

**Staff Research
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U.S. International Trade Commission

India's Textile and Apparel Industry: Growth Potential and Trade and Investment Opportunities

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U.S. International Trade Commission

Vern Simpson
Director, Office of Industries

This report was principally prepared by
Sundar A. Shetty
Textiles and Apparel Branch
Energy, Chemicals, and Textiles Division

**Address all communications to
Secretary to the Commission
United States International Trade Commission
Washington, DC 20436**

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EXECUTIVE SUMMARY

The study examines India's textile and apparel industry in terms of its structural anomalies and other key factors inhibiting the growth of the industry, competitive strengths and weaknesses of the industry, government programs designed to help improve the competitiveness of the industry, tariffs and other market access barriers impeding growth in trade and investment, and product sectors that offer opportunities for growth in U.S. trade and investment.

Industry Structure

The textile and apparel industry is one of the leading segments of the Indian economy and the largest source of foreign exchange earnings for India. This industry accounts for 4 percent of the gross domestic product (GDP), 20 percent of industrial output, and slightly more than 30 percent of export earnings. The textile and apparel industry employs about 38 million people, making it the largest source of industrial employment in India. The study identifies the following structural characteristics of India's textile and apparel industry:

- D India has the second-largest yarn-spinning capacity in the world (after China), accounting for roughly 20 percent of the world's spindle capacity. India's spinning segment is fairly modernized; approximately 35 to 40 percent of India's spindles are less than 10 years old. During 1989-98, India was the leading buyer of spinning machinery, accounting for 28 percent of world shipments. India's production of spun yarn is accounted for almost entirely by the "organized mill sector," which includes 285 large vertically-integrated "composite mills" and nearly 2,500 spinning mills.
- D India has the largest number of looms in place to weave fabrics, accounting for 64 percent of the world's installed looms. However, 98 percent of the looms are accounted for by India's powerloom and handloom sectors, which use mostly outdated equipment and produce mostly low-value unfinished fabrics. Composite mills account for 2 percent of India's installed looms and 4 percent of India's fabric output.
- D The handloom and powerloom sectors were established with government support, mainly to provide rural employment. These sectors benefit from various tax exemptions and other favorable government policies, which ensure that fabrics produced in these sectors are price competitive against those of composite mills.
- D The fabric processing (dyeing and finishing) sector, the weakest link in India's textile supply chain, consists of a large number of small units located in and around the powerloom and handloom centers. The proliferation of small processing units is due to India's fiscal policies, which favor small independent hand- and power-processing units over composite mills with modern processing facilities.
- D The production of apparel in India was, until recently, reserved for the small-scale industry (SSI) sector, which was defined as a unit having an investment in plant and machinery equivalent to less than \$230,000. Apparel units with larger

investments were allowed to operate only as export-oriented units (EOUs). As a result, India's apparel sector is highly fragmented and is characterized by low levels of technology use.

Competitive Position of India's Textile and Apparel Industry

India's share of global exports of textiles and apparel increased from 1.8 percent in 1980 to 3.3 percent in 1998. However, India's export growth was lower than that of most Asian countries during that period. The study identifies a number of competitive strengths of the Indian textile and apparel industry:

- D India has a large fiber base, and ranks as the world's third-leading producer of cotton, accounting for 15 percent of the world's cotton crop. India produces a wide variety of cotton, providing operational flexibility for domestic textile producers. In the manmade fiber sector, India is the world's fifth-largest producer of polyester fibers and filament yarns and the third-largest producer of cellulosic fibers and filament yarns.
- D India is the world's second-largest textile producer (after China), and is diversified and capable of producing a wide variety of textiles. The spinning segment is fairly modernized and competitive, accounting for about 20 percent of world cotton yarn exports.
- D India's textile and apparel industry benefits from a large pool of skilled workers and competent technical and managerial personnel. India's labor is inexpensive; hourly labor costs in the textile and apparel industry average less than 5 percent of those in the U.S. textile and apparel industry.

The study also identifies the competitive weaknesses that have impeded the growth of India's textile and apparel industry:

- D Policies of the Government of India (GOI) favoring small firms have resulted in the establishment of a large number of small independent units in the spinning, weaving, and processing sectors. Sources in India claim that GOI policies have provided competitive advantages for the small independent units over the generally larger composite mills, discouraged investments in new manufacturing technologies, and limited large-scale manufacturing and the attendant benefits of economies of scale.
- D Sources in India also claim that because of the GOI policies, small units have significantly lower production costs than the composite mills, use low levels of technology, and produce mostly low value-added goods of low quality that are less competitive globally.
- D India's textile industry depends heavily on domestically produced cotton. Almost two-thirds of domestic cotton production is rain fed, which results in wide weather-related fluctuations in cotton production. Moreover, the contamination level of Indian cotton is among the highest in the world. According to sources in India, the cotton ginning quality is poor, contributing to defective textile products.
- D The GOI policy reserving apparel production for the SSI sector had restricted the entry of large-scale units and discouraged investment in new apparel manufacturing technologies. As a result, most Indian apparel producers do not benefit from economies of scale.

- D The competitiveness of India's apparel sector is adversely impacted by an inadequate domestic supply of quality fabrics. Fabric imports are subject to high duty rates and other domestic taxes that increase the cost of imported fabrics. Another major weakness of the Indian apparel sector is a lack of product specialization which, along with a limited fabric base, has limited India's apparel production and exports to low value-added goods.
- D India has high energy and capital costs, multiple taxation, and low productivity, all of which add to production costs. As a result, textile and apparel products from India are less competitive than those of China and other developing countries in the international market.

Government Policies Affecting the Industry

As India steps into an increasingly liberalized global trade regime, the GOI has implemented several programs to help the textile and apparel industry adjust to the new trade environment. On November 2, 2000, the GOI unveiled its National Textile Policy (NTP) 2000, aimed at enhancing the competitiveness of the textile and apparel industry and expanding India's share of world textile and apparel exports to 10 percent by 2010 from the current 3-percent level. The study identifies the following measures taken by the GOI to achieve these objectives:

- D Under the NTP 2000, the GOI removed ready-made apparel articles from the list of products reserved for the SSI sector. As a result, foreign firms may now invest up to 100 percent in the apparel sector without any export obligation.
- D The GOI grants automatic approval within 2 weeks of all proposals involving foreign equity up to 51 percent in the manufacture of textile products in the composite mills and in the manufacture of waterproof textile products.
- D On April 1, 1999, the GOI implemented the Technology Upgradation Fund (TUF) to spur investment in new textile and apparel technologies. Under the 5-year \$6 billion program, eligible firms can receive loans for upgrading their technology at interest rates that are 5 percentage points lower than the normal lending rates of specified financial institutions in India. According to GOI officials, this interest rate incentive is intended to bring the cost of capital in India closer to international costs.
- D The GOI created a \$16 million "cotton technology mission" to increase research on improving cotton productivity and quality.
- D EOUs and composite mills that produce yarn for captive consumption are exempt from the GOI's hank yarn obligation, which requires each spinning mill to produce 50 percent of its yarn for the domestic market in hank form (80 percent of which must be in counts of 40s and lower) for use in the handloom sector. The GOI plans to reduce the hank yarn obligation from 50 percent to 30 percent for all other spinning units.
- D To boost exports and encourage new industry investment, the GOI under the quota entitlement policy increased the share of quotas earmarked for units investing in new machinery and plants.
- D To promote modernization of Indian industry, the GOI set up the Export Promotion Capital Goods (EPCG) scheme, which permits a firm importing new or secondhand capital goods for production of articles for export to enter the capital goods at preferential tariffs, provided that the firm exports at least six times the c.i.f. value of the imported capital goods within 6 years. Any textile firm planning to modernize its operations had to import at least \$4.6 million worth of equipment

to qualify for duty-free treatment under the EPCG scheme. In an effort to spur investment in the textile industry, on April 1, 1999, the GOI reduced the amount to \$230,000 and eliminated preferential treatment for imports of secondhand equipment under the EPCG scheme.

