "Hong Kong's Textile Industry," Profiles of Hong Kong Major Manufacturing Industries, found at www.tdctrade.com, retrieved Oct. 8, 2001, p. 1.

⁸ Includes spinning, weaving, and finishing mills; knitting mills; and production of carpets and rugs, cordage, rope, and twine, and other made-up textile products (other than apparel).

⁹ Data in this paragraph on the number of establishments and employees are from the Hong Kong Economic and Trade Office, Washington, DC. Data on sector output are mostly from the United Nations Industrial Development Organization (UNIDO), *International Yearbook of Industrial Statistics 2002* (Vienna), p. 232.

Production of higher priced textile products, such as quality ring-spun and open-end yarn; knitted fabric; and complex dyed and printed fabrics, has remained in Hong Kong. Hong Kong's textile industry is focused on "sophisticated textile products with original designs."¹⁰ Generally, Hong Kong's textile industry is focused on high-value-added activities such as sales and marketing, quality control, design and development, while factories offshore are focused on lower value-added activities.¹¹ Hong Kong textile companies that continue to manufacture locally have invested in advanced machinery and technology, such as open-end spinning machines and shuttleless looms.

Apparel

Increasing wages and land costs¹² have made Hong Kong one of the most expensive apparel suppliers in the Asian Pacific region¹³ and curbed the growth of its apparel production. Hong Kong industry sources reported that entry level skilled workers in Hong Kong's apparel industry earn HK\$5,000-6,000 per month, compared with earnings in China of the equivalent of HK\$2,000-3,000 per month. Consequently, Hong Kong apparel companies have moved production, especially of high-volume, lower cost apparel, to China and other low-cost supplying countries. The Hong Kong apparel industry currently emphasizes production of high-quality, high-fashion apparel and continues to work towards becoming more price and quality competitive, shortening delivery times, and developing and using the latest production and communication technologies.¹⁴ In addition, to remain competitive, apparel companies that continue to produce garments locally utilize OPAs with factories in China. Much of the apparel production attributable to Hong Kong is performed both in China, through OPAs with companies or contractors there, and in Hong Kong. Under OPAs, a carefully planned, but small part of the assembly process, is performed in Hong Kong so that the apparel articles can be considered to have Hong Kong origin. As early as the late 1980s, Hong Kong-based apparel producers began subcontracting production to factories in southeastern China. OPAs eventually turned into a partial relocation of Hong Kong's apparel industry. Hong Kong's apparel industry, for the most part, is not vertically integrated. Apparel companies source fabrics locally and from all over the world; major sources include Korea, Taiwan, and China.

As stated above, Hong Kong apparel producers now either utilize OPAs or have diversified their production worldwide. Consequently, the number of establishments producing apparel in Hong Kong dropped from 3,717 in 1997 to 2,413 in 2001.¹⁵ The number of employees involved in apparel manufacturing in Hong Kong dropped by 43 percent from 76,785 to

¹⁰ "Hong Kong's Textile Industry," p. 5.

¹¹ Ibid.

¹² Since the beginning of Hong Kong's latest recession, the cost of factory space has steadily declined and, reportedly, is currently competitively priced with China's rates. Representative of Hong Kong Government, interview by USITC staff, Feb. 25, 2003.

¹³ James Glass, "Hong Kong's Textile and Clothing Industry: Prospects to 1997 and Beyond," *Textile Outlook International*, May 1994.

¹⁴ "Hong Kong's Clothing Industry."

¹⁵ Establishment and employee data from the Hong Kong Economic and Trade Office, Washington, DC.

43,776 during 1997-2001. Gross output in the sector dropped by 30 percent from \$36.1 billion in 1997 to \$25.1 billion in 1999.¹⁶

Apparel industry sources in Hong Kong reported that most of Hong Kong's apparel industry is made up of small- and medium-sized companies, most of which utilize OPAs and have plants both in Hong Kong and in other countries such as China and Macau. These smaller to medium-sized companies used to subcontract out their production, but now tend to own more assets in order to have more control over their manufacturing facilities, especially as U.S. retailers have made human rights requirements more stringent. These companies specialize and work together to fill large orders and complicated production requirements demanded by U.S. retailers. In spite of the large number of these small- and medium-sized firms, Hong Kong's apparel industry is said to be dominated by approximately 20 to 30 large companies, with sales of up to \$500 million each.¹⁷ These apparel companies have production networks all over the world, including China, Australia, Bangladesh, Cambodia, Indonesia, Madagascar, Mauritius, Mexico, South Africa, Korea, Sri Lanka, Thailand, and Vietnam.¹⁸ Reportedly, the "favorite" location for offshore production is China because of its low cost, cultural similarities to Hong Kong, geographical proximity, and large potential consumer market.¹⁹ Hong Kong industry sources report that Cambodia and Vietnam are also increasingly popular sites for investment.²⁰ A Hong Kong Trade Development Council survey found 48 percent of Hong Kong's textile and apparel companies' exports were produced in China; 35 percent were produced in other countries, such as Vietnam and Cambodia; and 17 percent were produced in Hong Kong.²¹

In summary, Hong Kong has become a regional sourcing hub and entrepot for Asian apparel sourcing. Hong Kong's apparel companies provide such services as product development, material sourcing, quality control, merchandising, trade financing, and logistics arrangements. However, with China's entry to the WTO, Hong Kong faces more competition as apparel buyers increasingly may be attracted to dealing directly with producers in China.²²

Investment

Hong Kong operates a free-market economy, with minimum government intervention in corporate activity.²³ In general, Hong Kong affords national treatment to foreign-headquartered companies and foreign direct investment. Foreign-owned firms and local

¹⁶ Data from UNIDO, *International Yearbook of Industrial Statistics 2002*, p. 234.

¹⁷ Alkman Granitsas, "Back in Fashion," *Far Eastern Economic Review*, May 21, 1998, p. 53.

¹⁸ "Hong Kong's Clothing Industry."

¹⁹ Ibid.

²⁰ Representative of Hong Kong Government, interview by USITC staff, Hong Kong, Feb. 25, 2003.

²¹ U.S. Department of State telegram 5999, "Textiles Challenges Ahead and Diversification," prepared by the U.S. Consulate, Hong Kong, Nov. 1, 2002.

²² "World Textile and Apparel Trade and Production Trends," *Textile Outlook International*, Sept.-Oct. 2002, p. 59.

²³ U.S. Department of State telegram 5741, "1999 Hong Kong Investment Climate," prepared by the U.S. Consulate, Hong Kong, July 3, 1999.

firms are taxed at the same rate, 16 percent of profits. There are no capital gains or withholding taxes on dividends and royalties of foreign or local companies.

U.S. and other foreign investment in Hong Kong's textile and apparel manufacturing sector has been on the decline as investment has been redirected to China and other lower cost supplying countries. U.S. investment in the Hong Kong sector declined from \$81 million in 1994 to \$49 million in 1997 (latest year available).²⁴ Japanese investment in textile and apparel manufacturing in Hong Kong declined from \$210 million in 1994 to \$46 million in 1997.²⁵

In contrast, there has been growth in the number of foreign corporate regional offices and headquarters opening in Hong Kong and also in Hong Kong's outward investment. As of June 1, 2002, 3,119 foreign companies²⁶ had regional operations in Hong Kong; 948 were regional headquarters and 2,171 were regional offices.²⁷ There is also increased investment in apparel manufacturing in lower cost countries by Hong Kong companies, which have been investing heavily in all types of manufacturing in China. At the end of 2002, Hong Kong's foreign direct investment in China totaled \$130 billion and accounted for 33 percent of Hong Kong's total foreign investment.²⁸ This investment is concentrated largely in Guangdong Province, with the majority of such investment in the industrial sector, mainly OPAs.²⁹

Government Domestic and Trade Policies

The Hong Kong Trade and Industry Department reportedly has no plans to provide subsidies to textile and apparel firms that produce in Hong Kong, nor to provide tax incentives to encourage new manufacturing or to keep firms from relocating to China or other low-cost apparel suppliers.³⁰ The Hong Kong Trade and Industry Department's overall goal for the textile and apparel sector is for it to move "up the value chain" by providing services and becoming a "high-tech hub."³¹ The Trade and Industry Department is also encouraging Hong

²⁴ U.S. Department of State telegram 5741, "1999 Hong Kong Investment Climate."

²⁵ It is possible that these trends in U.S. and Japanese investment may have been influenced in part by the return of Hong Kong to China. However, China has honored Hong Kong's economic and trade autonomy.

²⁶ These figures are for total regional operations in Hong Kong; not just for those involving textiles and apparel.

²⁷ "Territory Continues to Attract Foreign Companies," *Hong Kong Digest*, Nov. 2002, p. 1.

²⁸ The information in this paragraph applies to investment in all sectors and is taken from the Hong Kong Economic and Trade Office report "Hong Kong's Investment in the Mainland Report," last updated Oct. 2002.

²⁹ This applies to outward processing arrangements producing all types of products, not just textiles and apparel.

³⁰ Representative of the Hong Kong Trade and Industry Department, interview by USITC staff, Hong Kong, Feb. 25, 2003.

³¹ U.S. Department of State telegram 5999, "Textiles Challenges Ahead and Diversification," and representative of Hong Kong Trade and Industry Department, interview by USITC staff, Feb. 25, 2003.

Kong firms to develop their own brand names, such as Girodana, and to become a design center, especially a style leader for China.³²

Hong Kong is a duty-free port and has no tariff barriers.³³ In addition, Hong Kong maintains no preferential or discriminatory export or import policies, such as import quotas, performance requirements, bonds, deposits, or similar requirements which affect foreign trade.

Foreign Trade³⁴

Imports

Hong Kong's imports of textiles and apparel³⁵ declined by 9 percent during 1997-2001 to \$28.2 billion (table E-5). A significant portion of these imports likely are partially made garments shipped from China to Hong Kong as part of OPAs, and apparel inputs such as fabrics shipped to Hong Kong for further dyeing and/or finishing. Hong Kong's imports of apparel increased by 7 percent during the period to \$16.0 billion, or 57 percent of Hong Kong's total textile and apparel imports, while Hong Kong's imports of textiles declined by 25 percent to \$12.2 billion, or 43 percent of the total. This decline in textile imports likely reflected the movement of apparel production from Hong Kong to China and other low-cost Asian suppliers.

Exports

Hong Kong was the world's sixth-largest exporter of textiles and apparel in 2001 with exports valued at \$10.3 billion (table E-5). Almost 90 percent (or \$9.3 billion) consisted of apparel, making Hong Kong the world's second-largest exporter of apparel in 2001. Hong Kong's exports of domestic textiles and apparel decreased by 6 percent during 1997-2001 to \$10.3 billion.³⁶

Hong Kong reports data for exports of "domestic" textiles and apparel—that is, textiles and apparel for which the production is attributable to Hong Kong—and for "re-exports" of

³² Representative of Hong Kong Government, interview by USITC staff, Feb. 25, 2003.

³³ U.S. Department of State telegram 5741, "1999 Hong Kong Investment Climate."

³⁴ Analysis of Hong Kong's trade balance is difficult because the export data used reflect exports only of "locally produced" textiles and apparel (although some of the production of these exports likely occurs through OPAs with producers in China), while the import data reflect trade in textiles and apparel that may be passing through Hong Kong for further production in China or other low-cost Asian producers.

³⁵ The import data reflect shipments of textiles and apparel that may be only passing through Hong Kong for further production or consumption in China and other low-cost Asian producers or markets.

³⁶ The following discussion on Hong Kong's foreign trade is based on statistics of the United Nations, as reported by Hong Kong.

textiles and apparel. In the case of a domestic export that is eligible for Hong Kong origin, production of a garment may occur in China by producers or contractors which participate in OPAs with Hong Kong producers. The production operations occurring in China may include cutting, assembly, pressing, and packaging. Re-exports of textiles and apparel are produced primarily or entirely in China for Hong Kong apparel or trading companies and exported through Hong Kong to their ultimate end-use markets. Re-exports do not confer Hong Kong origin.

Hong Kong's domestic apparel exports fluctuated between \$9.3 billion and \$9.9 billion during 1997-2001, with a 7-percent decline occurring in 2001, when apparel exports fell to \$9.3 billion from the 2000 level (table E-5). The principal market for Hong Kong's domestic apparel exports was the United States, accounting for \$4.3 billion or 47 percent of the total value of apparel exports in 2001, followed by the EU and China with 23 percent and 22 percent, respectively, of the total value (table E-6).³⁷

Hong Kong's domestic textile exports totaled almost \$1.1 billion in 2001 (table E-6). Textile exports accounted for approximately 5 percent of the estimated total output of Hong Kong's domestic textiles industry. Most of the domestic textiles are used by Hong Kong apparel companies which produce garments in Hong Kong through OPAs and/or in China. The leading markets for Hong Kong's domestic textiles were China, with \$469 million, or 45 percent of the total value in 2001, and the United States, with \$176 million, or 17 percent of the total (table E-6).³⁸ The Philippines, Bangladesh, and Canada, with imports from Hong Kong of \$40 million, \$39 million, and \$30 million, respectively, in 2001, were smaller, but the next largest markets. Exports to China and other Asian markets reflect Hong Kong textile companies supplying the inputs—yarns and fabrics—for the production of apparel by manufacturers affiliated with Hong Kong apparel companies in these lower cost apparel producing countries.

The value of Hong Kong's re-exports of textiles decreased by 14 percent from almost \$13.0 billion in 1997 to \$11.2 billion in 2001.³⁹ The largest market for these re-exports in 2001 was, by far, China, which accounted for approximately 70 percent of the total value. The next largest markets were the United States, accounting for 3 percent; and Bangladesh, the Philippines, Thailand, Indonesia, and Sri Lanka, each accounting for 2 percent of the total value. The total value of Hong Kong's re-exports of apparel increased by 3 percent from \$13.8 billion in 1997 to \$14.2 billion in 2001. The largest markets for these re-exports were the United States (which accounted for 28 percent of the total value), Japan (14 percent), the United Kingdom (9 percent), Germany (5 percent), and Australia (3 percent).

³⁷ In 2001, the calculated trade-weighted average U.S. duty on apparel imports from Hong Kong was 17 percent ad valorem.

³⁸ The calculated trade-weighted average duty on U.S. imports of textile mill products was 8.7 percent ad valorem in 2001.

³⁹ Data compiled from United Nations statistics.

U.S. imports from Hong Kong⁴⁰

U.S. imports of textiles and apparel from Hong Kong increased by 27 percent during 1997-2001 to 1,092 million square meters equivalent (SMEs), before declining by 12 percent to 962 million SMEs in 2002 (table E-7). The value of these imports increased by only 7 percent during 1997-2001, to \$4.4 billion in 2001, before declining by 9 percent in 2002 to \$4 billion. The smaller increase in value is due to the Asian financial crisis of 1997 with its devaluations of several major East Asian currencies, including Hong Kong's, plus the highly competitive U.S. apparel market exerting downward pressure on prices. Once one of the largest U.S. textile and apparel suppliers as part of the "Big Three,"⁴¹ Hong Kong was the 13th-largest supplier of U.S. textile and apparel imports by quantity in 2002, accounting for 6 percent of the total import quantity, but the third-largest supplier by value, with 5.6 percent of the total value.

Apparel represented the majority of U.S. imports of textiles and apparel from Hong Kong, accounting for 85 percent of the total quantity of U.S. imports of these products in 2002 (table E-7). Textiles accounted for the remaining 15 percent. Major apparel products imported from Hong Kong include manmade-fiber and cotton underwear and nightwear; babies' garments; women's and girls' cotton trousers, knit shirts, and woven blouses; women's and girls' manmade-fiber knit shirts; men's and boys' cotton woven shirts; and sweaters of manmade fibers and of vegetable fibers such as ramie and/or linen. Major textile products imported from Hong Kong include knit fabrics, blue denim fabrics, and cotton twill fabrics.⁴²

U.S. quotas and quota utilization rates

U.S. imports of textiles and apparel from Hong Kong are subject to group and specific limits or quotas. The United States uses about 70 product categories to administer the textile quota program⁴³ to Hong Kong. These 70 categories are divided into 3 groups and 2 subgroups with an overall quota assigned to each group and subgroup. The textile and apparel articles in each group are subject to specific limits. During 2001, there were approximately 75 specific limits covering imports of textile and apparel articles from Hong Kong, and these limits were applied to individual product categories, subsets of product categories, and

⁴⁰ Trade data in this section are based on official statistics of the U.S. Department of Commerce (DOC), with the quantity measured in square meters equivalent (SMEs). These data, which are also used in quota analysis, are not entirely comparable to UN data. DOC data include textile and apparel products made of cotton, wool, manmade fibers, ramie, flax, and silk blends. By contrast, UN data also include apparel made of leather, fur, and plastics.