Growth Opportunities

India, with a population of 1 billion people, has a huge domestic market. India's middle class, currently estimated at 200 million, is projected to expand to include nearly half the country's total population by 2006. Based on purchasing power parity, India is the fourth-largest economy in the world, has the third-largest GDP in the continent of Asia, and is the second-largest economy among emerging nations. India is also one of the fastest growing economies of the world. Although the disposable income of the majority of the Indian population is low, as the Indian economy grows, more consumers will have greater discretionary income for clothing and other purchases after meeting their basic needs.

India's huge domestic market offers the prospect of significant growth opportunities in domestic textiles and apparel consumption, which is expected to result in increased trade and foreign investment, especially in certain product sectors. According to a 1999 study, the major growth areas for trade and foreign investment in India will be technical textiles (e.g., fabrics used in aerospace, marine, medical, civil engineering, and other industrial applications), home textiles, and apparel. The S.R. Satyam Expert Committee (SEC), constituted by the GOI, also identified these sectors as having the greatest growth potential and recommended various measures to promote these sectors. The staff research study highlights the following areas where foreign firms can potentially enter the Indian market:

- D Demand for nonwoven textiles has been growing with increasing domestic affluence, growing health consciousness to use more disposable clothes, and the cost effective production of synthetic fibers in India. The liberalization of the Indian economy has created opportunities to import machinery and technology at preferential tariffs and enter into joint venture arrangements with foreign firms.
- D The technical textiles market in India has grown due to strong demand for automotive fabrics. India's goal is to achieve an output level of \$6 billion (10 percent of world output) in technical textiles by 2005. The GOI plans to provide incentives and tax concessions for this sector to attract foreign investment.
- D India's home textiles market is dominated by the handloom and powerloom sectors, which cater primarily to the low end of the market. The handloom sector is highly price competitive in terry towels and for home furnishings. The powerloom sector is price competitive in bedsheets. The composite mill sector dominates the branded market, which is relatively small. Demand for branded and quality home textiles has increased recently with increasing affluence among the Indian population. Opportunities exist for the introduction of quality branded products into this growing market.
- D India supplies 8 percent of the global demand for denim fabric. Per-capita denim consumption in India is estimated at 0.1 meter, about one-fifth of the global average. Domestic demand is expected to increase with the accelerated growth in the Indian economy and increased consumer spending on clothing. Capacity utilization of the Indian denim sector currently averages 50 to 60 percent. The deregulation of apparel production from the SSI sector under the NTP 2000 is expected to encourage large apparel firms to enter the Indian market, thereby spurring domestic demand for denim.

- D Opportunities exist for U.S. apparel producers to enter the Indian market through licensing and joint ventures with local firms. The recent GOI decision to deregulate apparel production is expected to help foreign firms establishing a large production base in India without any export obligation.

Outlook

As India reduces tariffs and dismantles trade barriers under its World Trade Organization (WTO) commitments, and as WTO countries phase out textile and apparel quotas by January 1, 2005, India is likely to face intense competition both domestically and internationally from other low-cost exporting countries that also largely depend on the performance of their textile and apparel sector for economic growth. In recognition of these factors, the GOI has taken measures to enhance the competitiveness of the Indian textile and apparel industry. These measures include plans to (1) gradually remove industry structural anomalies, (2) enhance the level of technology, (3) improve the quality and productivity of cotton, (4) reduce textile tariffs, (5) eliminate market access barriers, and (6) provide incentives to potential investors and exporters to promote trade and investment in the industry.

The goal of the NTP 2000 is to improve the global competitiveness of the Indian textile and apparel industry and enable the industry to quadruple its exports to \$50 billion by 2010. The NTP 2000 opens the country's apparel sector to large firms and allows up to 100 percent foreign investment in the sector without any export obligation. In addition, the NTP 2000 plans to liberalize remaining controls and regulations, eliminate targeted tax and fiscal benefits for firms in the SSI sector, and encourage strategic alliances with international textile firms to set up large integrated mills and processing facilities. There is a consensus among industry and GOI officials to promote the production of technical textiles in India by providing tariff and duty concessions and other investment incentives.

The GOI policies intended to address the structural deficiencies of India's textile and apparel industry, including the TUF scheme, have met with limited success so far. In addition, the GOI has ruled out deregulating the handloom sector, fearing a loss of millions of jobs in the sector, but is reviewing a proposal to de-reserve knitting mills from the SSI sector. By unveiling the NTP 2000, the GOI has created opportunities for increased trade and investment in India's textile and apparel industry. To achieve the GOI's production and export goals, sources in India claim that the GOI will need to make difficult and politically sensitive decisions on further deregulations and targeted tax and fiscal tax benefits.

CHAPTER 1

Introduction

Purpose of Study

The study analyzes India's textile and apparel industry, its structural problems, market access barriers, and measures taken by the GOI to enhance the industry's competitiveness in the post-Multifiber Arrangement (MFA) era. The study also assesses India's textile and apparel market potential and trade and investment opportunities for U.S. firms as India steps into a more free and transparent trade regime.

The textile and apparel industry plays a vital role in the Indian economy and is the single-largest source of foreign exchange earnings for India. Currently the industry accounts for 4 percent of GDP, 20 percent of industrial production, and slightly more than 30 percent of export earnings.¹ About 38 million people are employed in the Indian industry, making it the single-largest source of industrial jobs and the second-largest overall (after agriculture).

India is the world's third-largest producer of cotton and has the largest cotton acreage in the world. India also has an established and expanding polyester fiber and filament yarn industry. It is the world's second-largest textile producer after China, accounting for about 15 percent of world production of cotton textiles. India is also the world's largest exporter of cotton yarn with 20 percent of the total, and accounts for about 7 percent of world trade in fabrics.²

The Indian textile and apparel industry is diversified and has the capacity to provide a wide variety of textiles to meet different market needs. It has access to a large pool of skilled labor as well as trained and skilled technical and managerial personnel. Nevertheless, India's textile and apparel industry faces several structural problems. Foremost, the slow pace of modernization, particularly in the weaving, dyeing and finishing, and apparel sectors,

have hampered the growth and competitiveness of the industry. Other structural problems include a restricted fabric base, dependence on cotton, limited product mix, low productivity, multiple and discriminatory tax policies, and high infrastructure costs. Import restraints and market access barriers have fostered industry inefficiency and limited growth.

As India reduces tariffs and dismantles trade barriers under its WTO commitments, and as WTO countries phase out textile and apparel quotas established under the MFA by January 1, 2005, India is likely to face intense competition both domestically and internationally from other low-cost exporting countries that also largely depend on the performance of their textile and apparel sector for economic growth. In recognition of these factors, the GOI has taken measures to enhance the competitiveness of the Indian textile and apparel industry, as provided for in the NTP 2000 and other GOI policies. These measures include plans to (1) remove industry structural anomalies, (2) enhance the level of technology, (3) improve the quality and productivity of the cotton sector, (4) reduce textile tariffs and eliminate market access barriers, and (5) provide incentives to potential investors and exporters to promote trade and investment in the industry. As a result of the GOI initiatives, many Indian textile and apparel firms have modernized and expanded their operations in an effort to improve their competitiveness in markets both at home and abroad. Furthermore, some large Indian firms, lacking capital and marketing expertise, have sought joint ventures or other arrangements with foreign firms to enhance their competitiveness in the global market.