⁴¹ The "Big Three" included Hong Kong, Korea, and Taiwan.

⁴² U.S. imports of all of these products from Hong Kong, except for baby garments and knitted fabrics, are covered by specific limits or quotas. Any existing quotas on U.S. imports of the babies' garments and knitted fabrics were eliminated on Jan. 1, 2002, as these products became integrated into the WTO.

⁴³ To administer the U.S. textile quota program, textile articles are grouped under 3-digit category numbers, which cover several thousand 10-digit item numbers under which merchandise is classified for statistical purposes in the Harmonized Tariff Schedule of the United States (HTS).

combined product categories. During 2001, approximately 80 percent of the total quantity of U.S. imports of textiles and apparel from Hong Kong (as measured in SMEs) was covered by U.S. quotas—either by specific limits or by group limits.⁴⁴ Although none of the group or subgroup limits was binding during 2001, 22 of the specific limits were filled at 90 percent or more.

EU quotas and quota utilization rates

During 2002, the EU had 23 quotas on textile and apparel products imported from Hong Kong. The majority of these products included apparel items, such as T-shirts and other knitted shirts for men and women; knitted underwear; trousers, slacks, and shorts; men's and women's suits and ensembles of woven fabrics; panty hose, tights, and socks; dresses; and overcoats, jackets, and blazers made of knitted fabrics. Textile products included woven cotton fabrics, including a specific quota on unbleached or bleached cotton fabrics; woven fabrics of synthetic fibers, including a specific quota on those which are unbleached or bleached; and woven table, kitchen, and bath linens. Three of these quotas were filled at more than 90 percent during 2002. These quotas covered certain knitted shirts and T-shirts, and trousers, slacks, and shorts.

⁴⁴ Based on 2001 trade, this percentage would decrease to about 68 percent, reflecting the elimination of quotas on some product categories as part of the product integration under the ATC of the WTO in 2002.

Table E-5
Hong Kong: Statistical profile of textile and apparel sector and foreign trade, 1997-2001

Item	1997	1998	1999	2000	2001
Textile and apparel share of manufacturing value-added (percent)					
	23	21	(¹)	(¹)	(¹)
Number of establishments:					
Textiles	1,778	1,555	1,504	1,424	1,283
Apparel	3,717	3,225	2,998	2,669	2,413
Total	5,495	4,780	4,502	4,093	3,696
Number of workers:					
Textiles	22,671	17,720	16,482	16,200	15,045
Apparel	76,785	62,333	58,490	50,214	43,776
Total	99,456	80,053	74,972	66,414	58,821
Installed spinning capacities:					
Short-staple spindles (number)	32,000	39,000	45,400	48,000	48,000
Long-staple spindles (number)	24,000	24,000	24,000	24,000	24,000
Open-end rotors (number)	24,100	23,400	22,600	20,100	20,100
Installed weaving capacities:					
Shuttleless looms (number)	4,270	4,270	4,670	4,670	(¹)
Shuttle looms (number)	370	370	370	370	(¹)
Purchases of large circular knitting machines (number) ...	(¹)	148	134	279	247
Average total labor cost per operator hour	(¹)	(¹)	(¹)	\$6.10	² \$6.15
Foreign trade:					
Exports:					
Textiles (million dollars)	1,633.7	1,389.1	1,221.7	1,175.4	1,049.8
Apparel (million dollars)	9,323.9	9,663.8	9,569.3	9,932.2	9,261.1
Total (million dollars)	10,957.6	11,053.0	10,791.0	11,107.6	10,310.9
Imports:					
Textiles (million dollars)	16,191.6	13,474.7	12,548.8	13,697.1	12,152.5
Apparel (million dollars)	14,916.4	14,219.5	14,697.1	15,935.1	16,028.1
Total (million dollars)	31,108.0	27,694.2	27,245.8	29,632.2	28,180.6
Trade balance:					
Textiles (million dollars)	-14,557.9	-12,085.6	-11,327.0	-12,521.7	-11,102.7
Apparel (million dollars)	-5,592.5	-4,555.7	-5,127.8	-6,002.9	-6,767.0
Total (million dollars)	-20,150.4	-16,641.2	-16,454.9	-18,524.6	-17,869.7

¹ Not available.

² Represents 2002 data for textile production workers.

Note.—Because of rounding, figures may not add to totals shown.

Source: Industry data compiled from data of the World Bank (manufacturing value added), available on its website at <http://publication.worldbank.org>; Hong Kong Economic and Trade Office, Washington, DC (establishment and employment data); International Textile Manufacturers Federation, *International Textile Machinery Shipment Statistics* (Zurich), vol. 25/2002, and selected back issues; and Werner International Management Consultants, "Spinning and Weaving Labor Cost Comparisons 2002," Reston, VA. Trade data are United Nations data as reported by Hong Kong.

Table E-6
Hong Kong: Exports of textiles and apparel, by selected markets, 1997-2001

Item and market	1997	1998	1999	2000	2001
	<i>Million dollars</i>				
Textiles (SITC 65):					
Quota markets:					
United States	158	183	195	206	176
European Union	31	28	27	29	30
Canada	18	19	14	14	12
Subtotal	206	230	236	249	217
All other:					
China	869	692	545	507	469
Philippines	69	44	59	55	40
Bangladesh	51	44	41	42	39
Other	438	379	340	323	285
Subtotal	1,427	1,160	985	927	833
Grand total	1,634	1,389	1,222	1,175	1,050
Apparel (SITC 84):					
Quota markets:					
United States	4,204	4,549	4,316	4,523	4,308
European Union	2,665	2,485	2,491	2,539	2,106
Canada	335	333	299	310	305
Subtotal	7,204	7,367	7,105	7,372	6,718
All other	2,120	2,297	2,464	2,560	2,543
Grand total	9,324	9,664	9,569	9,932	9,261
Textiles and apparel:					
Quota markets:					
United States	4,362	4,732	4,511	4,729	4,483
European Union	2,696	2,513	2,518	2,567	2,135
Canada	353	352	313	324	317
Subtotal	7,410	7,597	7,342	7,621	6,936
All other	3,547	3,456	3,449	3,487	3,375
Grand total	10,958	11,053	10,791	11,108	10,311
	<i>Percent</i>				
Share of exports going to quota markets:					
Textiles	13	17	19	21	21
Apparel	77	76	74	74	73
Average	68	69	68	69	67

Note.—Because of rounding, figures may not add to totals shown.

Source: Compiled from United Nations data.

Table E-7
Textiles and apparel: U.S. general imports from Hong Kong, by specified product categories,¹ 1997-2002

Cat. No.	Description	1997	1998	1999	2000	2001	2002
<i>1,000 square meters equivalent</i>							
0	Textiles and apparel, total	863,355	1,020,897	1,017,557	1,123,250	1,092,272	961,680
1	Apparel	736,450	862,469	840,948	916,306	916,931	821,261
2	Textiles	126,905	158,429	176,609	206,945	175,341	140,420
12	Fabrics	114,158	142,893	157,805	168,021	138,367	97,272
14	Other miscellaneous articles	10,478	13,278	16,569	37,014	36,038	42,970
30	Cotton textiles and apparel	506,514	596,495	608,069	601,799	590,789	545,846
40	Wool textiles and apparel	34,957	34,508	32,843	34,983	33,832	30,955
60	Manmade-fiber textiles and apparel	274,843	316,538	314,994	410,790	394,572	340,983
80	Silk blend/veg fiber textiles/apparel	47,041	73,355	61,651	75,678	73,080	43,896
200	Yarn for retail sale, sewing thread	2,268	2,249	2,228	1,906	927	(²)
222	Knit fabric	47,491	38,136	58,061	78,089	59,868	21,265
225	Blue denim fabric	26,342	26,346	21,434	29,247	36,209	33,960
239	Babies' apparel	27,918	35,353	34,033	59,745	68,130	20,018
331	Cotton gloves	8,668	10,148	9,499	12,044	11,883	6,585
334	Other cotton coats, men/boys	5,712	7,925	7,677	9,643	6,362	7,415
335	Cotton coats, women/girls	8,205	10,664	8,997	11,812	11,592	11,953
336	Cotton dresses	5,852	8,638	9,257	9,110	6,019	9,977
338	Cotton knit shirts, men/boys	7,061	5,840	6,296	6,475	4,768	4,788
339	Cotton knit shirts, women/girls	23,853	25,730	25,230	24,020	23,587	30,008
340	Cotton not knit shirts, men/boys	50,977	60,773	51,708	53,840	54,186	52,648
341	Cotton not knit blouses	26,403	31,655	34,879	27,420	23,551	32,382
342	Cotton skirts	4,559	6,645	8,811	7,459	9,087	10,179
345	Cotton sweaters	12,567	13,710	13,716	16,222	14,328	14,944
347	Cotton trousers, men/boys	37,220	37,405	33,463	33,554	31,187	30,795
348	Cotton trousers, women/girls	64,256	62,491	64,810	60,989	65,701	84,306
350	Cotton robes	2,680	6,191	5,947	5,256	6,084	3,198
351	Cotton nightwear	42,751	55,995	52,794	43,675	50,496	52,033
352	Cotton underwear	60,031	64,708	71,387	55,134	54,096	66,462
359	Other cotton apparel	31,071	30,509	35,688	31,824	31,476	14,227
438	Wool knit shirts	9,952	10,159	9,444	10,442	10,000	9,042
445	Wool sweaters, men/boys	4,680	3,995	2,732	2,953	3,407	3,421
446	Wool sweaters, women/girls	12,275	12,212	14,311	13,612	12,079	13,055
634	Other manmade coats, men/boys	16,201	17,777	11,902	14,181	14,185	13,225
635	Manmade-fiber coats, women/girls	22,020	23,732	22,789	24,660	32,726	24,380
636	Manmade-fiber dresses	5,624	7,185	6,796	13,721	10,311	9,218
638	Manmade knit shirts, men/boys	8,013	8,411	4,311	5,408	5,287	3,521
639	Manmade knit shirts, women/girls	45,219	58,689	54,364	50,002	61,281	58,252
640	Manmade not knit shirts, men/boys	5,997	4,786	8,851	10,006	7,414	3,808
641	Manmade-fiber not knit blouses	4,554	7,394	5,838	7,564	8,439	7,694
642	Manmade-fiber skirts	2,254	3,107	4,075	3,663	3,251	3,901

See footnotes at end of table.

Table E-7—Continued
Textiles and apparel: U.S. general imports from Hong Kong, by specified product categories,¹ 1997-2002

Cat.		1997	1998	1999	2000	2001	2002
No.	Description	<i>1,000 square meters equivalent</i>					
645	Manmade-fiber sweaters, men/boys . . .	1,752	2,111	1,932	4,923	5,172	5,018
646	Manmade-fiber sweaters, women/girls .	39,414	34,333	30,732	31,828	39,257	32,420
647	Manmade-fiber trousers, men/boys . . .	6,720	8,510	8,113	8,764	6,561	7,543
648	Manmade-fiber trousers, women/girls . .	10,392	17,422	15,290	18,205	15,661	15,850
651	Manmade-fiber nightwear	4,775	8,081	8,951	15,088	15,746	15,084
652	Manmade-fiber underwear	31,852	38,774	43,471	62,729	74,981	72,098
845	Sweaters, other vegetable fibers	28,835	35,573	18,017	30,315	33,772	29,570

¹ To administer the U.S. textiles and apparel quota programs, articles are grouped under 3-digit category numbers, which cover many 10-digit statistical reporting numbers under which goods are classified for statistical purposes in the Harmonized Tariff Schedule of the United States (HTS). The 1-digit and 2-digit numbers represent specific levels of import aggregation for articles covered by the quota program (e.g., the number "1" represents total imports of apparel, while "31" represents total imports of cotton apparel).

Source: Compiled from official statistics of the U.S. Department of Commerce, found at <http://otexa.ita.doc.gov>.

Overview

Korea has a relatively large, vertically integrated, textile and apparel sector, which has played a significant role in the country's economic development.² However, because of the sector's inherent labor intensity, and due to shortages of skilled labor, labor-management disputes, rapid wage increases, and other issues, the domestic importance of the sector has been in decline since the late 1980s.³ The textile sector is highly export oriented and significantly weighted toward manmade fibers because of government promotion of the chemical sector in the 1970s,⁴ but it has increasingly invested in China in recent years. The apparel sector is relatively small domestically, and firm strategy has been to move production offshore. Because of strong government support, a skilled technical home base, and active outward investment, the economic outlook is positive, and the textile industry is viewed as a relatively strong competitor in the post quota global market.⁵

Korea's textile and apparel sector is large and vertically integrated. The sector's share of overall manufacturing in Korea shrank from 15.5 percent in 1985 to 10.0 percent in 1995, and to 7.0 percent in 2000.⁶ The sector accounted for 18.5 percent of the total number of manufacturing establishments and 14.8 percent of total employment, or more than 390,000 jobs, in 2000.⁷

Korea and other East Asian nations suffered a major setback during the Asian financial crisis of 1997-98 as its gross domestic product declined from a pre-crisis level of \$520 billion in 1996 to \$318 billion in 1998.⁸ The Korean currency underwent a major devaluation and Korea instituted a restructuring program that significantly affected its manufacturing sector, including textiles and apparel. Growth rates in the textile and apparel sector increased in

¹ Prepared by Robert Hughes, Office of Industries.

² Korea's GDP grew from 3 trillion won in 1970 to 517 trillion won in 2000. Byungki Ha, "International Direct Investment and Industrial Restructuring," Korean Institute for Industrial Economics and Trade (KIET), Issue Paper 2001-102 (in Korean), 2001, summarized in vol. 1, No. 1, p. 25, Jan.-Feb. 2002.

³ The industry's shares of total manufacturing employment and exports declined from 25.8 percent and 23.1 percent in 1985 to 14.8 percent and 10.7 percent in 2000. Park Hoon, "Inter-industry Analysis of the Textile Industry," KIET Industrial Economic Review, May/June 2002, p. 23.

⁴ U.S. International Trade Commission (USITC), U.S.-Korea FTA: *The Economic Impact of Establishing a Free Trade Agreement (FTA) Between the United States and the Republic of Korea*, USITC Pub. 3452, Sept. 2001, p. 3-25.

⁵ The Textile Committee, American Chamber of Commerce, Hong Kong, "Transition: The Integration of Apparel and Textile Quotas," Draft, Feb. 2003, p. 20.

⁶ Korea Institute for Industrial Economics and Trade (KIET), "Inter-industry Analysis of the Textile Industry," Park Hoon, May 25, 2002.

⁷ Embassy of the Republic of Korea, written submission to the Commission, Jan. 2003, pp. 1-2.

⁸ International Textile Manufacturers Federation, *Country Statements 2001* (Zurich, Switzerland), Aug. 2001, p. 21.

1999, 2000, and early 2001, but have now slowed substantially because of Korea's dependence on export markets in Japan and the United States, which have also experienced slower economic growth, and because of weakening domestic demand.

By 2000, Korean exports of textiles and apparel of \$17.7 billion had recovered to slightly more than pre-crisis highs of \$17.5 billion in 1997 (table E-8). Imports of \$4.7 billion in 2000 had not yet regained the level of \$5.0 billion in 1997. As economic growth slowed in 2001, the value of exports fell significantly to \$15.3 billion, while imports remained fairly stable. The trade surplus for textiles and apparel, which had fluctuated between \$12.5 billion and \$13.2 billion during 1997-2000, declined to \$10.5 billion in 2001.