Data and Scope

The Commission staff conducted a review of industry and trade journals; conducted interviews in India with key industry leaders, trade association executives, industry analysts, and government officials (see appendix A);³ and collected information from

¹ South India Textile Research Association (SITRA), "Indian Textile Industry: Present Status and Future Prospects," found at <http://www.indianetpages.com/coimbatore.cc/textiles/tx2.htm>, retrieved Apr. 26, 1999.

² D.S. Alva, chairman, and S. Rajagopal, executive director, The Cotton Textiles Export Promotion Council, interview by USITC staff, Feb. 4, 2000, Mumbai, India.

³ See appendix A for a complete list of firms, associations, and government agencies interviewed by Commission staff.

Indian business newspapers via the Internet. Most of the industry statistics were obtained from the GOI's Office of the Textile Commissioner, Ministry of Textiles, and The Indian Cotton Mills' Federation.

The study covers the three competing sectors that make up the Indian textile industry—the composite mill, powerloom, and handloom sectors—and the apparel industry. The scope of the study includes cotton, manmade fiber, wool, and silk textiles and apparel.⁴ Also covered are the independent processing houses that carry out post-weaving and knitting operations such as dyeing, printing, and finishing fabrics. Data on India's apparel industry are limited; the statistics provided in this study pertain primarily to the organized sector, consisting mostly of large apparel firms.

Organization of Study

The remainder of this chapter provides an overview of the Indian economy and its growth potential. Chapter 2 describes the structure of India's textile and apparel industry. Chapter 3 outlines the GOI's textile policies relating to investment and trade. Chapter 4 provides a profile of India's domestic market for textiles and apparel, and its trade in these goods. Chapter 5 analyzes the industry's competitive strengths and weaknesses compared with textile industries in other countries, comparative production costs for key textile products in India and elsewhere, and challenges and opportunities for India's textile industry in a quota-free environment. Chapter 6 highlights the report's major findings and outlook.

Overview of India's Economy

In the early 1990s, India incurred high budget deficits (8 percent of GDP), acute balance-of-payment (BOP) problems due to a deteriorating fiscal position, structural imbalances caused by a high degree of government planning and regulation, and declining external reserves caused by an increase in external debt and a sharp decline in remittances from Indian workers in the Middle East. Faced with these difficulties, the GOI initiated economic reforms in 1991 after signing a standby arrangement with the International Monetary Fund (IMF) to undertake fiscal

⁴ Excluded from the study are handicrafts, carpet and other floor coverings, leather apparel, and articles of coir or jute.

and structural reforms.⁵ These economic reforms initially centered on (1) liberalizing procedures for industrial licensing and investment, (2) reducing the role of the public sector in the nation's economy, (3) lowering import duties, (4) easing import licensing requirements, (5) relaxing controls on foreign direct and portfolio investment, and (6) improving operations of capital markets. The GOI subsequently introduced additional reforms during the 1990s by lowering import duties further and removing import restraints and other market access barriers.

GOI economic reforms have led to stronger economic growth, higher foreign investment inflows, and expanded trade. In terms of GDP, India's economic growth accelerated from 5.9 percent per year during 1980-90 to 6.7 percent per year during 1992-96, and then slowed to 5.8 percent per year during 1997-99.⁶ Real per-capita GDP grew from 3.8 percent per year during 1980-90 to 4.7 percent per year during 1992-96, slowing to 4.1 percent per year during 1997-99. In terms of producer prices, inflation declined from almost 14 percent in the early 1990s to 6 percent in 1996-97 and has remained at or below 6 percent since then. Foreign exchange reserves increased to \$32 billion in 1999, from \$1 billion in 1990.⁷ India's total external debt of \$95.2 billion at the end of March 1999 represented approximately 25 percent of the GDP, down from 38 percent in fiscal year (FY) 1991-92 (India's fiscal year begins on April 1 and ends on March 31 of the following year).⁸ The debt service ratio of debt payments to export earnings also declined from 30 percent in FY 1991-92 to 25 percent in FY 1998-99. India's short-term debt accounted for only 3.7 percent of total external debt in FY 1998-99, whereas nearly 40 percent of India's longer-term debt is concessional.⁹ However, high interest rates (averaging 13 to 16 percent during 1996-99), a large government fiscal deficit (7 percent of GDP in FY 1998-99), and an inadequate infrastructure have continued to hamper economic growth.

⁵ IMF, "World Economic Outlook," *World Economic and Financial Surveys*, Apr. 2000, p. 41, found at <http://www.imf.org/external/pubs/ft/weo/2000/index.htm>, retrieved Apr. 13, 2000.

⁶ *Ibid.*

⁷ IMF, *International Financial Statistics*, Mar. 2000, p. 390, and Mar. 1996, p. 298.

⁸ U.S. Department of Commerce, International Trade Administration, U.S. Commercial Service (USCS), *Country Commercial Guide: India, FY 2000, Economic Trends and Outlook*, found at <http://www.usatrade.gov/website/ccg.nsf/ccGurl/CCG-INDIA2000-CH-11-NT00010D56>, retrieved May 25, 2000.

⁹ *Ibid.*

Although India has made progress in trade policy reforms recently under its WTO commitments, some observers claim that the reform pace has been slow and inadequate. According to data published by the United Nations Economic and Social Commission for Asia and Pacific (ESCAP), India reduced its average customs duties from 125 percent in 1990 to 29 percent in 1999 and removed most of its quantitative restrictions on imports. However, India's average tariff rates on imports are still among the highest in the world and its trade regime remains complex, with a variety of exemptions and some quantitative restrictions on imports.¹⁰ India's trade deficit grew to \$8.6 billion in FY 1999-2000, from \$8.3 billion in FY 1998-99 and \$6.4 billion in FY 1997-98, as its currency remained stable against a backdrop of higher oil prices, increased expenditures on imports of intermediate goods and inputs, and a global slowdown in trade.¹¹

The 1991 IMF-led economic reforms provided for automatic clearance for foreign direct investment (FDI) in many sectors, and helped spur foreign investment in India. A total of 10,239 proposals involving FDI of roughly \$60 billion (Rs2,096.63 billion) were approved from August 1991 to December 1999.¹² Between 1997 and 1999, a total of

¹⁰ "GDP to Grow by 7 Percent in 2000-02-ESCAP," *The Indian Express*, May 23, 2000, found at <http://indian-exp...om/ie/daily/2000523/ibu23035.html>, retrieved May 23, 2000.

¹¹ "GDP to Grow 7 Percent" and USCS, *Country Commercial Guide: India*. India's lack of tariff and domestic taxation reform, weak infrastructure, protective labor laws, and investment restrictions are reportedly major impediments to stronger export performance. However, according to official statistics of the U.S. Department of Commerce, India's trade surplus with the United States in 1999 widened by \$696 million over the 1998 level to \$5.4 billion as U.S. merchandise exports to India were \$3.7 billion versus U.S. imports from India of \$9.1 billion.

¹² "FDI into India Shows Declining Trend," *The Indian Express*, Apr. 18, 2000, found at <http://www.indian-exp...om/ie/daily/20000418/ibu18022.htm>, retrieved on Apr. 18, 2000. The United States topped the list with \$13.2 billion (Rs462 billion), or 22 percent of the total, followed by Mauritius at 11 percent, and the United Kingdom at 8 percent. The exchange rate during the period varied from Rs30.49 to Rs43.06 to the U.S. dollar; the conversion was done at an exchange rate of Rs35 to a U.S. dollar.