Industry Profile

Production of all textile and apparel products declined significantly in 2001, and this decrease continued into 2002 in all sectors except cotton spinning.⁹ The main reasons for this decline were the continued slowdown in Korea's principal export markets, the United States and Japan; competition from China; and the shift in production to overseas factories. Overall, Korea's textile and apparel exports declined by 14.5 percent in 2001 and by 9.5 percent in the first half of 2002.

Industry structure and performance

Fibers

Korea does not produce natural fibers in quantity and imports virtually all of its requirements of cotton and wool. Since the 1970s, it has targeted manmade fibers as an integral part of its development plan and produces more than its own needs, exporting significant quantities while importing limited quantities of specialized manmade fibers.¹⁰ Total production of manmade fibers has grown steadily, even during the crisis of 1997-98. Total production increased by 10 percent from 2.4 million metric tons in 1997 to 2.6 million metric tons in 2000 (table E-8). Although it produces a wide range of manmade fibers, including acetate, acrylic, and nylon, it has emphasized polyester fiber, especially polyester filament, production of which has grown by 15 percent during the same period from 1.3 million to 1.5 million metric tons (table E-8). Production of polyester staple fiber was 0.7 million metric tons in 2000, down slightly from the previous year. The capacity of facilities to produce manmade fibers has increased steadily over this period, except for nylon, and were capable of producing 8,349 metric tons per day in 2000.¹¹

Textiles

⁹ "World Textile and Apparel Trade and Production Trends," *Textile Outlook International* (United Kingdom: Textile Intelligence Limited), Sept.-Oct. 2002, p. 60.

¹⁰ USITC, *U.S.-Korea FTA*, p. 3-25.

¹¹ Korean Federation of Textile Industries (KOFOTI), found at <http://www.kofoti.org.industrystatistics>.

Korea's textile industry is highly integrated, including spinning, weaving, and nonwoven and industrial textile operations. Domestic manmade fibers are an important input to textile production. The apparel industry is also substantial and depends heavily on input from the domestic textile sector.

The total number of textile firms fluctuated during the crisis of 1997-98, but increased slightly from 16,092 in 1997 to 16,216 in 1999 (table E-8). Total employment also fluctuated, but was down from 422,200 workers in 1997 to 407,200 workers in 1999. Wages and salaries also fell in 1998, and did not quite recover in 1999 to previous levels. Total production, measured in producer prices increased steadily from 40 trillion won in 1997 to over 46 trillion won in 1999, while an index of industrial production followed the more typical pattern of falling in 1998, but not quite recovering in 1999 to the level of 1997.¹²

Consumption of fibers by the Korean textile industry indicates the relative importance of manmade and natural fibers. Total mill consumption of fibers increased by 16 percent from 1.6 million metric tons in 1997 to 1.8 million metric tons in 2000 before falling to 1.7 million metric tons in 2001 (table E-8). Manmade fibers' share was 77 percent of total mill fiber consumption in 2001.

Korea has a significant spinning industry. Production of polyester spun yarn increased by 9 percent during 1997 to 2000, reaching 731 metric tons.¹³ Production of acrylic spun yarn was much smaller and decreased by 14 percent during 1997-2000, to 119 million metric tons. Cotton yarn production fluctuated, but fell from 247,000 metric tons in 1997 to 239,000 metric tons in 2000. Worsted woolen yarn output of over 31,000 metric tons in 1997 had declined to a little over 24,000 metric tons in 2000. Woolen yarn production, which had been over 15,000 metric tons in 1997, fell to 11,000 metric tons in 2000. The spinning industry has been upgrading its technology as the number of ring spindles was reduced by almost 40,000 from the beginning of 2000 to 2,023,592 ring spindles in July 2001, while the number of open-end rotors has increased by 2,000 to 17,424.¹⁴

Korea's woven fabric industry is an important segment of the textile industry. Total production of woven fabrics declined during 1997-2000 as competition increased and foreign markets declined. Production fell by 15 percent from 9,966 million square meters in 1997 to 8,475 million square meters in 2000.¹⁵ Synthetic filament fabric dominated fabric

¹² Ibid.

¹³ Discussion on yarn production based on data from KOFOTI.

¹⁴ Members of the Spinners' & Weavers' Association report that their ring-spinning equipment has fallen by one million spindles from 3 million in 1995. "Korea Second-half Gloom," *Textile Asia*, Oct. 2001, p. 60.

¹⁵ Discussion in the following paragraphs on the different segments of the textile industry is based on data from KOFOTI.

production with over 70 percent of total output in 1997, but its share decreased to 65 percent by 2000.

Knitting is another important textile activity. Although knitting production data are not available, total employment in knitting production declined steadily by 17 percent from 33,204 workers in 1997 to 27,654 in 2000. However, the number of facilities increased slightly from 32,367 in 1997 to 33,613 in 2000.

Dyeing and finishing activities are likewise substantial, but also in decline. Yarn dyeing decreased by almost 20 percent from 133,015 metric tons in 1997 to 107,081 metric tons in 2000, while fabric printing fell by 14 percent to 493 million square yards. Fabric dyeing fluctuated, but was up slightly to 5.4 billion square yards in 2000.

Nonwoven fabric production is an area of growth for Korea, as it has been for the U.S. industry. This sector represents one of the key opportunities to build on Korea's strengths in textile production and technology.¹⁶ This sector has been targeted for development by the government in its plan to double textile exports by 2010. Production data are available only for 1997 and 1998, but production increased substantially for nonwoven products of both staple and filament fiber, even during the crisis of 1997-98 when most other textile and apparel activities were in significant decline. Staple fiber nonwoven production increased by 24 percent to 179 million square yards in 1998, while filament nonwoven production increased 25 percent to 232 million square yards in 1998.

Apparel

Apparel production has been an important contributor to Korea's development, but the structure of the industry has changed in recent years, given competitive pressure from China, rising wage rates, and problems of labor availability.¹⁷ Consequently, Korean firms have invested abroad by moving production of labor intensive items to countries offering advantages of abundant labor at lower costs. The total number of apparel firms fluctuated during the crisis, but decreased from 8,109 in 1997 to 7,403 in 1999 (table E-8). Total employment also fluctuated, but was down from 151,500 workers in 1997 to 132,300 workers in 1999. Wages and salaries also declined, and did not recover in 1999 to levels of 1997. Apparel production, measured in producer prices, fell from 9,963 billion won in 1997 to 6,928 billion won in 1998, and then recovered somewhat to 7,595 billion won in 1999.¹⁸ The index of industrial production followed the same pattern.

Aggregate production data for apparel are not available, but output for certain products are reported. Knitwear production increased slightly in 1998 to 813 million pieces from the 1997 level, remained approximately the same level in 1999, but fell in 2000 to 811 million pieces (table E-8). Production of socks fluctuated, but remained approximately the same level of

¹⁶ Government plans to promote growth in this sector are discussed in the section on planning.

¹⁷ "World Textile and Apparel Trade and Production Trends," p. 60.

¹⁸ Data in this paragraph compiled from data from KOFOTI.

slightly more than 1 million pairs in 1997-2000. Glove production was relatively steady at slightly less than one-half million pairs.

Factors of production

Raw materials

Korea does not have extensive production of natural fibers, almost all of which it must import, but it is strong in the production of manmade fibers. Mill consumption of natural fibers increased steadily from 342,000 metric tons in 1997 to 396,000 metric tons in 2000, and then fell to 380,000 metric tons in 2001 (table E-8). Cotton spinning's consumption increased slightly in early 2002 because of increased orders, but the woolen sector was challenged by low priced goods from China and Southeast Asia.¹⁹

Consumption of manmade fibers dipped slightly in 1998, but rebounded strongly and consumption levels of 615,383 metric tons in 2000 were almost 50 percent higher than those of 1997.²⁰ By 2001 the production of synthetic fiber was being reduced in an organized manner because of excess world production and inventories.²¹

Labor

Korea's textile and apparel sector has a shortage of skilled labor. Wage rates have been rising, which has driven up total labor costs. Employment has declined in virtually all sectors as the industry restructures by closing companies and pursuing mergers.²² These developments have resulted in labor problems, including strikes that have adversely affected production.²³ Korean companies also have had problems at their foreign operations, but companies have introduced labor reforms, especially in Latin America.²⁴

The average hourly labor costs in the Korean spinning and weaving segment of \$5.73 per hour in 2002 were less than those in Japan (\$22.76), Taiwan (\$7.15), and Hong Kong (\$6.15), but more than those in Thailand (\$1.24), China (\$0.69), India (\$0.57), Pakistan

¹⁹ Based on data from KOFOTI, "Industry by Sector," p. 1, retrieved Dec. 12, 2002.

²⁰ Trends based on data from KOFOTI differ from the mill fiber consumption data for manmade fibers in table E-8 because data taken from two different sources.

²¹ Korea's synthetic textile industry will reportedly reduce its output by 30 percent. The cutback will be accomplished by a 10-percent reduction of output by each member of the Korean Synthetic Textile Association, the retirement of machinery over 20 years old, the relocation of machinery to China, and the shutdown of Daeha Synthetic Textile. "Korea, Synthetic Surplus," *Textile Asia*, July 2001, p. 91.

²² Discussed in section on domestic policy.

²³ Details on work stoppages at several plants are discussed. *Textile Asia*, July 2001, p. 92.

²⁴ Jozef De Coster, "Korea Goes Latin," *Textile Asia*, June 1999, p. 8.

(\$0.34), and Indonesia (\$0.50).²⁵ Thus, significant incentives exist to move labor intensive activities to other countries. Also, rapid development in high tech sectors means that traditional sectors like textiles and apparel find it more difficult to attract skilled workers.²⁶

The average usage of labor per unit of output (labor coefficient) has decreased over time as textile and apparel manufacturers have shifted from more labor-intensive to more capital-intensive activities. The textile and apparel industry labor coefficient fell from 39 persons per billion won in 1990, to 11 persons per billion in 1998.²⁷ Apparel's labor coefficient was 13.5 persons in 1998, while the coefficient for manmade- fiber production was 2.7 persons. The coefficient for yarn production fell sharply from 25.5 persons in 1995 to 10.9 in 1998 as significant restructuring led to a large manpower reduction.²⁸

Technology

Recent investment in the spinning sector has led to the wholesale renewal of much of the equipment. While major investment has been undertaken, much of the remaining equipment in the sector is approaching obsolescence.²⁹ In the major Daegu weaving district, 4,000-5,000 water-jet looms were scrapped or transferred overseas in 2000, while only 350 new water-jet looms were added. Of the 32,000 installed looms, less than 30 percent was less than 6 years old, while 43 percent was more than 10 years old. Weavers are exiting the industry; 690 weavers reportedly have stopped production or closed in the past 2 years.³⁰

Sixty Korean textile and apparel firms have formed a B2B e-commerce site.³¹ Such sites are designed to facilitate communications between firms, especially in sourcing. The Korean Government has announced plans to link the electronics, automotive, steel, textile, and distribution sectors through a comprehensive e-network.

Investment

The significant increase in foreign investment by the Korean textile industry in recent years is a response to many factors, including increasing wage rates and labor shortages in Korea, the increasing competitiveness of China, and the eventual phaseout of the quota system.³² Foreign investment by Korean firms has been substantial as the Korean textile and apparel

²⁵ Werner International Management Consultants, "Spinning and Weaving Labor Cost Comparisons 2002," Reston, VA.

²⁶ Industry representatives, interviews by USITC staff, Seoul, Mar. 6-7, 2003.

²⁷ This was still approximately twice that of manufacturing overall. Coefficients are from Park Hoon, KIET Magazine, June 2002, p. 34.

²⁸ This was still approximately twice that of manufacturing overall. Ibid., p. 34.

²⁹ "Korea: More Looms Scrapped in Daegu," *Asian Textile Business*, Nov. 2002, p. 36.

³⁰ Ibid.

³¹ *Pacific Trade Winds*, Santa Barbara, CA, Aug. 2000, p. 3.

³² Trade Compliance Center, World Trade Organization (WTO), "Trade Policy Review Summary," Sept. 2000, p. 1.

sector has been moving factories abroad to cut costs.³³ The industry had invested a cumulative \$2.3 billion overseas through August 2002, compared with a cumulative \$2.1 billion 15 years ago. Yearly average overseas investment was \$1.1 billion during the period 1981-86, \$205 million annually during 1992-97, and a record \$279 million in 2001.³⁴

China topped the list of destination countries with 1,274 projects and total investment of \$660 million, followed by the Philippines, Indonesia, Bangladesh, and Vietnam.³⁵ Korean firms are reported to be the largest investors in Bangladesh.³⁶ Another major destination of Korean textile and apparel investment is Latin America, especially Guatemala (130 of a total of 244 companies producing apparel in Guatemala). According to a trade source, in 1999, Korean firms represented 53 percent of apparel enterprises in Guatemala, but only 17 percent of those in Honduras and 5 percent in El Salvador.³⁷ An indication of the importance of this investment is that Guatemala was second only to China as a destination of Korea's exports of knitted fabrics, and ahead of the United States, Hong Kong, and Vietnam.³⁸

A major investment project that has been under consideration for some time is an industrial complex in Kaesong, North Korea. A total of 171 textile and apparel companies have expressed an interest in the industrial park.³⁹ Apparel manufacturers were the most numerous with 59 companies; weaving companies were next with 39. Total planned investment was \$395 million for 2.3 million square meters of land for their operations. Companies planned to hire 38,000 workers and pay a monthly salary of \$85. On the other hand, the project may not be as attractive as initially believed. Recent reports from the Korea Development Institute are that North Korea is demanding higher wages and land prices than originally believed.⁴⁰ North Korea has demanded about 300,000 won for each 3.3 square meter of land, while prices in Tianjin and Shenyang, China, were less than 100,000 won. Similarly, the requested \$80-100 per month in wages is more than the \$50-60 per month in Vietnam, or the \$50-100 in China.

³³ Industry representatives, interviews by USITC staff, Seoul, Mar. 6-7, 2003. Park Hoon, reported in "Korea: Offshore Production Hitting Textile Industry, Says KIET," *bharattextile.com*, Dec. 4, 2002, retrieved May 5, 2002.

³⁴ Hoon, p. 7.

³⁵ In a survey conducted by the Federation of Small and Medium Businesses, more than half of the responding Korean firms indicated they planned to invest in China within the next five years. See "China: Partner, Rival or Both?," *New York Times*, Mar. 2, 2003.

³⁶ "Korea's Textile and Apparel Industry," *Pacific Trade Winds*, Santa Barbara, CA, June 2001, p. 1.

³⁷ Jozef De Coster, p. 7.

³⁸ Based on Nov. 2002 data, "Knitted Fabrics: Korea Confirms Its Supremacy," found at *emergingtextiles.com*, retrieved Jan. 27, 2003.

³⁹ "Korea: Major Textile Cos to Move to Kaesong Industrial Complex," found at *bharattextile.com*, Dec. 13, 2002, retrieved Dec. 25, 2002.

⁴⁰ "Kaesong Complex Not Attractive: KAI" (news clipping), found at *www.gobuyer.com*, retrieved Dec. 4, 2002.

Government Policies

The Government of the Republic of Korea instituted a number of general reforms during 1997-2002.⁴¹ Many of these reforms were linked to its commitments under the Uruguay Round; others are the result of conditions stemming from the Asian financial crisis of 1997-98, and conditions imposed by international institutions. These included opening its financial and equity markets to foreign investment and the restructuring of the financial and corporate sectors through market-based reforms to increase transparency, accountability, and efficiency.⁴² More recently, the Government has proposed changes directed specifically at the textile and apparel sector.⁴³

Domestic policies

As a condition of the \$58 billion International Monetary Fund (IMF) assistance package in 1998, Korea agreed to open its financial and equity markets to foreign investment and to reform its financial and corporate sectors to increase transparency, accountability, and efficiency.⁴⁴ The Government injected approximately \$120 billion in public funds to recapitalize the financial sector. Regulators instituted international accounting standards and banks were encouraged to put ailing borrowers under continuous credit-risk assessment. As of April 2001, 1,544 companies were under assessment.⁴⁵

In general, there was a movement from the past, state-led economic program to a more market-oriented plan.⁴⁶ Other reforms included removing almost half of the top 30 business groups or “chaebols” from the market, and establishing goals of debt/equity ratios of below 200 percent. There were numerous business problems, including the Daewoo Group bankruptcy in 1999 and the Hyundai Engineering and Construction liquidity crisis. After an initially expansionary fiscal policy to counter the adverse effects of the crisis, public expenditures are being restrained and taxes increased.

A principal feature of these changes was the devaluation of the Korean won from 965 won per U.S. dollar in October 1997 to a low of 1665 won per dollar in December 1997 as Korea shifted from a managed to a free floating exchange rate system with a program of exchange rate stabilization.⁴⁷ In May 2001, the won traded in the range of 1300 won to the dollar, and is currently in the 1200-1210 range.⁴⁸ Following the devaluation of 1998, Korean exports responded strongly in 1998-2000, but were down significantly in 2001. In its submission, the Embassy of Korea pointed out that, while Asian textile shipments to the U.S. market

⁴¹ Trade Compliance Center, WTO, Sept. 2000, p. 1.

⁴² U.S. and Foreign Commercial Service, p. 1.

⁴³ Korean Ministry of Commerce, Industry, and Energy (MOCIE), *Vision for the Year 2010*.

⁴⁴ “Economic Trends and Outlook,” *Korea Country Commercial Guide FY 2002*, p. 1.

⁴⁵ *Ibid.*, p. 2.

⁴⁶ Information in the paragraph is mainly from the Trade Compliance Center, WTO, p. 5.

⁴⁷ *Ibid.*, pp. 5 and 14.

⁴⁸ “Federal Reserve Statistical Release: Foreign Exchange Rates,” Jan. 6, 2003.

rose by more than 80 percent in the 4 years following the devaluation, Korea's share of the U.S. apparel market declined from 9.7 percent in 1990 to 3.8 percent in 2000.⁴⁹

On March 20, 2001, the Korean Minister of Commerce, Industry and Energy (MOCIE) stated that the ministry is developing mid- and long-term plans for restructuring the textile industry. The new plans will reportedly focus on the development of industrial textiles,⁵⁰ the structuring of specialized industries by location, and the revitalization of the fashion industry and e-commerce.⁵¹ The Government reportedly will spend 2 trillion won on the development of industrial textile materials until 2011.⁵² The plan calls for an increase of more than 1,000 new firms by 2010 to produce industrial textiles as the goal is to bring the production of apparel and industrial materials into balance. The minister stated that the ministry will offer assistance in information technology, employee training and research and development "to help enhance the competitiveness of the country's textile industry in preparation for textile trade liberalization in 2005."⁵³

The MOCIE plan for 2010 calls for Korean textile and apparel industry exports to the United States to increase from \$16 billion in 2001 to \$30 billion in 2010, with an increase in the trade surplus from \$11 billion in 2001 to \$20 billion in 2010. It also calls for the share of fashion apparel exports to increase from 5 percent in 2001 to 30 percent in 2010, while the share of industrial textile production is to increase from 22 percent in 2001 to 50 percent in 2010.

According to the plan, the increase in production of industrial textiles is to be through development of high-tech fibers and cooperation with foreign research institutes. Infrastructure would be enhanced by building a textile research center to facilitate domestic application of new technology and to train experts in industrial textiles. According to the MOCIE plan, competitiveness would be improved by organizing international industrial textile exhibitions. The dyeing and processing industry would also be upgraded by developing advanced processing technology for dye processing. Textile dyeing factories would be digitalized with on-line transaction systems and automated equipment. Labor would be trained to operate the new systems. Skilled mechanics would be trained at the rate of 350 persons per year, and the allocation of foreign trainees would be increased from 1,885 in 2001 to 3,500 each year.

A major element of the MOCIE vision is to upgrade Korea's fashion industry by constructing a multipurpose building for different fashion events, including making the Seoul Collection a world-class event. The Seoul Fashion-Brand Expo would be held regularly, and over 300 persons per year would be trained in fashion design. Digital design and color transaction would be promoted through the Internet. Establishing a textile and fashion department in the University would provide incentives through scholarships and

⁴⁹ Embassy of the Republic of Korea, p. 4.

⁵⁰ Korean industrial textile materials represent 22 percent of total textile output. The Korean Minister also urged the cotton spinning and synthetic fiber industries to make "self-rescue" efforts.

⁵¹ "Korea: Reform to Come," *Textile Asia*, Apr. 2001, p. 68.

⁵² Ibid.

⁵³ Ibid.

internships with factory training. Shortage of labor would be addressed by improved allocation of foreign trainees to include 25,000 laborers per year.

Another major MOCIE goal is the restructuring of the manmade-fiber and cotton spinning industry. The number of companies and capacity to produce polyester filament yarn would be reduced from 13 companies to 9, and specialized production would be promoted. Obsolete facilities in cotton spinning would be reduced from 1.25 million spindles to 890,000 spindles.

New E-Business applications would include quick response (QR) systems with standard product code, and the conversion of an off-line production and distribution system to an online system through the Internet. This would include a textile and fashion e-Portal and a web site for foreign buyers to find information on domestic enterprises and products. Export marketing would be enhanced by training 300 persons per year as overseas marketing specialists, expanding overseas exhibition events, and the construction of a data base of export market information.⁵⁴

MOCIE expects China to gain market share at the expense of Korea and Taiwan from the phaseout of quotas in 2005.⁵⁵ It sees China's growth as an opportunity to sell more Korean textile goods to China, but that the Korean apparel industry would have significant competitive problems. As the best strategy for the industry, MOCIE identifies the shift to high technology products, especially functional or industrial textiles.

Korean companies and associations expressed concern about the MOCIE plan, but they tended to agree that companies would not be competitive in commodity products and should pursue higher technology products, niche markets with high quality items targeted to customers' needs, and relocating production overseas.⁵⁶ Company officials varied in their views on how their firm should approach these objectives, but some agreed that location advantages to inputs were more important than proximity to customers. They viewed rapid response to customers needs with full package performance to be very important.

⁵⁴ "Korea: Reform to Come," *Textile Asia*, Apr. 2001, pp. 9-10.

⁵⁵ MOCIE officials, interview by USITC staff, Mar. 6, 2003.

⁵⁶ *Ibid.*

Trade policies

Korea's average applied MFN tariff in 2000 was 13.8 percent for all goods and 7.5 percent for industrial products. Import duties are an important source of revenue. However, the multiplicity of rates, and the divergence between applied rates and bound rates render the system highly complex, thereby imparting a degree of uncertainty, which could be considered trade restrictive.⁵⁷ The customs tariff is Korea's main trade policy instrument. The multiplicity of rates, including 96 ad valorem rates, 11 specific rates, and 18 alternative rates, make it a complex instrument. The gap between applied and bound rates allows for a considerable scope for the authorities to increase rates which they have done for some "sensitive items" including textiles and apparel. All voluntary restraints, except those for exports of textiles and apparel have been eliminated.

Korea and Chile signed a free-trade agreement on February 15, 2002.⁵⁸ This is Korea's first free-trade agreement and would remove tariffs on two-thirds of Korean products. Virtually all Chilean manufactured goods would become tariff free. The agreement will take effect 30 days after ratification by both countries' national assemblies. Yonhap, the semiofficial Korean news agency, indicated that Korea was looking for similar deals with Japan, Mexico, and Singapore, and is studying the possibility with other Southeast Asia nations.

Foreign Trade

Korea had a fluctuating trade surplus during 1997-2001, which declined overall by 16 percent to \$10.5 billion (table E-8).

In 1991, Korea's textile and apparel exports to the United States were \$15.5 billion for a 23-percent share of the U.S. market. Market shares in Japan and the European Union were 19 and 13.5 percent.⁵⁹ At that time, Korea was part of the "Big Three,"⁶⁰ textile and apparel suppliers to the U.S. market. By 2001, Korea's share of the U.S. market had fallen to 3.7 percent.⁶¹

Imports

Based on United Nations trade statistics, Korea's principal sources of natural and manmade fibers, which are not included in textiles, are Australia, the United States, and China, which supplied over 60 percent of these materials in 2000. Major sources of textiles are China, the EU, and Japan, which supplied 55 percent of textiles to Korea in 2000. Trade in apparel is

⁵⁷ Information in paragraph is mainly from the WTO, pp. 7 and 10.

⁵⁸ "Korea, in Deal with Chile, Signs Its First Free-Trade Pact," *New York Times*, Feb. 17, 2002.

⁵⁹ Textile Outlook International, *Textile Intelligence Limited*, Nov. 1992, p. 45.

⁶⁰ Also included Hong Kong and Taiwan.

⁶¹ Embassy of the Republic of Korea, p. 6.

even more concentrated with China and the EU supplying 85 percent of Korean imports of apparel in 2000.

Exports

Based on United Nations trade statistics, Korea's principal markets for fibers, almost exclusively manmade, are China, the EU, and the United States, which were the destination of over 60 percent of Korea's exports. Textile exports were more diverse as China, Hong Kong, the United States, the EU, and Indonesia accounted for half of these exports (table E-9). The United States (with almost half of the total), Japan, and the EU received 84 percent of Korea's exports of apparel in 2000.

Trends in Korean exports of manmade fibers were down by 25 percent from \$1.1 billion in 1997 to \$0.8 billion in 2001 (table E-8). Imports fell by slightly less, or 21 percent to \$0.9 billion in 2001. Trade in fibers is roughly in balance, alternating between deficit and surplus. However, the distribution between natural and manmade-fiber trade reflects Korea's dependence on imports of natural products, which were almost 80 percent of total fiber imports of \$650 million in 2002. Exports of manmade fibers were 97 percent of total exports of fibers of \$635 million.⁶² The trade balance of fibers was in deficit by \$0.1 billion in 2001.

Exports of textiles fell from \$13.3 billion in 1997 to \$10.9 billion in 2001, while imports of textiles also fell from \$3.6 billion in 1997 to \$3.1 billion in 2001 (table E-8). Accordingly, the trade surplus for textiles declined from \$9.8 billion in 1997 to \$7.9 billion in 2001.

Exports of apparel increased steadily from \$4.2 billion in 1997 to \$5.0 billion in 2000, before falling to \$4.4 billion in 2001 (table E-8). Imports of apparel fell significantly in 1998 by over 60 percent, but have steadily rebounded to \$1.6 billion in 2001, 17 percent more than the level of 1997. The trade surplus for apparel fluctuated but declined by 4 percent to \$2.7 billion in 2001.

U.S. imports from Korea

On the basis of official U.S. statistics, U.S. imports of textiles and apparel from Korea increased by 149 percent during 1997-2002 to 206 million square meters equivalent (SMEs) (table E-10). U.S. imports of textiles from Korea increased by 178 percent during the period to 1.4 billion SMEs, while apparel imports increased by 103 percent to 650 million SMEs.

U.S. imports of sector goods from Korea during 1997-2002 consisted mostly of manmade-fiber products, which accounted for 87 percent of the total quantity of sector imports from

⁶² Based on data from KOFOTI.

Korea in 2002. Major imports were of fabrics (category 12),⁶³ which increased from 328 million SMEs in 1997 to 960 million SMEs in 2002, or by 192 percent. U.S. imports of knit fabrics (category 222) accounted for a significant part of this increase, increasing from 56 million SMEs in 1997 to 408 million SMEs in 2002. Imports of special purpose fabric (category 229) also grew significantly from 45 million SMEs to 294 million SMEs. “Other miscellaneous articles” was a substantial category, but imports of these items fell from 153 million SMEs in 1997 to 116 million SMEs in 2001, before increasing by 125 percent in 2002, to 376 million SMEs.

U.S. and EU quotas and quota utilization rates

U.S. imports of textiles and apparel from Korea were subject to binding aggregate, or group, quotas in 2002 (binding quotas are considered those having a “fill rate” of 90 percent or more). In 2002, Korea filled 90.4 percent of its adjusted “group I” limit of 263 million SMEs, which covered non-apparel products such as yarns, fabrics, and home textiles. Korea had a fill rate of 98.3 percent for its adjusted “group II” limit of 570 million SMEs, which covered apparel articles.

The EU had 31 quotas on imports of textiles and apparel from Korea in 2002. The quotas covered a variety of textile and apparel products. Four of Korea’s quotas had fill rates of more than 90 percent in 2002. These quotas covered broadwoven synthetic staple fiber fabrics, other than bleached or unbleached; knit jerseys, pullovers, and similar articles; men’s and women’s woven pants and shorts; and woven synthetic filament fiber fabrics.

⁶³ As shown in table E-10, the 1-digit and 2-digit category numbers represent specific levels of import aggregation for articles covered by the quota program (e.g., category 12 represents total imports of fabrics covered by the former Multifiber Arrangement--namely, fabrics of cotton, wool, manmade fibers, non-cotton vegetable fibers, and silk blends).

Table E-8
Korea: Statistical profile of textile and apparel sector and foreign trade, 1997-2001

Item	1997	1998	1999	2000	2001
Textile and apparel share of manufacturing value-added (percent)	9	8	8	(¹)	(¹)
Number of establishments:					
Textiles	16,092	14,481	16,216	(¹)	(¹)
Apparel	8,109	6,676	7,403	(¹)	(¹)
Total	24,201	21,157	23,619	(¹)	(¹)
Number of workers:					
Textiles (1,000)	422,200	375,500	407,200	(¹)	(¹)
Apparel (1,000)	151,500	121,400	132,300	(¹)	(¹)
Total (1,000)	573,700	496,900	539,500	(¹)	(¹)
Average labor cost per operator hour	(¹)	(¹)	(¹)	\$5.32	² \$5.73
Installed spinning capacity:					
Short-staple spindles (1,000)	1,997.0	1,957.0	1,938.0	1,803.0	1,757.1
Long-staple spindles (1,000)	676.0	676.0	676.0	676.0	676.0
Open-end rotors (1,000)	16.8	16.8	15.4	13.7	15.6
Installed weaving capacity:					
Shuttleless looms (number)	27,000	27,000	(¹)	2,200	1,800
Shuttle looms (number)	5,000	5,000	(¹)	(¹)	(¹)
Purchases of large circular knitting machines	(¹)	146	185	123	86
Production index (1997=100):					
Yarns	(¹)	(¹)	(¹)	99.7	97.2
Fabrics	(¹)	(¹)	(¹)	78.7	68.9
Mill fiber consumption:					
Manmade fibers (1,000 metric tons)	1,216.1	1,265.7	1,343.4	1,413.5	1,306.6
Cotton (1,000 metric tons)	310.5	323.0	361.0	362.0	347.9
Wool (1,000 metric tons)	31.7	35.4	32.9	33.9	31.6
Total (1,000 metric tons)	1,558.3	1,624.1	1,737.3	1,809.4	1,686.1
Production of selected products:					
Manmade fibers:					
Nylon filament (1,000 metric tons)	283	252	277	292	(¹)
Poly filament (1,000 metric tons)	1,290	1,332	1,406	1,484	(¹)
Poly staple (1,000 metric tons)	673	699	741	731	(¹)
Acrylic staple (1,000 metric tons)	138	134	140	119	(¹)
Other (1,000 metric tons)	22	20	21	23	(¹)
Total (1,000 metric tons)	2,406	2,437	2,585	2,649	(¹)
Knitwear (1,000 pieces)	799,882	812,765	812,977	810,795	(¹)
Socks (1,000 pairs)	1,044,046	1,034,968	1,039,718	1,042,921	(¹)
Gloves (1,000 pairs)	429,073	429,014	435,236	437,115	(¹)
Sweaters (1,000 pieces)	166,897	175,246	177,546	170,327	(¹)
Warp knits (1,000 yards)	1,734,201	1,725,230	1,779,979	1,803,773	(¹)

See footnotes at end of table.