6,335 proposals involving FDI of \$29 billion (Rs1,140 billion) were approved in all sectors. However, FDI approvals declined from \$15.1 billion in 1997 to \$6.6 billion in 1999, largely as a result of the financial crisis in Asia. The cumulative FDI inflows from August 1991 to December 1999 were nearly \$19.2 billion, or about one-third of the approved FDI.¹³

Average annual FDI flows to India expanded sixfold from \$470 million in 1991-94 to \$2.7 billion in 1995-98, according to data of the United Nations Conference on Trade and Development (UNCTAD).¹⁴ India's share of total FDI inflows to Asia and the Pacific region during 1991-99 tripled from 1.1 percent to 3.3 percent, while FDI inflows to Asia and the Pacific region decreased in that period. U.S. FDI in India is concentrated largely in the banking, manufacturing, and financial services sectors. However, a substantial portion of new investment approvals are in infrastructure projects.

ESCAP projected that India's economy would grow 7 percent annually between 2000 and 2002, based on the continuation of economic reform and no major internal and external shocks.¹⁵ The World Bank has projected that India could potentially achieve annual economic growth of 7.5 percent or more, which would be close to the growth levels achieved by such East Asian tigers as Hong Kong, South Korea, Malaysia, and China and could lead to a significant decrease in poverty.¹⁶ The World Bank cautioned, however, that this growth will be achieved only if India implements economic reforms at both the central and state government levels and reduces its fiscal deficit. The World Bank recommended that India cut subsidies and privatize power and irrigation to reduce the fiscal deficit and thereby free up funds for social and infrastructure spending.

¹³ "FDI Inflow up 20 Percent in 1999-2000," *The Hindu*, Apr. 20, 2000, found at <http://www.the-hindu.com/holnus/06202005.htm>, retrieved Apr. 20, 2000.

¹⁴ "India Has 'Potential' for Higher FDI Growth: UNCTAD," *The Indian Express*, Apr. 4, 2000, found at <http://www.indian-express.com/news/0403500.htm>, retrieved Apr. 6, 2000, and UNCTAD, *World Investment Directory 2000: Volume VII, Asia and the Pacific*.

¹⁵ "GDP to Grow 7 Percent."

¹⁶ Peter Montagnon, "India on Brink of Tiger-like Rapid Annual Growth," *Financial Times*, Feb. 16, 2000.

CHAPTER 2

Structure of the Textile and Apparel Industry

The textile and apparel industry is one of the largest segments of India's economy, accounting for 20 percent of total industrial production and slightly more than 30 percent of total export earnings. It is also the largest employer in the manufacturing sector with a workforce of some 38 million people. In addition, millions of others rely on the textile and apparel industry for their livelihoods, especially those involved in cotton production. This chapter examines the structure of India's textile and apparel industry, from fiber production to textile and apparel manufacturing, and concludes with an overview of its textile machinery industry, the major source of equipment for the country's textile and apparel industry.

Fiber Production

India is the third-largest producer of cotton in the world with annual production of some 3 million tons, or about 15 percent of the world total.¹⁷ India grows a wide range of cotton, from short staple to extra-long staple, and has the largest area under cotton cultivation in the world today, about 7.5 million hectares.¹⁸ Two-thirds of the cotton growing area in India is rain fed, which has led to low productivity and wide fluctuations in annual production.¹⁹ Indian cotton also reportedly contains high levels of contamination or foreign matter, contributing to low levels of productivity and product quality in cotton ginning and, in turn, the textile sector.²⁰

¹⁷ Alva interview. China and the United States rank first and second, respectively, in world cotton production.

¹⁸ "Will the Bubble Burst?" *Export Import Trade Flash* found at <http://www.trade-india.com/tradein.../vol2issue12/content/splight.html>, retrieved Apr. 26, 1999.

¹⁹ B.C. Khatua, commissioner, and Shashi Singh, director, Office of the Textile Commissioner, interview by USITC staff, Feb. 1, 2000, Mumbai, India. See also B.C. Khatua, "Problems and Prospects of Indian Textile Industry in the Millennium," *Asian Textile Journal*, Jan. 2000, pp. 75-79.

²⁰ *Ibid.*

India ranks among the world's five largest producers of manmade fibers and filament yarns with an annual output of 1.7 million tons (see table 2-1).²¹ Its manmade fiber and filament yarn sector comprised 97 establishments with an installed capacity of 2.1 million tons in 1999 (see table 2-2). About 70 percent of the capacity, or 1.5 million tons, is for polyester staple fiber (PSF) and polyester filament yarn (PFY).

The polyester-producing segment underwent significant consolidation in the 1990s, with most of India's PSF market production capacity now accounted for by Reliance Industries (60 percent), Indo Rama Synthetics (21 percent), and JCT Fibers (8 percent). Reliance Industries increased its domestic PSF market share from 40 percent in 1997 to 60 percent in 1999. India's PFY production capacity is accounted for by at least 33 registered producers, led by Reliance Industries (35 percent) and Indo Rama Synthetics (10 percent).

India is also the world's second-leading producer of silk, with annual output of nearly 15 million kilograms.²² Demand for wool in India is met by imports, primarily from Australia.

Textile Sector

The textile sector in India is one of the world's largest; it has more installed spindles to make spun yarn than any other country except China and has the most looms in place to weave fabric. However, these production capacity measures are somewhat misleading because much of India's spinning and weaving equipment is technologically outdated.

The Indian textile industry comprises three interrelated but competing sectors—the organized mill sector and the "decentralized" handloom and

²¹ Khatua and Singh interview.

²² Office of the Textile Commissioner, Ministry of Textiles, found at <http://www.texmin.nic.in/ermiudel.htm>, retrieved Apr. 24, 2000. China is the leading producer of silk.

Table 2-1
Production of manmade fibers and filament yarn in India, by type, FY1995-96-FY1999-2000¹

(1,000 tons)

Item	1995-96	1996-97	1997-98	1998-99	1999-2000
Fibers:					
Polyester staple	228.1	324.7	438.6	522.7	554.4
Acrylic staple	74.1	82.8	79.4	78.9	80.8
Other synthetic (polypropylene)	1.9	1.9	2.0	1.9	2.1
Total synthetic	304.1	409.4	520.0	603.5	637.3
Cellulosic (viscose staple)	194.3	178.8	188.4	178.2	201.2
Total manmade fibers	498.4	588.2	708.4	781.7	838.5
Filament yarn:					
Polyester	376.2	493.3	667.9	745.4	797.7
Nylon	41.6	38.0	29.8	28.6	26.0
Polypropylene	14.6	13.0	13.8	15.4	16.5
Total synthetic	432.4	544.3	711.5	789.4	840.2
Cellulosic (viscose)	60.7	57.3	57.0	60.9	49.2
Total manmade filament	493.1	601.6	768.5	850.3	889.4

¹ Fiscal year (FY) April 1-March 31 (e.g., fiscal year 1999-2000 runs from April 1, 1999, to March 31, 2000).

Source: Compiled from official statistics of the Office of the Textile Commissioner, Ministry of Textiles, GOI, retrieved from <http://texmin.nic.in/ermiudel.htm>, June 6, 2000.

Table 2-2
Number of establishments and capacity in India's manmade fibers and filament yarn sector as of March 31, 2000

Item	Number of establishments	Installed capacity
		1,000 tons per year
Fibers:		
Polyester	15	632
Acrylic	7	119
Polypropylene	3	7
Viscose	3	306
Total	28	1,064
Yarn:		
Polyester	40	917
Nylon	10	24
Polypropylene	12	16
Viscose	7	75
Total	69	1,032

Source: Compiled from official statistics of the Office of the Textile Commissioner, Ministry of Textiles, GOI, retrieved from <http://texmin.nic.in/ermiudel.htm>, June 6, 2000.

powerloom sectors. The organized mill sector consists of 285 medium- to large-sized firms that are vertically integrated “composite mills” that do spinning, weaving, and finishing operations and 2,500 spinning mills (see table 2-3). More than 900 of the spinning mills are registered as small scale industry (SSI) units, which are eligible for special GOI benefits, provided that investment in plant and equipment does not exceed an amount equivalent to not more than \$230,000 per unit. The decentralized handloom and powerloom sectors comprise thousands of small fabric-weaving units and processing (dyeing and finishing) units. The number of decentralized units grew as a result of government policy implemented following India’s independence in 1947 to encourage the creation of large-scale employment opportunities.