Table E-8—Continued

Korea: Statistical profile of textile and apparel sector and foreign trade, 1997-2001

Item	1997	1998	1999	2000	2001
Foreign trade in textiles and apparel:					
Exports:					
Textiles (<i>million dollars</i>)	13,317.7	11,258.6	11,581.4	12,658.4	10,882.5
Apparel (<i>million dollars</i>)	4,204.1	4,670.8	4,902.4	5,071.5	4,356.1
Total (<i>million dollars</i>)	17,521.8	15,929.4	16,483.9	17,729.9	15,238.6
Imports:					
Textiles (<i>million dollars</i>)	3,567.3	2,222.4	3,007.8	3,366.6	3,076.7
Apparel (<i>million dollars</i>)	1,408.9	511.5	768.9	1,313.8	1,646.8
Total (<i>million dollars</i>)	4,976.2	2,733.9	3,776.6	4,680.4	4,723.6
Trade balance:					
Textiles (<i>million dollars</i>)	9,750.4	9,036.2	8,573.7	9,291.8	7,805.7
Apparel (<i>million dollars</i>)	2,795.2	4,159.3	4,133.5	3,757.7	2,709.3
Total (<i>million dollars</i>)	12,545.5	13,195.5	12,707.2	13,049.5	10,515.0
Foreign trade in manmade fibers:					
Exports (<i>million dollars</i>)	1,078	853	848	984	809
Imports (<i>million dollars</i>)	1,141	847	917	863	898
Trade balance (<i>million dollars</i>)	-63	6	-69	121	-89

¹ Not available.

² Represents 2002 data.

Note.—Because of rounding, figures may not add to totals shown.

Source: Industry data compiled from data of the Korean Federation of Textile Industries (KOFOTI), found at <http://www.kofoti.org>; the International Textile Manufacturers Federation (Zurich), *International Textile Machinery Shipment Statistics*, vol. 25/2002, and selected back issues; Geerdes International, Inc., Richmond, VA, facsimile to Commission staff, Feb. 4, 2003; and Werner International Management Consultants, Reston, VA. Trade data are United Nations data as reported by Korea.

Table E-9

Korea: Exports of textiles and apparel, by selected markets, 1997-2001

Item and market	1997	1998	1999	2000	2001
	<i>Million dollars</i>				
Textiles (SITC 65):					
Quota markets:					
United States	901	870	934	1,016	894
European Union	907	907	830	906	783
Canada	117	111	114	122	107
Subtotal	1,926	1,889	1,878	2,045	1,784
All other:					
China	2,030	1,581	1,764	2,112	1,966
Hong Kong	2,299	1,677	1,531	1,515	1,180
Indonesia	645	447	587	726	634
Other	6,418	5,664	5,822	6,261	5,318
Subtotal	11,392	9,370	9,704	10,614	9,098
Grand total	13,318	11,259	11,581	12,658	10,882
Apparel (SITC 84):					
Quota markets:					
United States	1,700	2,078	2,259	2,465	2,230
European Union	595	608	739	734	583
Canada	126	154	163	189	190
Subtotal	2,421	2,840	3,161	3,388	3,002
All other	1,783	1,831	1,741	1,683	1,354
Grand total	4,204	4,671	4,902	5,071	4,356
Textiles and apparel:					
Quota markets:					
United States	2,601	2,948	3,193	3,481	3,123
European Union	1,503	1,516	1,569	1,640	1,366
Canada	244	265	277	312	297
Subtotal	4,347	4,729	5,039	5,433	4,786
All other	13,174	11,201	11,445	12,297	10,453
Grand total	17,522	15,929	16,484	17,730	15,239
	<i>Percent</i>				
Share of exports going to quota markets:					
Textiles	14	17	16	16	16
Apparel	58	61	64	67	69
Average	36	39	40	42	43

Note.—Because of rounding, figures may not add to totals shown.

Source: Compiled from United Nations data.

Table E-10
Textiles and apparel: U.S. general imports from Korea, by specified product categories,¹ 1997-2002

Cat.		1997	1998	1999	2000	2001	2002
No.	Description	<i>1,000 square meters equivalent</i>					
0	Textiles and apparel, total	817,648	1,044,700	1,222,089	1,311,775	1,383,482	2,032,165
1	Apparel	320,484	460,075	537,370	587,193	631,957	649,952
2	Textiles	497,163	584,626	684,719	724,582	751,525	1,382,213
11	Yarns	16,094	25,669	15,548	14,970	20,504	46,214
12	Fabrics	328,316	391,211	519,462	573,745	615,223	959,912
14	Other miscellaneous articles	152,754	167,746	149,710	135,867	115,798	376,087
30	Cotton textiles and apparel	132,227	176,877	192,986	211,823	219,055	245,265
31	Cotton apparel	75,960	108,858	130,437	142,805	151,100	166,639
32	Cotton textiles	56,267	68,020	62,549	69,017	67,955	78,626
40	Wool textiles and apparel	7,205	10,085	12,180	12,092	10,137	9,414
60	Manmade-fiber textiles and apparel	671,637	850,486	1,009,052	1,079,272	1,143,232	1,766,645
61	Manmade-fiber apparel	234,277	338,274	392,503	428,366	463,565	466,704
62	Manmade-fiber textiles	437,360	512,212	616,549	650,906	679,666	1,299,941
80	Silk blend/veg fiber textiles/apparel	6,579	7,252	7,872	8,588	11,059	10,842
222	Knit fabric	55,810	60,975	98,432	71,388	130,827	408,350
223	Nonwoven fabric	3,684	5,327	3,103	1,819	2,265	38,788
224	Pile and tufted fabric	48,382	44,755	44,229	47,573	44,756	31,117
229	Special purpose fabric	44,951	110,788	183,782	272,503	268,933	293,940
239	Babies' apparel	5,912	9,429	16,693	19,138	16,328	15,777
331	Cotton gloves	10,918	16,997	22,780	26,747	21,383	14,444
332	Cotton hosiery	9,947	15,492	24,269	32,463	40,525	64,121
340	Cotton not knit shirts, men/boys	13,879	15,941	14,154	13,357	13,130	14,639
619	Polyester filament fabric, lightweight	68,525	53,152	59,415	48,052	50,856	69,978
620	Other synthetic filament fabric	32,460	43,672	56,956	53,724	43,687	35,824
632	Manmade-fiber hosiery	2,194	3,399	5,316	7,383	10,884	13,964
634	Other manmade coats, men/boys	36,308	38,769	28,563	27,554	32,410	30,254
635	Manmade-fiber coats, women/girls	10,480	12,779	13,945	16,556	17,763	13,611
636	Manmade-fiber dresses	10,720	10,083	12,314	9,252	10,077	10,577
638	Manmade knit shirts, men/boys	12,077	21,754	21,137	23,095	25,434	34,263
639	Manmade knit shirts, women/girls	37,458	49,664	54,273	39,172	39,757	39,091
640	Manmade not knit shirts, men/boys	34,799	44,893	62,559	89,505	83,816	78,707
641	Manmade-fiber not knit blouses	8,779	8,792	9,187	12,980	9,400	6,551
645	Manmade-fiber sweaters, men/boys	5,721	14,745	14,524	21,210	39,759	42,006
646	Manmade-fiber sweaters, women/girls	15,709	35,497	30,590	41,302	68,609	84,291
647	Manmade-fiber trousers, men/boys	4,294	7,689	6,607	6,533	7,976	11,048
648	Manmade-fiber trousers, women/girls	6,189	12,571	12,287	13,277	12,079	8,439
659	Other manmade-fiber apparel	38,674	59,893	98,436	98,207	81,756	71,976
666	Other manmade-fiber furnishings	23,166	39,961	29,899	24,697	18,572	281,906
669	Other manmade-fiber manufactures	89,649	75,599	58,131	56,555	52,497	71,676
670	Manmade-fiber handbags/luggage	26,043	33,061	38,917	32,202	27,115	7,595

¹To administer the U.S. textile and apparel quota program, articles are grouped under 3-digit category numbers, which cover many 10-digit statistical reporting numbers under which goods are classified from statistical purposes in the Harmonized Tariff Schedule of the United States (HTS). The 1-digit and 2-digit numbers represent specific levels of import aggregation for articles covered by the quota program (e.g., the number "1" represents total imports of apparel, while "31" represents total imports of cotton apparel).

Source: Compiled from official statistics of the U.S. Department of Commerce, found at <http://otexa.ita.doc.gov/>.

Macau¹

Overview

Macau reverted to China on December 29, 1999, after several centuries of Portuguese dominion. It was established as a Special Administrative Region (SAR) under the same "one country, two systems" principle that governed the handover of Hong Kong by the British, so that Macau retained control over its economic and social affairs while China took all responsibility for foreign affairs and national security.

Information on Macau's textile and apparel sector is limited, but the sector is second only to gambling and associated tourism as a contributor to Macau's gross domestic product, representing about one-third of output and national income. The sector represents approximately 15 percent of Macau's workforce. Apparel production accounts for nearly all Macau's manufacturing output, and about 85 percent of Macau's merchandise exports. The United States and Europe are Macau's principal markets.

The key competitive determinants for Macau are its excellent transportation and communication infrastructure, Macau's proximity to China for production sharing, and its open, freely competitive business climate. Most observers believe Macau's apparel production would quickly shift to China, where labor costs are much lower, in the absence of quotas.

Industry Profile

Macau has no significant textile industry, having no fiber production, spinning, weaving, dyeing, or fabric-finishing industries. The country does have knitting operations, but these are typically integrated with garment production.² UNIDO reported 115 textile establishments in Macau in 1999, down from 140 establishments in 1997. These establishments employ about 45 persons on average.

Macau's apparel industry consists of cut-and-sew garment production based on imported fabrics. UNIDO reported 394 establishments in 1999, down from 408 establishments in 1997. These establishments employ less than 60 workers on average. Macau is a major exporter of apparel, particularly knitwear, to the United States and Europe. There reportedly have been problems with transshipment of garments manufactured across the border in China in Guangdong Province.

Macau's apparel industry relies on imports for its raw material requirements. Macau built a new container port and has road connections with China, so raw material flows are efficient.

¹ Prepared by Robert L. Randall, Office of Industries.

² Statistics referring to Macau's textile industry are assumed to include knitwear production.

According to data published by UNIDO, employment in Macau's textile and apparel sector rose from 29,000 in 1997 to 32,600 in 1999, representing about 15 percent of Macau's workforce (table E-11). UNIDO statistics show that annual wages and salaries in Macau in textile manufacturing were about \$6,700-\$6,800 per worker in the textile industry and about \$6,000-\$6,300 in the apparel industry. Macau has a "guest worker" program to balance labor needs; such workers can be repatriated in less than a year as their permits expire if their labor is no longer required.

Investment

Gross fixed investment in Macau's textile and apparel sector was reported by UNIDO to be about \$31 to \$32 million in 1998 and 1999, or about \$60,000 per firm. Foreign investors (none are known to exist or be contemplated in this industry) are entitled to nondiscriminatory national treatment on capital flows, repatriation of profits, and to exert full management control.

Government Policies

Under the Basic Law governing reversion of Macau to China, Macau is not subject to China's taxation or regulation. However, Macau is responsible for raising all revenue necessary to provide all its government services (except for national defense and foreign affairs, which China provides). Macau has low tax rates on profits and personal services, raising most of its revenue through gambling taxes.

The Macau pataca (worth about 8 PMo to \$US) is fixed to the Hong Kong dollar, which, in turn, is essentially fixed to the U.S. dollar through a currency board arrangement. No change in this policy is contemplated by either Macau or Hong Kong, despite criticism by some outside observers that this practice tends to cause high interest rates. This fixed currency policy is, however, a major advantage to outside investors and exporters because it reduces exchange rate risk associated with international trade and investment. Macau has a dozen commercial banks and has easy access to Hong Kong and Chinese banks for any necessary financing. Exchange controls are prohibited by Macau's Basic Law. However, exporters must convert at least 40 percent of all export proceeds into patacas.

Macau has no special policies or incentives expressly affecting or influencing the textile and apparel sector nor any plans for introducing any such special industrial policies. China regards investments from, or channeled through, Macau (along with Hong Kong and Taiwan) as "foreign investment" entitled to special favorable treatment. Macau businesses with operations in China are treated as "foreign investors," thereby benefiting from lower Chinese labor costs and Macau's shipping and communications facilities. Macau is a free port.

Foreign Trade

Macau's textile imports to have been in the \$800-900 million range during 1997-2001 (table E-11). Apparel imports have increased steadily from \$105.8 million in 1997 to \$243.4 million in 2001. There is no available breakdown of reported apparel imports between (1) finished garments for domestic Macau consumption, (2) finished garments for re-export to other countries, and (3) partially completed garments for finishing in Macau.

Macau's textile exports have declined from \$148 million in 1997 to \$20 million in 2001, while Macau's apparel exports have held fairly steady during the period, totaling almost \$1.7 billion in 2001 (table E-11). Table E-12 provides a further breakdown of Macau's exports by selected markets, divided between quota and nonquota markets. The United States is Macau's principal quota market, accounting for about two-thirds of Macau's total textile and apparel exports. As shown in table E-13, U.S. imports of textiles and apparel from Macau rose by 82 percent during 1997-2002 to 322 million square meters equivalent (SMEs). Sector imports from Macau consisted almost entirely of apparel products.

Table E-11
Macau: Statistical profile of textile and apparel sector and foreign trade, 1997-2001

Item	1997	1998	1999	2000	2001
Number of establishments:					
Textiles	140	134	115	(¹)	(¹)
Apparel	408	441	394	(¹)	(¹)
Total	548	575	509	(¹)	(¹)
Number of workers:					
Textiles	5,980	5,878	6,200	(¹)	(¹)
Apparel	23,916	25,520	26,429	(¹)	(¹)
Total	29,896	31,398	32,629	(¹)	(¹)
Foreign trade:					
Exports:					
Textiles (<i>million dollars</i>)	148.1	38.0	53.4	45.6	20.4
Apparel (<i>million dollars</i>)	1,674.9	1,636.9	1,627.6	1,847.4	1,659.2
Total (<i>million dollars</i>)	1,823.0	1,674.8	1,681.0	1,893.0	1,679.6
Imports:					
Textiles (<i>million dollars</i>)	839.2	841.3	802.5	901.0	839.8
Apparel (<i>million dollars</i>)	105.8	125.6	169.2	213.7	243.4
Total (<i>million dollars</i>)	945.0	966.8	971.6	1,114.7	1,083.2
Trade balance:					
Textiles (<i>million dollars</i>)	-691.1	-803.3	-749.1	-855.5	-819.4
Apparel (<i>million dollars</i>)	1,569.1	1,511.3	1,458.4	1,633.7	1,415.8
Total (<i>million dollars</i>)	878.0	708.0	709.4	778.2	596.5

Note.—Because of rounding, figures may not add to totals shown.

Source: Industry data compiled from the United Nations Industrial Development Organization, *International Yearbook of Industrial Statistics 2002*. Trade data are United Nations data as reported by Macau.

Table E-12
Macau: Exports of textiles and apparel, by selected markets, 1997-2001

Item and market	1997	1998	1999	2000	2001
	<i>Million dollars</i>				
Textiles (SITC 65):					
Quota markets:					
United States	(¹)	8	23	15	7
European Union	(¹)	(¹)	(¹)	(¹)	(¹)
Canada	(¹)	0	(¹)	(¹)	(¹)
Subtotal	1	8	23	15	7
All other:					
Japan	2	(¹)	2	4	5
China	67	5	8	11	4
Hong Kong	73	18	15	13	3
Other	5	7	5	3	1
Subtotal	147	30	31	31	13
Grand total	148	38	53	46	20
Apparel (SITC 84):					
Quota markets:					
United States	917	965	963	1,143	1,051
European Union	641	575	578	612	520
Canada	31	35	30	38	37
Subtotal	1,589	1,575	1,571	1,793	1,609
All other	86	62	56	55	50
Grand total	1,675	1,637	1,628	1,847	1,659
Textiles and apparel:					
Quota markets:					
United States	917	974	985	1,158	1,058
European Union	641	575	578	612	521
Canada	32	35	30	38	37
Subtotal	1,590	1,583	1,594	1,808	1,616
All other	233	91	87	85	64
Grand total	1,823	1,675	1,681	1,893	1,680
	<i>Percent</i>				
Share of exports going to quota markets:					
Textiles	1	22	42	33	34
Apparel	95	96	97	97	97
Average	48	59	70	65	66

¹ Less than \$500,000.

Note.—Because of rounding, figures may not add to totals shown.

Source: Compiled from United Nations data.

Table E-13

Textiles and apparel: U.S. general imports from Macau, by specified product categories,¹ 1997-2002

Cat.		1997	1998	1999	2000	2001	2002
No.	Description	<i>1,000 square meters equivalent</i>					
0	Textiles and apparel, total	176,477	226,012	277,674	306,031	293,245	321,800
1	Apparel	176,401	207,232	210,898	256,475	267,863	318,960
2	Textiles	75	18,780	66,776	49,556	25,382	2,840
30	Cotton textiles and apparel	87,949	107,195	110,842	123,631	125,884	133,149
60	Manmade-fiber textiles and apparel	85,331	112,498	160,998	177,266	162,896	181,810
239	Babies' apparel	13,965	15,683	10,532	12,875	12,229	5,640
334	Other cotton coats, men/boys	3,288	4,175	3,411	4,807	3,792	4,424
335	Cotton coats, women/girls	3,497	2,738	2,028	4,822	9,071	8,091
336	Cotton dresses	2,446	2,570	2,792	2,593	3,304	3,323
338	Cotton knit shirts, men/boys	2,312	2,370	2,648	3,057	2,586	3,689
339	Cotton knit shirts, women/girls	8,956	10,692	11,975	10,314	14,724	14,994
340	Cotton not knit shirts, men/boys	5,502	7,156	9,469	7,261	7,261	6,293
341	Cotton not knit blouses	2,380	2,882	3,412	2,624	2,325	4,422
342	Cotton skirts	1,102	1,196	1,894	1,558	2,069	2,920
345	Cotton sweaters	1,851	2,148	1,928	2,919	2,686	3,061
347	Cotton trousers, men/boys	3,488	4,026	4,808	5,937	4,992	5,437
348	Cotton trousers, women/girls	10,156	9,666	10,575	10,180	13,181	16,477
349	Cotton brassieres	1,970	1,162	1,573	1,859	338	473
350	Cotton robes	632	1,667	2,867	2,866	1,586	1,679
351	Cotton nightwear	3,877	3,947	4,309	4,122	4,796	6,326
352	Cotton underwear	11,791	18,614	19,094	30,490	29,134	41,632
359	Other cotton apparel	10,734	16,242	16,994	16,475	12,213	4,903
634	Other manmade coats, men/boys	14,237	14,419	8,584	11,175	10,358	13,204
635	Manmade-fiber coats, women/girls	9,292	6,535	6,604	6,315	8,218	13,179
636	Manmade-fiber dresses	7,743	4,681	4,252	10,137	9,694	7,792
638	Manmade knit shirts, men/boys	4,301	7,356	7,097	6,927	7,526	9,970
639	Manmade knit shirts, women/girls	17,222	19,743	23,540	19,021	17,742	31,484
640	Manmade not knit shirts, men/boys	628	538	1,108	1,976	1,660	1,587
641	Manmade-fiber not knit blouses	1,911	2,312	1,394	1,828	1,540	1,971
642	Manmade-fiber skirts	1,048	1,559	2,452	2,203	1,853	2,123
645	Manmade-fiber sweaters, men/boys	37	475	334	460	615	364
646	Manmade-fiber sweaters, women/girls	6,552	4,869	1,326	3,427	5,549	4,233
647	Manmade-fiber trousers, men/boys	2,056	5,731	7,295	6,448	6,771	7,273
648	Manmade-fiber trousers, women/girls	5,692	4,413	5,384	5,339	4,916	7,641
649	Manmade-fiber brassieres	940	1,865	2,915	4,423	5,924	1,311
650	Manmade-fiber robes	1,045	682	517	1,713	1,847	972
651	Manmade-fiber nightwear	775	1,963	2,590	5,669	6,084	17,864
652	Manmade-fiber underwear	1,731	5,242	4,858	8,059	27,092	41,330
659	Other manmade-fiber apparel	8,128	9,781	12,897	30,454	17,918	15,036

¹ To administer the U.S. textile and apparel quota program, articles are grouped under 3-digit category numbers, which cover many 10-digit statistical reporting numbers under which goods are classified from statistical purposes in the Harmonized Tariff Schedule of the United States (HTS). The 1-digit and 2-digit numbers represent specific levels of import aggregation for articles covered by the quota program (e.g., the number "1" represents total imports of apparel, while "31" represents total imports of cotton apparel).

Source: Compiled from official statistics of the U.S. Department of Commerce, found at <http://otexa.ita.doc.gov/>.

Overview

The Taiwan textile and apparel sector contributed \$13.9 billion, or 5 percent, of the economy's GDP in 2001. Of this, the textile industry accounted for \$11.3 billion, and apparel, \$2.6 billion. Sector exports in 2001 reached \$12.3 billion, or about 90 percent of production value. Sector imports in 2001 totaled \$2.0 billion. Employment in textiles and apparel was 218,345 persons in 2001 (table E-14, found at the end of this profile), about 10 percent of the economy's total workforce.

Taiwan's textile and apparel sector is highly export-oriented and Taiwan apparel makers have invested heavily in Chinese apparel production, motivated by rising wages in Taiwan that make the domestic apparel industry less competitive.³ Taiwan has also invested elsewhere in Asia and in Latin America and Africa. As Taiwan apparel producers relocate overseas, Taiwan exports of fibers and fabrics have increased (except where constrained by quotas).⁴ Therefore, the success of China and other low-cost fabric and apparel producers in a quota-free global market could provide strategic benefits to some segments of the Taiwan industry, which could offset competitive challenges to other segments.

Industry Profile

Taiwan's textile and apparel sector includes almost all links in the supply chain from man-made fibers to yarn, fabrics, and apparel/accessories. Only in the natural fiber area is a key link missing. In 2001, about 80 percent of Taiwan's fiber imports and more than 25 percent of yarn imports were natural, because of negligible domestic cotton and wool production. The sector benefits from excellent infrastructure throughout Taiwan, as well as a skilled workforce, access to technology and capital, and an advantageous geographic location as the "gateway to Asia."

Industry structure and performance

Taiwan's textile industry consists of several large, vertically integrated firms, including a handful of multinational enterprises, and a significant but shrinking number of small businesses.

¹ Prepared by Roger Corey, Office of Industries.

² Except where noted, all dollar values are in U.S. dollars, converted from NT\$ at the rate of exchange listed in Taiwan Textile Federation, "Statistics on Taiwan Textile and Apparel Industries 2001."

³ Taiwan Textile Federation representatives, interview by USITC staff, Taipei, Mar. 4, 2003.

⁴ U.S. Department of State telegram 1634, "Taiwan: Post-2004 textile Trade Impacts," prepared by the American Institute in Taiwan (AIT), May 13, 2002.

These latter firms generally focus on one stage of the supply chain, such as spinning yarn, while the larger firms are integrated fully from fiber production (or in some cases even to petrochemical production) forward into apparel production and distribution.

Small Taiwan textile firms are competitively disadvantaged. They are poorly positioned to negotiate low prices for raw materials from the highly concentrated domestic petrochemical industry. Fiber prices, for example, are set for spinners in the larger (even international) market place. Without the market power to make long-term contracts or obtain volume discounts, such firms are at the mercy of volatile international markets for textiles and petrochemicals. Small Taiwan textile firms are also hampered by their inability to fill orders of large volume or multiple products from domestic and foreign chain retailers and other distributors. Because the retail market is growing more concentrated, this competitive disadvantage also grows. As a result, the number of small firms is shrinking, a trend actively encouraged by government policy (see below) aimed at boosting textile industry scale and competitiveness. Large textile firms do not have these disadvantages. In addition, large firms have a further advantage because of their foreign interests, especially investments in low-cost apparel factories in low-wage countries, to which Taiwan's textile exports are increasingly being channeled.⁵

The yarn segment includes firms that spin cotton, wool, and manmade fibers and firms that produce textured manmade fibers. The spun fiber segment of the industry has reportedly suffered from competitive pressure on prices and from U.S. trade barriers on such items as sweaters from Taiwan, Korea, and Hong Kong.⁶ From 1999 to 2001, Taiwan production of spun fiber (polyester, nylon, and acrylic) fell by 16 percent, from 124,000 metric tons (MT) to 104,000 MT. At the same time, textured yarn output fell by only 3 percent, from 1,187,000 MT to 1,151,000 MT.⁷

The fabric segment of the textile industry includes weavers, knitters, and nonwoven fabric makers. Fabric producers using filament fibers rely on silk, manmade fibers, and textured yarn. Fabric weavers using spun yarns rely on cotton and manmade-fiber spun yarns. Fabrics woven with filament yarns are on the rise, while yarn woven of spun yarns are on the decline. Knitting establishments include numerous family enterprises.⁸ The nonwoven segment of the industry, which is relatively new in Taiwan, specializes in low-price products.⁹

Retail distribution channels in Taiwan, as in the United States, are mainly department stores and warehouse stores. However, Taiwan department stores, like their Japanese counterparts, commonly consist of concessionaires operating booths or stalls in a shared facility. Foreign

⁵ However, large firms also experience competitive pressure. Industrywide, the daily production capacity for polyester and nylon yarn, for example, fell by 21 percent between 1999 and 2001, after nearly tripling during the 1990s. "Taiwan Textile Industry," *Asian Textile Business*, Apr. 2002, pp. 41-46. For more discussion, see the "Investment" section below.

⁶ U.S. Department of State telegram 2434, "SPR 521: Textile Industry Outlook," prepared by AIT, Apr. 26, 1995.

⁷ Taiwan Textile Federation, "Statistics on Taiwan Textile and Apparel Industries 2001."

⁸ U.S. Department of State telegram 2434, "SPR 521: Textile Industry Outlook," prepared by AIT, Apr. 26, 1995.

⁹ Ibid.

textile firms have been advised to distribute their products through agents, although some U.S. retailers have begun establishing themselves in Taiwan.¹⁰

Taiwan's textile (including manmade fibers) and apparel output fell by 25 percent in value during 1997-2001, from \$18.5 billion (7.3 percent of GDP) in 1997 to \$13.9 billion (5.1 percent) in 2001 (table E-14). Within this sector, apparel output declined more rapidly than textiles, falling by 37 percent from \$3.2 billion in 1997 to \$2.0 billion in 2001. In comparison, textile output declined by only 23 percent, from \$15.3 billion in 1997 to \$11.9 billion in 2001. Sector exports (not including manmade fibers) declined during this period, by 33 percent from \$16.0 billion (about 15 percent of all exports) in 1997 to \$12.3 billion (about 10 percent) in 2001 (table E-14). Sector exports accounted for approximately 90 percent of sector output during this period. Imports declined by 28 percent from \$2.9 billion (about 3 percent of all imports) in 1997 to almost \$2.0 billion (about 2 percent) in 2001.

Factors of production

Raw materials

The limited supply of domestic cotton and wool in Taiwan has led to an emphasis on manmade fibers and products. Polyester is the dominant fiber type (more than 75 percent by volume of all fibers produced in 2001)¹¹ although nylon fiber is rising in importance due to strong foreign demand in major apparel markets. Taiwan produces both manmade filament fiber and staple fiber. Fiber and yarn imports, more than half of which are cotton- or wool-based, made up 40 percent of Taiwan's fiber and yarn consumption in 2001.

Labor

Taiwan's textile and apparel industries employed 218,400 persons (about 9 percent of Taiwan's workforce) in 2001, down by 17 percent from 262,100 (11 percent of the total workforce) in 1997 (table E-14).¹² Shortages of both skilled and unskilled labor create a major burden on the Taiwan textile and apparel industry. For example, a shortage of professional designers hampers the competitiveness of the home furnishings segment of the textile industry.¹³ This problem is exacerbated by government-imposed limits on workweek hours, which force employers to find additional labor or pay overtime.¹⁴ "Guest workers" from the Philippines, China, and elsewhere,

¹⁰ U.S. Department of Commerce, *Taiwan Country Commercial Guide FY2002*, found at www.usatrade.gov, retrieved Mar. 5, 2002.

¹¹ Taiwan Textile Federation, "Statistics on Taiwan Textile and Apparel Industries 2001."

¹² Some from the Taiwan Textile Federation, cited in "Hi-Tech Textiles Give Added Value to Taiwan," [just-style.com](http://www.just-style.com), Feb. 10, 2003, found at <http://www.just-style.com>, retrieved Feb. 13, 2003.

¹³ Includes fringe benefits. Werner International Management Consultants, "Spinning and Weaving Labor Cost Comparisons 2002," Reston, VA.

¹⁴ "Asia's Apparel Industry: Notable Trends in 2000," *Pacific Trade Winds*, Jan. 2001, p. 3.

who account for a significant amount of the industry's labor, help offset the chronic labor shortage.¹⁵ The skill level of such workers is often poor, and low productivity and high training costs mitigate the wage cost savings.¹⁶ The government has recently placed supply restrictions on the number of guest workers.

Labor costs in Taiwan textiles are lower than in the United States but higher than in other Asian economies. The average labor cost per hour of spinning and weaving in Taiwan in 2002 was \$7.15, compared with \$15.13 in the United States and \$0.57 in India.¹⁷

One reason for Taiwan's labor cost disadvantage compared with its Asian competitors is a result of generous fringe benefits. Labor costs to employers include a bonus of 1 month's pay at yearend; insurance for maternity leave and retirement; and health insurance for the employee and his/her family.¹⁸ These benefits are not always available, or are available at lower levels, to workers in other textile producing countries, such as Indonesia, Vietnam, and India.

Labor productivity in Taiwan's textiles industry is rising (although not as fast as that in the manufacturing sector as a whole), while that in the apparel industry is falling. From a 1996 base of 100, the labor productivity index for all manufacturing reached 131.97 in 2001, while that for textiles rose only to 115.60. The index for apparel and accessories actually fell to 87.91.¹⁹ This is possibly due to larger, more integrated firms moving overseas, leaving smaller, less efficient ones behind.

Technology

Technological development is high in the textile industry, but lower in the apparel industry, contributing to the latter's decline in output. Manufacturers of manmade fibers and yarn employ state-of-the-art technology, due in part to liberal Taiwan policies regarding foreign investment in the industry. Yarn spinners use a variety of technologies, including ring, open-end, and jet spindle types. Fabric manufacturers utilize both shuttle and shuttleless looms; these producers use a full range of technologies, including both water and air jet, flexible as well as rigid rapier, and projectile types. The apparel industry, however, is much more labor-intensive and thus much less competitive, given Taiwan's rising wages and other labor costs.

In 2000, Taiwan employed 2,800 spindles, of which almost all were of the ring type, and the remainder, open-end spindles. This mix of spindle technology is similar to China (98 percent ring), Korea (99 percent), and Pakistan (98 percent), but it is superior to that in the U.S. industry

¹⁵ U.S. Department of Commerce, *Taiwan Country Commercial Guide FY2002*.

¹⁶ Industrial Development Bureau, "The Development of Taiwan's Textile and Apparel Industry," Nov. 1994. Also, Taiwan Textile Federation, interviews by USITC staff, Taipei, Mar. 4, 2003.

¹⁷ International Textile Manufacturers Federation, *Country Statements 2001*.

¹⁸ U.S. Department of State telegram 569, "Labor Wage Study of Taiwan's Textile Industry," prepared by AIT, Feb. 25, 1999; Industrial Development Bureau.

¹⁹ Taiwan Textile Federation.