The handloom sector is an integral part of rural life in India, employing more than 12 million workers. A typical handloom unit is a family-run business with two to six manually operated looms.²³ Most of the 3.5 million handlooms are antiquated.²⁴ Although the handloom sector incurs relatively high production costs and low productivity, the sector is known for its craftsmanship and unique products, which have helped it to develop a niche in global markets.

²³ Prodipto Roy, “Competitiveness of the Indian Textile Supply Chain,” *Textile Outlook International*, Sept. 1999, p. 116.

²⁴ “Handlooms Exports No Looming Threat,” *Export Import Trade Flash*, p. 4, found at <http://www.trade-india.com/tradein...es/vol3issue21/content/covers.html>, retrieved Apr. 26, 1999. The sector is gradually replacing the antiquated throw-shuttle looms with fly-shuttle looms.

Table 2-3
Structure of India’s textile industry, FY1995-96-FY1999-2000

Item	1995-96	1996-97	1997-98	1998-99	1999-2000
Number of mills	2,430	2,514	2,583	2,652	2,771
Spinning ¹	2,156	2,233	2,305	2,371	2,486
Composite mills	274	281	278	281	285
Installed spindles (<i>million</i>)	31.25	34.59	35.39	35.59	37.08
Rotors (<i>1,000</i>) ²	226	276	313	383	392
Looms (<i>1,000</i>) ³	132	124	124	123	123
Shuttleless (<i>1,000</i>)	5.7	6.3	7.2	7.8	(⁴)
Production:					
Spun yarn (<i>million kilograms</i>)	2,485	2,794	2,973	2,808	3,049
Cotton	1,894	2,148	2,213	2,022	2,205
Blended	395	484	583	595	623
100% noncotton	196	162	177	191	221
Fabrics (<i>million square meters</i>)	31,460	34,298	36,896	35,543	38,874
Cotton	18,900	19,841	19,992	17,949	19,089
Blended	4,025	4,888	5,751	5,699	5,937
100% noncotton	8,535	9,569	11,153	11,895	13,848
Fibers/filaments:					
Raw cotton (<i>million kilograms</i>)	2,893	3,024	2,686	2,745	(⁴)
Manmade fiber staple (<i>1,000 tons</i>)	498	588	708	782	839
Manmade fiber filament (<i>1,000 tons</i>)	493	602	769	850	889
Employees (<i>1,000</i>) ⁵	1,055	1,027	1,010	1,011	1,140

¹ Includes SSI units.

² Organized mill sector only. An additional 52,400 rotors were installed in the decentralized sector in 1999-2000.

³ These looms are in the organized mill sector only. In addition, there are an estimated 1.6 million powerdriven looms and 3.5 million handlooms in the decentralized powerloom and handloom sectors.

⁴ Not available.

⁵ Organized mill sector only.

Source: Compiled from official statistics of the Office of the Textile Commissioner, Ministry of Textiles, GOI, retrieved from <http://texmin.nic.in/ermiudel.htm>, June 6, 2000, and The Indian Cotton Mills’ Federation, New Delhi, *Annual Reports, 1998-99* and earlier years.

The powerloom sector comprises 367,000 units with a workforce of 6.8 million people. Unlike the handloom sector, the powerloom sector uses power-driven shuttle looms; a typical powerloom unit has 12 to 44 looms.²⁵ The powerloom sector accounts for 60 percent of fabric production and is the primary supplier of fabrics to domestic apparel producers and consumers. Although the sector uses technology that lags considerably behind that of the organized mill sector, some powerloom weavers have invested in shuttleless looms, the more advanced technology. However, the transition is very slow; shuttleless looms now account for less than 1 percent of the 1.63 million looms in place in the powerloom sector.

Yarn Production

India's production of spun yarn in 1999 totaled 3.0 billion kilograms, 72 percent of which consisted of cotton (see table 2-3). Almost all of the spun yarn made in India comes from the organized mill sector, reflecting the highly capital-intensive nature of yarn spinning. Spinning capacity in 1999 totaled 37.08 million ring spindles and only 445,000 open end (OE) rotors, which represent the more advanced technology. The SSI units accounted for 5 percent of the ring spindles and 12 percent of the OE rotors.²⁶ In the woolen sector, India has 520,000 worsted spindles.

²⁵ Roy, "Competitiveness of Supply Chain," p. 116.

²⁶ Shyamal Ghosh, "Future of Indian Textiles," *Asian Textile Journal*, Jan. 2000, pp. 49-52.

Although India's spinning segment is more modernized than the weaving segment, 60-65 percent of the installed spindles are more than 10 years old and OE rotors account for less than 1 percent of total spinning capacity. However, modernization in the spinning segment has been rapid; total spindle shipments during 1989-98 accounted for about 33 percent of the installed capacity and 68 percent of OE rotors were less than 10 years old.

Fabric Production

India's fabric production grew by 24 percent during 1995-99 to an estimated 38.9 billion square meters in 1999. Approximately 64 percent of fabric production consisted of cotton or cotton blends (see table 2-3). Most fabric production occurs in the decentralized sectors, with the powerloom sector generating 60 percent and the handloom sector and the knitting mills (hosiery) producing 36 percent of the total (see table 2-4). The remaining 4 percent comes from the organized mill sector. The decentralized sectors have a total of 5.1 million looms in place, compared with just 123,000 looms in the organized mill sector. Only 6 percent of the looms in place in the organized mill sector are shuttleless looms, the more advanced technology.²⁷

²⁷ Shuttleless looms account for only about 1 percent of the total installed looms in India, including the organized mill sector and the handloom and powerloom sectors. See Khatua, "Problems and Prospects in the Millennium," pp. 75-79.

Table 2-4
India's textile industry: Production of fabrics by sector, FY1995-96-FY1999-2000

Sector	1995-96	1996-97	1997-98	1998-99	1999-2000	Percent share	
						1996	2000
	-----Million square meters-----					-----Percent-----	
Organized mill ¹	2,019	1,957	1,948	1,785	1,710	6.4	4.4
Handloom	7,202	7,456	7,604	6,792	7,365	22.9	18.9
Powerloom	17,201	19,352	20,951	20,690	23,387	54.7	60.2
Hosiery	5,038	5,533	6,393	6,276	6,412	16.0	16.5
Total ²	31,460	34,298	36,896	35,544	38,874	100.0	100.0

¹ Includes SSI units.

² Does not include khadi, wool, or silk.

Source: Compiled from official statistics of the Office of the Textile Commissioner, Ministry of Textiles, GOI, retrieved from <http://texmin.nic.in/ermiudel.htm>, June 6, 2000.

Dyeing and Finishing

The fabric dyeing and finishing segment consists of 12,596 process houses, including 10,397 independent hand-processing units and 2,066 independent power-processing units. The remaining 133 units are part of the composite mills in the organized mill sector. Most of the independent power-processing and hand-processing units are located in or near powerloom centers, and they bleach, dye, print, or otherwise finish fabrics principally for the decentralized sectors.

India's fabric dyeing and finishing segment is significantly underdeveloped in terms of technology, leading to low product quality and environmental problems.²⁸ A lack of investment in the dyeing and finishing segment has hurt the competitiveness of Indian textile mills and has effectively limited their ability to supply quality fabrics for domestic apparel producers.