(80 percent).²⁰ On the weaving side, Taiwan's technological mix is more closely aligned with that in the United States: of a total of 45,800 looms in 2000, 95 percent were of the shuttleless type and the rest were shuttle looms, but superior to those of Pakistan (67 percent) and China (8 percent).^{21 22}

Investment

Domestic investment

During 1997-2002, private industry investment in manmade-fiber production totaled \$2.5 billion. An additional \$10 billion was invested (in the textile and apparel sector generally) by the Taiwan Government.²³ Investment in polyester filament production rose in the 1990s, in anticipation of increased demand from Chinese fabric and apparel makers.²⁴ However, this expected demand did not fully materialize for several reasons: China encouraged growth in its own fiber and fabric industry; China's accession into the WTO (with its associated reductions in Chinese tariffs) was delayed; and Taiwan has lagged in the production of more popular materials such as nylon and natural fibers and yarns, relying heavily instead on polyester.²⁵ Thus, with substantial overcapacity in polyester production, total investment in Taiwan's textile industry has declined in recent years, albeit not as rapidly as the decline in its more competitively disadvantaged apparel industry. However, Taiwan's productive capacity in some textile segments appears flexible: in response to a downturn in demand for cotton and cotton-blend apparel in 2000, the number of operational spindles reportedly fell by nearly 30 percent, leading to a sizeable drop in cotton imports in that year.²⁶

Any future investment, according to some industry observers, is likely to be in high value-added goods such as bullet-proof clothing, fire-retardant materials, and fabrics for the medical sector.²⁷ Investment in more traditional textile and apparel products is less likely because of reduced or volatile demand. Taiwan's recession in early 2001 and the post-September 11, 2001, economic downturn caused some textile firms in Taiwan to go bankrupt while others cut back capacity utilization by as much as 20 percent.²⁸

²⁰ Data from International Textile Manufacturers Federation, *Country Statements 2001*, pp. 34-35.

²¹ Ibid.

²² ITMF data on other measures, such as Taiwan's capacity utilization and labor productivity, are not available.

²³ Data from the Taiwan Textile Federation, cited in "Hi-Tech Textiles Give Added Value to Taiwan."

²⁴ "Taiwan," *JTN Monthly*, Jan. 2000, p. 44.

²⁵ "Asia's Apparel Industry," *Pacific Trade Winds*, Jan. 2001, p. 2.

²⁶ "Imports Below a Million," *Textile Asia*, Dec. 2001, p. 63.

²⁷ "Impact of WTO," *Textile Asia*, Dec. 2001, p. 62.

²⁸ "Textured Yarn Cut," *Textile Asia*, Dec. 2001, pp. 63-64; "Textured Yarn Supply and Demand Must be Adjusted," *Asian Textile Business*, Jan. 2002, pp. 45-46. Some firms reported to have avoided bankruptcy likely did so because they are said to have enjoyed historically better

Foreign investment in Taiwan is generally not treated differently from domestic investment.²⁹ As a result, foreign investment is growing. Foreign investment is attracted by transparent legal and accounting systems in Taiwan, modern and efficient capital markets, and only limited restrictions on currency convertibility and repatriation of profits.³⁰

Foreign investment

Many Taiwan apparel producers and some textile producers have been investing in foreign operations to take advantage of lower labor costs as well as quota availability.³¹ This pattern began for apparel manufacturers in the early 1990s, followed by fabric makers in the late 1990s, and most recently by some fiber and yarn producers.³² However, in many cases the foreign operations continue to rely largely on Taiwan-made textile inputs (where foreign import quotas allow). This reliance will probably decrease as preferential agreements such as AGOA are fully implemented so that duty preferences apply only to apparel products made from local (or U.S.) inputs.³³

Taiwan foreign investment in textiles and apparel (excluding China, which is discussed later in this section) totaled \$143 million in 2001, up by \$46 million (47 percent) from \$97 million in 2000.³⁴ Foreign investment in apparel was \$24.2 million in 2001; this flow has not shown any clear trend in recent years, ranging from a low of \$20.3 million in 1998 to a high of \$47.4 million in 1999. In contrast, the flow of investment abroad in textiles declined from \$66.6 million in 1997 to a low of \$12.4 million in 2000, before recovering somewhat to \$27.2 million in 2001.³⁵

Taiwan firms have invested in Africa, Latin America, Southeast Asia, and China. In Africa, the greatest concentrations of Taiwan investment are found in Lesotho and Swaziland, both countries that traditionally have received Taiwan development assistance. In Lesotho, a Taiwan firm reportedly spent \$2.4 million on new sewing machines to expand its factory in 2002.

economic health than their Taiwanese and foreign rivals due to low debt/equity ratios (“Taiwan,” *JTN Monthly*, Jan. 2000, p. 44).

²⁹ U.S. Department of Commerce, *Taiwan Country Commercial Guide FY2002*.

³⁰ *Ibid.*

³¹ Taiwan Textile Federation, interviews by USITC staff, Taipei, Mar. 4, 2003.

³² “Asia: World’s Textile Center,” *Asian Textile Business*, Apr. 2001, p. 22.

³³ See also prehearing brief, United States Association of Importers of Textiles and Apparel, pp. 6-7.

³⁴ These data represent cumulative annual investment flows since 1960. Data from U.S. Department of State telegram 1634, “Taiwan: Post-2004 Textile Trade Impacts,” prepared by AIT, May 13, 2002; also, Taiwan Textile Federation, communication to USITC staff, Mar. 14, 2002.

³⁵ Taiwan Textile Federation, “Statistics on Taiwan Textile and Apparel Industries 2001;” also, Taiwan Textile Federation, communication to USITC staff, Mar. 14, 2002.

Another Taiwan firm added a third factory, at a cost of almost \$30 million, to its Lesotho operations, for a combined monthly capacity of 137,000 garments.³⁶

In Swaziland, which like Lesotho benefits from U.S. duty-free treatment for apparel made from nonlocal (e.g., Taiwan) inputs, a Taiwan firm operates a garment factory, which it expanded in 2000.³⁷ Another operates a garment factory in Swaziland and was recently reported to be opening a second.³⁸

In Central America, Taiwanese investment has been encouraged in Honduras, Mexico, Nicaragua, and other countries. According to a Honduran industry representative, Taiwan firms enjoy a reputation for high quality that works well with Honduras' low production costs and economical, timely access to the U.S. market.³⁹ Taiwan textile firms with investments in Mexico include a t-shirt and casual apparel factory with a capacity of 600,000 pieces of clothing annually,⁴⁰ an integrated knitted fabric factory,⁴¹ and others.⁴² One firm operates one denim factory in Mexico and five other factories in Nicaragua,⁴³ while others have factories in Nicaragua and El Salvador.⁴⁴

³⁶ "Taiwan: Garment Makers Expand Sub-Saharan Africa Plants," Just-style.com, July 25, 2002, found at <http://www.just-style.com>, retrieved July 26, 2002. Elsewhere, this investment was reported at \$85 million. "News Briefs," *Pacific Trade Winds*, Aug. 2000, p. 3.

³⁷ "News Briefs," *Pacific Trade Winds*, Feb. 2000, p. 3.

³⁸ "Nan-Woei, Roo Hsing Scored Handsome Profits From Overseas Garment Plants in 2002," Global NewsWire (e-mail), *Taiwan Economic News*, Jan. 29, 2003.

³⁹ "A Hand to Honduras," *Textile Asia*, Oct. 2002, p. 78; "Honduras signs textile deal with Taiwan," just-style.com, Nov. 5, 2001, found at <http://www.just-style.com>, retrieved Nov. 6, 2001 (announcing a "cooperation agreement" between the Taiwan Textile Federation and the Honduran Investment and Export Development Foundation to encourage investment in Honduras). See also, "A place to invest," *Textile Asia*, Apr. 2001, p. 62 (describing efforts by the China (Taiwan) External Trade Development Council to encourage apparel investment in Honduras).

⁴⁰ "Taiwan Textile Firm Hong Ho Enjoys Profit Surge," Just-style.com, Sept. 3, 2002, found at <http://www.just-style.com>, retrieved Sept. 5, 2002.

⁴¹ "Taiwan Textile Firm to Open Factory in Mexico," Just-style.com, Aug. 1, 2001, found at <http://www.just-style.com>, retrieved Aug. 1, 2001.

⁴² "Nan-Woei, Roo Hsing Scored Handsome Profits From Overseas Garment Plants in 2002," Global NewsWire (e-mail), *Taiwan Economic News*, Jan. 29, 2003.

⁴³ "Taiwan's Nien Hsing Becomes World's Largest Denim Maker," *EmergingTextiles.com*, Jan. 18, 2000, found at <http://www.emergingtextiles.com>, retrieved Feb. 27, 2002, "Taiwanese Textile Companies to Massively Invest in Central America," *EmergingTextiles.com*, Sept. 14, 2000, found at <http://www.emergingtextiles.com>, retrieved Feb. 27, 2002. See also, "New Protests Against Taiwanese Apparel Plant in Nicaragua," *EmergingTextiles.com*, Dec. 12, 2000, found at <http://www.emergingtextiles.com>, retrieved Feb. 27, 2002.

⁴⁴ "Taiwan's Textile Companies to Massively Invest in Central America."

In Southeast Asia, Taiwan textile and apparel firms have invested heavily in Vietnam.⁴⁵ Among the reasons commonly cited are Vietnam's skilled and low-cost labor force.⁴⁶ Other locations include the Philippines (where at least one firm has invested in a duty-free zone at Subic Bay),⁴⁷ Cambodia,⁴⁸ Malaysia and Thailand.⁴⁹ Many of these investments are joint-venture arrangements with Chinese-speaking locals, and reportedly often include the shipment of older machinery to these factories.⁵⁰

Taiwan's investment in China's textile and apparel sector totaled \$1.2 billion in 2001.⁵¹ Of this figure, 70 percent was invested in the textile industry and 30 percent in the apparel industry. However, growth in apparel investment has been rapid: about 40 percent of total apparel investment during 1960-2001 took place during the last 5 years, and 2001 investment of approximately \$65 million was almost four times the previous year's investment of \$17.6 million. This investment has been spurred in part by recent reductions in China's import tariffs for items such as polyester filament yarn and staple yarn and other apparel inputs and by lower labor costs in China.⁵² This has aided Taiwan exporters of these items as well as Taiwan investors in China's apparel factories that depend on such imports for raw material.⁵³ However, there is resistance in China to rapid expansion of Taiwan investment, because it creates competition for Chinese firms. The most consistently reported driving force behind these and other investments is the disparity in labor costs between the two economies.⁵⁴

⁴⁵ "Taiwan Textile Groups Relocate Production, on Their Turn," *EmergingTextiles.com*, Oct. 19, 2000, found at <http://www.emergingtextiles.com>, retrieved Feb. 27, 2002; "Setting up in Vietnam," *Textile Asia*, May 2001, p. 66; "Accelerating Advances into Vietnam," *Asian Textile Business*, Feb. 2002, p. 71; and "Vietnam to Develop a Strong Textile Industry," *EmergingTextiles.com*, Jan. 7, 2002, found at <http://www.emergingtextiles.com>, retrieved on Feb. 27, 2002.

⁴⁶ See, e.g., "Vietnam to Develop a Strong Textile Industry," *EmergingTextiles.com*, Jan. 7, 2002, found at <http://www.emergingtextiles.com>, retrieved Feb. 27, 2002.

⁴⁷ "Taiwanese Garment Firm to Invest in Subic," *texwatch.com*, Aug. 14, 2002; found at <http://www.texwatch.com>, retrieved Nov. 6, 2002.

⁴⁸ "Roo Hsing Profit Surges 89 Percent on Soaring U.S. Orders," *Just-style.com*, Oct. 29, 2002, found at <http://www.just-style.com>, retrieved Oct. 30, 2002.

⁴⁹ "Taiwan: Increased Financial Difficulties," *Asian Textile Business*, Sept. 2001, p. 79.

⁵⁰ "Taiwan's Textile Industry: Pressures at Home, Expansion Abroad, Political Constraints, and E-Commerce Developments," *Pacific Trade Winds*, Nov. 2000, pp. 1-2.

⁵¹ Taiwan Textile Federation, communication to USITC staff, Mar. 14, 2002; see also "Taiwan: Decline of a Textile Giant?," *EmergingTextiles.com*, found at <http://www.emergingtextiles.com>, retrieved Mar. 29, 2002.

⁵² "Taiwan Textile Industry," *Asian Textile Business*, Apr. 2002, p. 43.

⁵³ Such investors are as often as not the same firms that export Taiwan yarn and other inputs.

⁵⁴ "Taiwanese Textile Firms to Massively Invest in China," *EmergingTextiles.com*, Nov. 26, 2001, found at <http://www.emergingtextiles.com>, retrieved Feb. 27, 2002.

Government Policies

Domestic policies

Of greatest importance to the domestic industry and to foreign investors is Taiwan's policy toward investment.⁵⁵ Rules regarding investment have been relaxed in recent years, owing not only to Taiwan's WTO obligations but also to the need to sustain growth in the face of several economic downturns. Private ownership and business establishment (with foreign as well as domestic capital) is allowed in all lines of business except national security and state monopolies. Such investment is assisted by efficient capital markets and transparent regulatory and tax regimes.

Transparency issues in Taiwan law and finance were a concern to U.S. investors during the 1990s.⁵⁶ Since then, however, the two driving forces that have led to improvements in this area are Taiwan's obligations as a WTO member and the need to sustain exports by attracting foreign investment.⁵⁷

The Taiwan Government is reportedly encouraging mergers in the textile and apparel industry (from about 13 firms to 3 or 4 "giant" firms).⁵⁸ In addition, the Ministry of Economic Affairs has reportedly expanded the number of synthetic fiber producers and spinners eligible for loans for updated equipment investment and for establishing manufacturing bases overseas.⁵⁹

Trade policies

Taiwan's average tariffs on yarns, fibers, and apparel have fallen sharply. Between 1997 and 1998, tariffs on cotton yarn fell from 4 percent ad valorem to 3 percent; that on wool yarn from 15 to 7.5 percent, and on synthetic yarn from 5 to 3 percent. The average tariffs on fabrics fell from 20 to 25 percent ad valorem to 5-10 percent. Woven and knitted apparel tariffs fell from 25 to 30 percent ad valorem to an average of 12.5 percent.⁶⁰ Taiwan's tariffs fell further upon its accession to the WTO on January 1, 2002. The average import tariff on all goods declined from 8.2 percent to 7.1 percent, and is scheduled to fall to 4.2 percent by 2007. Currently, manmade fiber is dutiable at 1.5 percent, gray cloth at 7.5 percent, and apparel at an average of 12.5 percent.

⁵⁵ For more information on this issue, see U.S. Department of Commerce, "Taiwan: Country Commercial Guide," found at <http://www.usatrade.gov> or <http://www.Export.gov>.

⁵⁶ Sharon Lockwood, "Taiwan's Accession to GATT: A Washington Perspective," *Columbia Journal of World Business*, Fall 1993, pp. 97-99.

⁵⁷ U.S. Department of State telegram 569, "Labor Wage Study on Taiwan's Apparel Industry," prepared by AIT, Feb. 25, 1999.

⁵⁸ Emerging Textiles.com, "Taiwan: Decline of a Textile Giant?," found at www.emergingtextiles.com, retrieved Mar. 29, 2002.

⁵⁹ "Challenge to Changes: Taiwan's Textile Industry," *Asian Textile Business*, Apr. 2001.

⁶⁰ Taiwan Textile Federation, *Statistics on Taiwan Textile and Apparel Industries 2001*.

Foreign Trade

Taiwan has run a substantial trade surplus in textiles and apparel for many years. In 2001, this surplus was \$10.3 billion, (table E-14). Sector exports in 2001 reached \$12.3 billion and sector imports totaled almost \$2.0 billion. The surplus in textiles and apparel has diminished somewhat in recent years, down from \$13.1 billion in 1997, because exports fell more rapidly than imports during this period, particularly in 2001.