Apparel Sector

Although official data on India's apparel production sector are not available, industry sources estimate that India's domestic production of readymade apparel totaled about \$19 billion (Rs700 billion) in 1997. The GOI had "reserved" apparel production (including knitting) for domestic consumption for SSI units and required non-SSI sector firms, or export-oriented units (EOUs), to export at least 50 percent of their output.

India's apparel sector is highly fragmented, comprising about 30,000 units and employing some 3 million people.²⁹ Most apparel sector units are family-run businesses having 50-60 sewing machines, often on contract to apparel wholesalers, usually using old production equipment and methods.³⁰ The EOUs tend to operate on a much larger scale in more modern facilities and offer brand-name quality goods, especially menswear.

Exporters of ready-made apparel are classified as either manufacturer-exporters or merchant-exporters. Some 2,000 manufacturer-exporters export apparel, while the roughly 26,000 merchant-exporters serve as export brokers on behalf of apparel manufacturers.³¹

²⁸ USITC staff interviews (see appendix A).

²⁹ Anju Sneh, "Indian Apparel Industry - an Overview," found at <http://apparel.indiamart.com/lib/garments/indian07251998.html>, retrieved Aug. 17, 1999.

³⁰ Ibid.

³¹ Economic Consulting Services, Inc., (ECS), *The Market for U.S. Cotton Textile and Apparel Products in*

For tax purposes, export-oriented apparel firms generally own several units registered as either manufacturer-exporters or merchant-exporters.³² Average export revenues are \$650,000 (Rs23.5 million) per manufacturer-exporter and \$110,000 (Rs4 million) per merchant-exporter.³³

India has about 6,000 knitting units registered as producers or exporters; the majority of the units are registered as SSI units. The knitting segment has grown by 76 percent since 1993, with current annual output of knitwear (sweaters, polo shirts, T-shirts, and underwear) at 6.4 billion square meters, valued at nearly \$2 billion (Rs80 billion). Knitwear exports totaled \$1.5 billion in FY 1998-99.

Structural Problems

The dominant role of the decentralized powerloom and handloom sectors in fabric production and finishing largely reflects GOI policies designed to promote domestic employment. These policies have effectively slowed modernization in the weaving and finishing segments of the organized mill sector. Whereas the organized mill sector is constrained by government regulations, which are discussed in chapter 3 of this report, the decentralized sectors benefit from favorable tax treatment, exemption from labor laws, and government subsidies for energy and water.³⁴ For example, government labor policy prohibits composite mills in the organized mill sector from laying off workers, even when a mill is idle or its operation is unprofitable, and it requires composite mills to pay workers for idle time.³⁵ This labor policy does not apply to SSI units in the organized mill sector or to decentralized sector units, where average wages for production workers are only about one-fourth of those in the organized mill sector.³⁶ In

³¹—Continued

India, Dec. 30, 1998, p. 39, prepared for the American Textile Manufacturers Institute, Washington, DC.

³² Tallam Venkatesh, president, Federation of Karnataka Chamber of Commerce & Industry, interview by USITC staff, Dec. 20, 1999, Bangalore, India.

³³ ECS, *The Market for U.S. Cotton Products in India*, p. 39.

³⁴ USITC staff interviews (see appendix A).

³⁵ V.K. Bhartia, vice president - marketing, Raymond (India) Ltd., interview by USITC staff, Jan. 31, 2000, Mumbai.

³⁶ Ibid. Also H.B. Chaturvedi, president, and K.J.S. Ahluwalia, secretary, North India Textile Mills Association, interview by USITC staff, Feb. 11, 2000, New Delhi.

addition, because the decentralized sectors are low-tech, their depreciation and capital costs are also low.

As a result of government policies and other factors, the powerloom sector has a significant cost advantage over the organized mill sector in fabric production. Production costs in the powerloom sector reportedly average \$0.22 (Rs9) a meter for grey (unprocessed) fabric and \$0.65 (Rs26) a meter for processed fabric, compared with \$0.62 (Rs25) and \$1.20 (Rs48), respectively, for the composite mills.³⁷ However, the fabrics made in the powerloom sector are lower in quality and more limited in styles than those made in the organized mill sector, largely reflecting the low technology level, low quality of inputs, and inadequate worker training.

The handloom sector also benefits from special GOI policies because of its importance to rural economies and its production conditions. Under the "hank yarn obligation," the GOI requires the organized mill sector to supply the handloom sector with yarn suitable for use in the manufacture of fabrics on handlooms at favorable prices. The handloom sector also benefits from excise duty exemption, government subsidies, and reservation of certain apparel products for exclusive production.³⁸ In addition, the sector receives technical, financial, and marketing assistance from the GOI to help it upgrade production systems, improve fabric quality, and market products.³⁹

The proliferation of small units in the dyeing and finishing segment largely reflects GOI policies that favor such units relative to the composite mills. The GOI provides tax concessions to small units using hand-processing devices and certain power-driven machines. For example, the excise duty on processed fabrics is much lower for independent processors than for composite mills because of a difference in the application of duty. The excise duty for independent processors is a fixed amount based on the number of

machines called stenter chambers, regardless of fabric quantity, while the duty for composite mills is based on the processed value of the fabrics. Although the GOI recently increased the excise duty for independent processors, duty fees paid by these units on average are still about one-half of those paid by the composite mills.⁴⁰

Trade and industry sources in India claim that GOI policies contributed to the numerous plant closings in the organized mill sector during the 1990s. The closings also reflected low productivity in the organized mill sector, stagnant demand, rising input costs, and difficulties in obtaining adequate working capital in a timely manner.⁴¹ As of February 2000, the number of idle mills totaled 342 (107 composite mills and 235 spinning mills), of which 212 had closed during the past 5 years. The closed mills had a workforce of 325,000 workers and total capacity of 8.15 million spindles, 28,248 OE rotors, and 72,298 looms.⁴² Two-thirds of the closed mills (218 mills) reportedly were closed because of financial difficulties, and 18 percent (63 mills) were closed because of labor issues.⁴³ Capacity utilization in the spinning segment of the organized mill sector declined significantly between FY 1995-96 and FY 1998-99, and it continued to remain low in the weaving segment (see table 2-5). The GOI set up the Board for Industrial and Financial Reconstruction (BIFR) to detect weak and potentially weak companies and to take preventive remedial and other measures with respect to such firms. The GOI also set up a Textile Workers Rehabilitation Fund Scheme to protect the interest of the workers. As of September 9, 1999, there were 421 textile mills registered with BIFR.⁴⁴

⁴⁰ Effective April 1, 2000, the excise duty for independent processors was increased from \$3,500 (Rs150,000) to \$4,650 (Rs200,000) per stenter chamber per month for units having an average ex-factory value of up to \$0.70 (Rs30) per square meter of fabric. For units processing fabrics having an ex-factory value of over \$0.70 per square meter, the excise rate was increased from \$4,650 (Rs200,000) to \$5,820 (Rs250,000) per stenter chamber per month. USITC staff interview with textile industry and trade association executives. Also Khatua interview and K.K. Jalan, director, Ministry of Textiles, interview by USITC staff, Feb. 11, 2000, New Delhi.

⁴¹ V.Y. Tamhane, secretary general, Millowners' Association, interview by USITC staff, Feb. 4, 2000, Mumbai.

⁴² Office of the Textile Commissioner, data obtained from <http://texmin.nic.in/ermiudel.htm>, retrieved Apr. 25, 2000.

⁴³ Ibid.

⁴⁴ Ibid.

³⁷ "Tax-Weary Textiles Cry for Help," *Business India*, May 15, 2000, found at <http://today.newscast.com/nct.cgi?menu=viewdoc&doref=1:100:5:26:57298&profnum=283901>, retrieved May 30, 2000.

³⁸ Khatua, "Problems and Prospects in the Millennium," pp. 75-79.

³⁹ The GOI's 1985 Textile Policy specified measures and promotional schemes designed to help the handloom sector grow and provide large-scale employment in rural areas. Sabitha Bhengra, executive director, The Handloom Export Promotion Council, interview by USITC staff, Dec. 18, 1999, Chennai, India.

Table 2-5
India's textile industry: Capacity utilization in spinning and weaving sectors, FY1994-95-
FY1999-2000

(Percent)

Fiscal year	Capacity utilization	
	Spinning	Weaving
1994-95	81	51
1995-96	86	53
1996-97	86	52
1997-98	85	52
1998-99	79	51
1999-2000	83	51

Source: Compiled from official statistics of the Office of the Textile Commissioner, Ministry of Textiles, GOI, retrieved from <http://texmin.nic.in/ermiudel.htm>, June 6, 2000.

GOI policies have significantly constrained the growth of the country's apparel sector because of the reservation of apparel production for SSI units and the 24-percent limit on FDI. However, the GOI's newly unveiled NTP 2000 deregulates India's apparel sector and allows FDI up to 100 percent.⁴⁵ The sector's growth has also been constrained because of a lack of quality fabrics, inadequate design and fashion, an underdeveloped retail infrastructure, a lack of coordination between marketing and manufacturing, and limited exposure to professional manufacturing and marketing techniques.

Textile Machinery

The textile machinery industry is one of the largest segments of India's capital goods sector. The industry comprises more than 100 plants with a capital investment totaling about \$350 million and annual output estimated at \$350 million.⁴⁶ The industry exports approximately 20 percent of its output, consisting mainly of spinning equipment. Capacity utilization in the industry has fallen to about 40 percent in recent years.⁴⁷ Industry shipments reportedly declined during the 1990s because of sluggish demand, spinning overcapacity, and low technology of Indian-made shuttleless looms and fabric finishing equipment. Other factors that have had an adverse impact on the competitiveness of the Indian textile machinery industry include large-scale

imports of competing secondhand equipment by the domestic textile industry under the Export Promotion Capital Goods (EPCG) scheme,⁴⁸ a higher duty on imported machinery parts than on completed equipment (30 percent versus 20 percent ad valorem), and numerous domestic taxes and levies that are applicable to domestic machinery sales, but not to imported machinery. As a result, the share of domestic demand for textile machinery supplied by the Indian machinery industry declined to 47 percent in FY 1997-98 from 82 percent in FY 1991-92.⁴⁹

Indian demand for textile machinery may increase following the GOI's establishment in 1999 of the Technology Upgradation Fund (TUF), which provides medium- and long-term loans to textile units for upgrading technology at interest rates that are 5 percentage points lower than those normally charged by financial institutions (see chapter 3 for more information on TUF). Indian industry sources expect that the lower interest rates will improve the viability of at least some of the modernization schemes that the mills have been postponing because of high capital costs and low profits.

Because of India's high capital costs, small firms in the weaving and processing sectors generally opt for less expensive machines supplied by small local firms.⁵⁰ Most large mills, especially the EOUs, import their weaving and processing equipment

⁴⁵ For details on the NTP, see chapter 3.

⁴⁶ "Budget India - An Economic Times Online Special," found at <http://www.economicstimes.com/budget/oldbud/tex2.htm>, retrieved Jan. 11, 2000.

⁴⁷ Ibid.

⁴⁸ Effective on April 1, 1999, the GOI's Export-Import Policy of 1999 prohibits the importation of used machinery under the EPCG scheme.

⁴⁹ "Budget India," retrieved Jan. 11, 2000.

⁵⁰ "India Today: Textile Machinery Industry - Hopes Pinned on New Technology Fund," *JTN Monthly*, May 1999, pp. 100-103.

because of the low technology of Indian-made shuttleless looms.⁵¹ Producers of textile processing machinery are small in size and cater primarily to the low end of the markets that is still being served by imports of used machines from Europe, the United States, Japan, Korea, and Taiwan.⁵² In the case of spinning equipment, India has shown significant advances. Lakshmi Machinery Works maintained global standards even after parting from

⁵¹ Ibid.

⁵² USITC staff interviews.

its collaborator Reiter.⁵³ Trutzschler's Indian venture, Trumac, has found excellent acceptance in spinning preparatory machines. Suessen and Toyoda have set up spinning machinery units recently in India. However, Indian demand for spinning equipment has declined because of spinning overcapacity, the newer spindles in use (nearly 40 percent of spindles in place are less than 10 years old), and growing demand for imports of the highly productive OE spinning equipment.

⁵³ Ibid.

CHAPTER 3

Government Trade and Nontrade Policies

India has historically protected its textile and apparel industry from foreign competition through high tariffs and quantitative restrictions. India claimed virtually all its quantitative restrictions under the balance-of-payments (BOP) provisions of the General Agreement on Tariffs and Trade (GATT) Article XVIII:B for over 50 years. Although India has been reducing tariffs and liberalizing trade barriers, its import restraints, high customs duties, additional taxes, and burdensome clearance formalities at customs continue to be major impediments to U.S. textile and apparel exports. India also provides export incentives for textiles and apparel. These include tariff incentives and export promotion measures such as duty exemptions or concessional tariffs on raw material and capital inputs, access to special import licenses for restricted inputs, exemption from income taxes on export earnings, and pre-and post-shipment financing. This chapter discusses GOI trade and nontrade policies and their impact on India's textile and apparel industry.

Trade Policies

Tariff Barriers

The United States and India reached agreement on reciprocal market access commitments for textiles and apparel in connection with the negotiation of the WTO Agreement on Textiles and Clothing, which provides for the phaseout of textile and apparel quotas by January 1, 2005. Under the United States-India Textile Agreement of January 1, 1995, India agreed to reduce tariffs on textiles and apparel and remove all import restrictions on these products. India agreed to bind tariffs at 20 percent ad valorem for yarns, fibers, industrial fabrics, and home furnishings, 35 percent for most apparel fabrics, and 40 percent for apparel

goods by January 1, 2000 (see table 3-1 for current Indian tariffs on major textile items). Effective on April 1, 2000, the GOI reduced tariffs on manmade fibers and filament yarns from 35 percent to 20 percent ad valorem; cotton yarn, from 25 percent to 20 percent; and spun, blended, and woolen yarn, from 40 percent to 20 percent. On September 15, 2000, the United States and India announced a tariff binding commitment agreement under which India will bind its tariffs on 265 textile and apparel products such as textured yarns of nylon and polyester, filament fabrics, sportswear, and home textiles.⁵⁴

Although India has significantly reduced its textile and apparel tariffs, these tariffs still rank among the highest in the world, especially on products that can be domestically substituted. Additionally, domestic taxes and levies, which are applied to both imported and domestic goods, make the effective tariff rates much higher. Table 3-2 illustrates the effective duties on selected textile items.

Apparel products are not subject to excise duties and most other miscellaneous taxes, but are categorized as restricted imports.⁵⁵ Several types of Indian tariffs and other taxes are shown on the following page:

⁵⁴ A tariff binding is a commitment to a ceiling rate beyond which tariffs, or import duties or taxes, cannot be raised under WTO rules. This agreement establishes legally binding tariff ceilings and reaffirms one of several of India's market opening commitments made under the 1994 agreement. See Office of the United States Trade Representative (USTR), "United States and India Reach Agreement on Textile Tariff Bindings," press release No. 00-61, Sept. 15, 2000.

⁵⁵ Import restraints on apparel are expected to be eliminated by April 1, 2001.