Imports

Overall imports of textiles and apparel into Taiwan dropped steadily from \$2.9 billion in 1997 to just under \$2.0 billion in 2001, a decline of 32 percent (table E-14). Imports of fiber, yarn, and fabric were all down sharply, reflecting the weakened condition of the domestic apparel industry.⁶¹ Imports from the United States fell by 21 percent, from \$287 million in 1997 to \$228 million in 2001. However, as a share of total sector imports, imports from the United States rose from 8 percent in 1997 to 10 percent in 2001. Japan was for several years the largest source of Taiwan's imports of textiles and apparel. In 2001 Hong Kong surpassed Japan with 16 percent of Taiwan's total import value, compared with the latter's 12-percent share. Korea and the United States have competed for third and fourth place, each accounting for between 8 and 10 percent of Taiwan's import market in recent years, and Italy was in fifth place with 6 to 7 percent throughout 1997-2001. The United States is Taiwan's largest supplier of imported textile fibers, mostly cotton and nylon, with 23 percent of the import market in 2001. Australia was the second-largest fiber supplier with 22 percent, mainly cotton and wool types. Yarns are supplied mainly by Japan (16 percent in 2001), Malaysia (13 percent), India (12 percent), Pakistan (10 percent), and Korea (9 percent). The United States ranks third (9 percent) as Taiwan's largest fabric supplier, behind Japan (23 percent) and Korea (17 percent). The chief fabrics imported from the United States include coated fabrics, nonwoven fabrics, and carpets. Apparel imports -- largely women's apparel made from woven fabrics -- are supplied mainly from Hong Kong (42 percent of the total value in 2001). Other significant suppliers are Italy (14 percent), Vietnam (9 percent), Japan (6 percent), and Korea (6 percent). The United States supplied less than 2 percent of Taiwan's apparel imports in 2001.

⁶¹ Data in remainder of the paragraph are from Taiwan Textile Federation, *Statistics on Taiwan Textile and Apparel Industries 2001*.

Exports

Exports of textiles and apparel from Taiwan totaled \$12.3 billion in 2001, down from \$16.0 billion in 1997, a decline of \$3.7 billion or 23 percent (table E-14). Exports of all items-- fibers, yarns, fabrics, and apparel--declined, with apparel showing the greatest decline, owing (as with imports) to the declining state of the apparel industry. Exports to the United States fell by 18 percent during 1997-2001 to \$2.2 billion (table E-15). The U.S. share of Taiwan's total textile and apparel exports rose to 18 percent in 2001 from 17 percent in 1997.

In recent years, Hong Kong, Taiwan's traditional conduit into China, has been Taiwan's largest export market, albeit a shrinking one: Hong Kong's share of Taiwan's total exports fell from 37 percent in 1997 to 31 percent in 2001. The United States accounted for 16 to 18 percent of total exports throughout 1997-2001, while Indonesia was the third-largest market with 4 percent. Japan, the Philippines, Vietnam, and numerous other small markets accounted for the remainder. U.S.-bound exports from Taiwan in recent years have consisted almost entirely of apparel of all types (woven, knitted, and sweaters) as well as apparel accessories, bed linens, and the like.

Taiwan exporters face a wide range of foreign tariffs. The following tabulation of data supplied by the Taiwan Textile Federation presents tariffs for key product groups in certain important markets for 2000.

Item	Tariff ad valorem equivalent rates (AVE) on imports from Taiwan			
	Japan	Korea	USA	EU
Manmade fibers	3-9	8	1.7-9.5	12-14
Cotton yarn	7.6	8	3.7-12	10-16
Synthetic yarn	3.6-9	8	3-14.6	13-19
Grey cotton fabric	7.6	8	6.5-13.5	17-19
Finished cotton fabric	7.6-10	8	5.4-15.5	17-19
Grey manmade fiber fabric	7.2-13.6	8	13.8	19-21
Finished manmade fiber fabric	7.2-17	8	3	19-21
Woven apparel	10.1-17.8	8	2.4-30	20-22
Knitted apparel	10.1-15	8	3.3-34.1	20-23

In addition to tariffs, Taiwan faces quotas in the United States, Canada, and the EU. Taiwan's quota fill rates in the U.S. market are high for many products of manmade fibers, cotton, and wool. There are a number of products with low fill rates that may be explained by high unit values (relative to the average for all U.S. import sources). For example, the average unit value of cotton poplin/broadcloth fabric (category 314) from Taiwan was 50 percent higher than the average for U.S. imports of such fabric from all sources, 145 percent higher for manmade-fiber poplin/broadcloth fabric (category 614) and 29 percent higher for women's and girls' not

knitted manmade-fiber shirts and blouses (category 641).⁶² However, few quotas are completely filled. Examples of manmade-fiber products with fill rates of 90 percent or more in 2001 include synthetic filament fabric (categories 619/620); assorted fabrics (categories 625/6/7/8/9); and trousers/shorts (categories 647/8). Examples of cotton and wool products with fill rates of 90 percent or more in 2001 include cotton sweaters (category 345); cotton trousers (categories 347/8); and wool sweaters (categories 445/6).

*U.S. imports from Taiwan*⁶³

U.S. imports of textiles and apparel from Taiwan increased by 16 percent during 1997-2002 to 1,391 million square meters equivalent (SMEs) (table E-16). U.S. imports of textiles from Taiwan accounted for most of this increase, rising by 34 percent during 1997-2002 to 816 million SMEs; imports of apparel decreased by 2 percent during the period to 576 million SMEs.

In 2002, Taiwan was the seventh-largest supplier of U.S. textile and apparel imports, accounting for 4 percent of the total quantity of imports. Once one of the “Big Three”⁶⁴ suppliers to the U.S. market, Taiwan has been overtaken by China, Mexico, Canada, Pakistan, Korea, and India.

Major textile and apparel products imported from Taiwan during 1997-2002 included knit fabric; special purpose fabric; textured filament yarn; pile and tufted fabric; blue denim fabric; men’s and boys’ woven cotton shirts; manmade-fiber hosiery; manmade-fiber knit shirts; women’s and girls’ manmade-fiber sweaters; and manmade-fiber nightwear.

EU quotas and quota utilization rates

During 2002, the EU had 28 quotas on textiles and apparel products imported from Taiwan. The quotas covered a variety textile and apparel products, including cotton and synthetic woven fabrics; T-shirts of all fibers except wool; other knit shirts such as pullovers, jerseys, and twin sets; men’s and women’s woven trousers and slacks; panty hose and socks; men’s and women’s underpants and briefs; women’s and girls’ dresses; knit pants; and overcoats, jackets, and blazers. Three of these quotas were filled by more than 90 percent during 2002. These quotas included knit jerseys, pullover, and other knit shirts; men’s and women’s woven trousers and pants; and woven fabrics of synthetic filament yarn.

⁶² Comparisons of average unit values of imports based on official trade statistics of the U.S. Department of Commerce.

⁶³ Trade data in this section is based on official statistics of the U.S. Department of Commerce (USDOC).

⁶⁴ The “Big Three” included Hong Kong, Korea, and Taiwan.

Table E-14
Taiwan: Statistical profile of textile and apparel sector and foreign trade, 1997-2001

Item	1997	1998	1999	2000	2001
Number of workers:					
Textiles (1,000)	185,687	152,059	156,662	148,901	135,922
Apparel (1,000)	76,395	101,159	95,396	90,123	82,423
Total (1,000)	262,082	253,218	252,058	239,024	218,345
Production:					
Manmade fibers (million dollars)	3,857.2	3,550.6	3,382.6	3,652.6	3,182.9
Textiles (million dollars)	11,458.3	11,238.4	11,105.1	10,554.7	8,694.3
Yarns (million dollars)	(¹)	(¹)	3,200.0	3,340.0	2,559.0
Fabrics (million dollars)	(¹)	(¹)	4,877.0	4,379.0	2,969.0
Apparel (million dollars)	3,198.5	3,528.9	3,051.0	2,606.9	2,008.6
Total (million dollars)	(¹)	(¹)	25,615.7	24,533.2	19,413.8
Production index (1997=100):					
Yarn	(¹)	(¹)	(¹)	94.1	81.6
Fabric	(¹)	(¹)	(¹)	106.6	87.0
Mill fiber consumption:					
Manmade fibers (1,000 metric tons)	2,320.0	2,484.8	2,346.0	2,323.1	2,139.4
Cotton (1,000 metric tons)	288.6	314.0	299.9	387.0	376.3
Wool (1,000 metric tons)	40.0	42.0	34.9	37.2	35.4
Total (1,000 metric tons)	2,648.6	2,840.8	2,680.8	2,747.3	2,551.1
Installed spinning capacities:					
Short-staple spindles (1,000)	3,334.0	3,041.0	2,843.0	2,716.0	2,550.2
Long-staple spindles (1,000)	339.0	339.0	339.0	339.0	339.0
Open-end rotors (1,000)	140.0	110.0	102.3	85.7	81.8
Installed weaving capacities:					
Shuttleless looms (number)	20,050	20,050	21,300	20,890	20,800
Shuttle looms (number)	3,040	3,040	2,500	1,220	1,220
Foreign trade in textiles and apparel:					
Exports:					
Textiles (million dollars)	12,731.9	11,105.2	10,840.4	11,876.5	9,860.8
Apparel (million dollars)	3,276.9	3,070.8	2,761.0	2,947.4	2,427.5
Total (million dollars)	16,008.8	14,175.9	13,601.3	14,823.9	12,288.4
Imports:					
Textiles (million dollars)	1,860.9	1,572.1	1,472.9	1,447.2	1,031.1
Apparel (million dollars)	1,007.5	925.2	864.5	993.3	929.3
Total (million dollars)	2,868.3	2,497.2	2,337.4	2,440.4	1,960.3
Trade balance:					
Textiles (million dollars)	10,871.0	9,533.1	9,367.4	10,429.3	8,829.8
Apparel (million dollars)	2,269.5	2,145.6	1,895.6	1,954.1	1,498.8
Total (million dollars)	13,140.4	11,678.7	11,264.0	12,383.5	10,328.0
Foreign trade in textile fibers:					
Exports (million dollars)	1,035.9	769.7	746.6	946.7	797.8
Imports (million dollars)	907.5	805.0	669.9	622.3	524.0
Trade balance (million dollars)	128.4	-35.3	76.7	324.4	273.8

¹ Not available.

Note.—Because of rounding, figures may not add to totals shown. Because data on Taiwan's production and foreign trade of sector products are compiled from two different sources, in many cases, production is less than exports.

Source: Industry data from the Taiwan Textile Federation, *Statistics of Taiwan Textile and Apparel Industries 2001*; the International Textile Machinery Federation, *International Textile Machinery Shipment Statistics*, vol. 25/2002, and selected back issues; and Geerdes International, Inc., Richmond, VA. Trade data are United Nations data.

Table E-15
Taiwan: Exports of textiles and apparel, by selected markets, 1997-2001

Item and market	1997	1998	1999	2000	2001
	<i>Million dollars</i>				
Textiles (SITC 65):					
Quota markets:					
United States	675	650	651	655	598
European Union	569	639	570	522	423
Canada	97	94	94	99	70
Subtotal	1,341	1,383	1,315	1,275	1,091
All other:					
Hong Kong	5,585	4,509	4,237	4,471	3,654
Indonesia	457	372	402	536	443
Vietnam	351	338	355	403	389
Other	4,998	4,504	4,531	5,192	4,283
Subtotal	11,391	9,723	9,526	10,602	8,770
Grand total	12,732	11,105	10,840	11,876	9,861
Apparel (SITC 84):					
Quota markets:					
United States	2,053	2,043	1,866	2,021	1,647
European Union	485	412	368	372	282
Canada	92	103	86	100	100
Subtotal	2,631	2,558	2,320	2,492	2,029
All other	646	513	441	455	398
Grand total	3,277	3,071	2,761	2,947	2,428
Textiles and apparel:					
Quota markets:					
United States	2,728	2,693	2,517	2,676	2,245
European Union	1,054	1,051	938	893	705
Canada	189	197	180	198	170
Subtotal	3,971	3,940	3,634	3,767	3,120
All other	12,038	10,236	9,967	11,057	9,169
Grand total	16,009	14,176	13,601	14,824	12,288
	<i>Percent</i>				
Share of exports going to quota markets:					
Textiles	11	12	12	11	11
Apparel	80	83	84	85	84
Average	25	28	27	25	25

Note.—Because of rounding, figures may not add to totals shown.

Source: Compiled from United Nations data.

Table E-16
Textiles and apparel: U.S. general imports from Taiwan, by specified product categories,¹ 1997-2002

Cat.		1997	1998	1999	2000	2001	2002
No.	Description	(1,000 square meters equivalent)					
0	Textiles and apparel, total	1,197,396	1,189,899	1,269,894	1,233,308	1,224,379	1,391,299
1	Apparel	589,586	620,652	637,435	670,737	614,130	575,679
2	Textiles	607,810	569,248	632,460	562,571	610,248	815,620
11	Yarns	26,695	26,428	24,858	25,861	16,879	27,851
12	Fabrics	394,034	350,739	401,437	341,025	383,263	610,191
14	Other miscellaneous articles	187,081	192,081	206,165	195,686	210,106	177,578
30	Cotton textiles and apparel	270,465	287,763	310,148	303,962	278,252	269,005
31	Cotton apparel	147,693	163,917	157,863	156,517	134,144	121,914
32	Cotton textiles	122,773	123,846	152,285	147,445	144,108	147,091
40	Wool textiles and apparel	4,280	4,261	3,800	3,964	4,700	3,135
60	Manmade-fiber textiles and apparel	914,516	888,016	948,173	918,704	933,321	1,112,861
61	Manmade-fiber apparel	435,665	448,929	473,319	507,299	470,070	445,877
62	Manmade-fiber textiles	478,851	439,086	474,854	411,405	463,252	666,984
80	Silk blend/veg fiber textiles/apparel	8,135	9,860	7,773	6,678	8,106	6,298
222	Knit fabric	140,342	109,463	147,767	90,954	121,068	265,913
224	Pile and tufted fabric	74,526	79,974	76,695	82,464	80,255	94,392
225	Blue denim fabric	10,556	11,835	10,050	10,867	24,308	30,620
229	Special purpose fabric	66,999	64,959	62,900	68,715	69,479	144,397
239	Babies' apparel	24,031	28,939	26,394	31,126	22,664	15,549
332	Cotton hosiery	3,997	4,555	6,699	9,437	10,488	13,358
340	Cotton not knit shirts, men/boys	22,302	24,688	24,736	23,313	20,566	15,405
359	Other cotton apparel	45,757	42,366	38,653	39,500	37,393	24,000
369	Other cotton manufactures	40,729	43,402	59,568	63,040	51,466	58,347
600	Textured filament yarn	7,381	5,397	5,076	5,147	4,653	20,933
620	Other synthetic filament fabric	9,702	12,974	12,356	10,392	13,118	13,383
631	Manmade-fiber gloves	14,352	15,733	15,335	15,187	16,145	14,158
632	Manmade-fiber hosiery	22,363	22,559	27,076	32,578	36,468	39,715
634	Other manmade coats, men/boys	33,792	28,498	24,259	28,065	22,796	18,771
635	Manmade-fiber coats, women/girls	24,668	20,700	17,940	18,040	17,865	15,184
636	Manmade-fiber dresses	14,496	12,213	15,129	12,970	8,087	10,173
638	Manmade knit shirts, men/boys	15,879	17,549	22,593	20,832	22,936	21,792
639	Manmade knit shirts, women/girls	56,223	60,608	71,521	59,621	47,570	54,788
646	Manmade-fiber sweaters, women/girls	20,239	35,056	21,740	24,697	38,164	39,501
647	Manmade-fiber trousers, men/boys	24,100	24,851	27,241	30,156	29,241	24,487
648	Manmade-fiber trousers, women/girls	55,489	52,543	56,346	52,639	44,916	41,422
651	Manmade-fiber nightwear	16,295	16,399	20,232	21,701	17,275	22,433
652	Manmade-fiber underwear	9,146	11,730	17,156	18,652	23,345	18,819
659	Other manmade-fiber apparel	93,246	88,659	92,822	117,590	98,649	94,295
666	Other manmade-fiber furnishings	67,354	62,206	65,045	60,045	80,999	85,489
669	Other manmade-fiber manufactures	6,810	7,355	8,381	9,048	6,828	9,413
670	Manmade-fiber handbags/luggage	56,968	63,565	59,258	54,287	60,806	17,066

¹ To administer the U.S. textile and apparel quota program, articles are grouped under 3-digit category numbers, which cover many 10-digit statistical reporting numbers under which goods are classified from statistical purposes in the Harmonized Tariff Schedule of the United States (HTS). The 1-digit and 2-digit numbers represent specific levels of import aggregation for articles covered by the quota program (e.g., the number "1" represents total imports of apparel, while "31" represents total imports of cotton apparel).

Source: Compiled from official statistics of the U.S. Department of Commerce, found at <http://otexa.ita.doc.gov/>.