Type of tariff and tax**Applied on:**

Basic customs duty	Levied on assessed c.i.f. value of imports plus landing charges; generally does not exceed 1 percent of the c.i.f. value.
Surcharge on customs duty	Selected textile imports. Discontinued as of April 1, 1999. Calculated on the assessed value plus the basic customs duty.
Basic excise duty	Countervailing duty on imports to offset levies on domestically produced like products. Varies by product, ranging from zero on natural fibers to 32 percent on polyester filament yarn. Grey fabrics and certain cotton yarns are exempt from excise duty. Levied on the sum of assessed value, basic customs duty, and surcharge.
Surcharge on excise duty	Selected textile items (manmade fibers and yarns). Most fabrics are exempted. Surcharge is 15 percent on excise duty. For example, on an 8 percent basic excise duty, the surcharge would be 1.2 percent.
Cess tax	All textile items. This tax is 0.05 percent of the assessed import value plus custom duties including surcharge.
Special additional duty	Counterbalance to sales tax and other local taxes on like products. Assessed at 4 percent of the sum of assessed value, basic customs duty, surcharge, excise duty (including surcharge), and cess.

Table 3-1
Customs duty structure for major textile items in India, FY1996-97-FY2000-01
(Percent ad valorem)

Item	1996-97 ¹	1997-98 ²	1998-99 ²	1999-2000 ³	2000-01 ³
Natural fibers:					
Cotton	0	0	0	5.5	5.5
Wool:					
Below 32 micron	27	25	20	16.5	16.5
Above 32 micron	12	15	10	5.5	5.5
Raw materials for manmade:					
DMT, PTA, MEG	27	30	30	27.5	27.5
Acrylonitrile	12	15	15	16.5	16.5
Caprolactum	32	35	30	27.5	27.5
Paraxylene	12	15	5	5.5	5.5
Wood pulp	7	15	10	5.5	5.5
Yarn:					
Cotton	27	30	30	425	420
Spun	52	55	40	440	420
Blended	52	55	40	440	420
Wool	52	45	40	440	420
Fiber/filament:					
Polyester stable fiber	32	35	35	435	420
Acrylic staple fiber	32	35	35	435	420
Viscose staple fiber	27	30	30	425	420
Filament yarn	32	35	35	435	420
Fabric:					
Cotton	52	45	40	440	⁴ 530/35
Blended	52	45	40	440	⁴ 530/35
Wool	52	45	40	440	⁴ 530

¹ Includes 2 percent special duty.

² Includes 5 percent special duty which was withdrawn on Feb. 28, 1999.

³ Includes 10 percent surcharge.

⁴ Exempts from 10 percent surcharge.

⁵ Attracts ad valorem rate or specific rate which ever is higher.

Source: Compiled from official statistics of the Office of the Textile Commissioner, Ministry of Textiles, GOI, retrieved from <http://texmin.nic.in/ermiudel.htm>, June 6, 2000.

Table 3-2
Effective duty rates on imports of major textile items in India in U.S. dollars, FY2000-01

No.	Item	Raw materials		Cotton yarn	Manmade fiber spun, and blended yarn	Cotton and manmade-fiber fabric
		Cotton	Manmade			
1	Assessed value (c.i.f.)	\$100	\$100	\$100	\$100	\$100
2	Basic customs duty (percent)	5	25	20	20	30
3	Surcharge (10 percent of line 2)	0.5	2.5	(¹)	(¹)	(¹)
4	Calculated customs duties including surcharge	\$5.50	\$27.50	\$20.00	\$20.00	\$30.00
5	Add lines 1 and 4	\$105.50	\$127.50	\$120.00	\$120.00	\$130.00
6	Basic excise duty (percent)	0	16	8	16	16
7	Surcharge (15 percent of line 6)	0	(¹)	1.2	2.4	(¹)
8	Calculated excise duties including surcharge	\$0.00	\$20.40	\$11.04	\$22.08	\$20.80
9	Add lines 5 and 8	\$105.50	² \$147.90	² \$131.04	² \$142.08	² \$150.80
10	Cess on line 5 (percent)	0	0.05	0.05	0.05	0.05
11	Cess	\$0.00	\$0.64	\$0.60	\$0.60	\$0.65
	Total including all duties	\$105.50	\$148.54	\$131.64	\$142.68	\$151.45
	Effective duty rates (percent)	5.5	48.54	31.64	42.68	51.45

¹ Exempt from surcharge.

² Does not include an additional special duty of 4 percent levied on most of the textile items except fabrics, as a counterbalance to sales tax. Fabrics, which are exempt from the 15-percent surcharge in line 7 above, attract an additional excise duty in lieu of sales tax between 5 and 8 percent (also not included above).

Source: Compiled from official statistics of the Office of the Textile Commissioner, Ministry of Textiles, GOI, and The Indian Cotton Mills' Federation, New Delhi.

The GOI rationalized the excise duty structure by converging 11 ad valorem rates into three rates—namely 8,16, and 24 percent. Excise duties on most yarns and fabrics were reduced to either 8 percent or 16 percent (see table 3-3).⁵⁶ However, the GOI increased the excise duty on fabrics having an ex-factory value of less than \$0.70 (Rs30) per square meter from 13 percent to 16 percent. For other fabrics except wool, India maintained the 16 percent duty.

According to textile industry and government sources in India, the additional taxes and levies on imports of textile products are intended to offset excise taxes levied on domestically produced like products.⁵⁷ However, because these taxes are applied

on an ad valorem basis over custom duties that have already been applied, the cumulative additional taxes on imports exceed the excise taxes that are applied to domestic goods. Both the United States and the EU assert that the aggregate value of basic customs duties and additional duties exceed India's WTO bound rate commitment for a significant number of tariff headings.

Nontariff Barriers

Import Licensing

India has liberalized its import licensing regime for textiles and apparel, but still limits market access for U.S. apparel. Currently, unrestricted importation applies to items such as yarns and fabrics intended for further processing. Apparel and made-up textile goods

⁵⁶ Excise duties shown in table 3-3 include an additional 15-percent surcharge where applicable.

⁵⁷ USITC staff interviews.

Table 3-3
Excise duty structure for major textile items¹ in India, FY1996-97-FY2000-01
(Percent ad valorem)

Item	1996-97	1997-98	1998-99	1999-2000	2000-01
Natural fiber and wood pulp	0	0	0	0	0
Raw materials for manmade fibers	20	18	18	16	16
Yarn: ²					
Cotton	5.75	5.75	5.75	9.20	9.2
Spun and blended	23	20.7	20.7	18.4	18.4
Wool	11.5	9.2	9.2	9.2	9.2
Fiber/filament: ²					
Manmade staple	23	20.7	20.7	18.4	18.4
Polyester filament yarn	46	34.5	34.5	34.5	36.8
Viscose filament yarn	23	20.7	20.7	18.4	18.4
Nylon filament yarn	34.5	34.5	28.75	27.6	18.4
Fabric: ³					
Below Rs 30/per meter	10	10	10	13	16
Above Rs 30/per meter	20	20	20	16	16
Blended	20	20	20	16	16
Wool	22.25	22.25	22.25	21	21

¹ Cotton, manmade, and blended fabrics processed without the aid of power and steam are exempted from excise duty. Grey fabrics are exempt from excise duty; also exempt from excise duty is cotton yarn not containing synthetic staple fiber covered under SSI duty exemption scheme, effective April 1, 1999.

² Excise duty includes an additional 15-percent surcharge under the Textiles and Textile Articles (T&TA) Act, 1978.

³ Exempt from 15-percent surcharge under T&TA Act, but attracts additional excise duty in lieu of sales tax of between 5 and 8 percent.

Source: Compiled from official statistics of the Office of the Textile Commissioner, Ministry of Textiles, GOI, retrieved from <http://texmin.nic.in/ermiudel.htm>, June 6, 2000.

generally require a special import license (SIL)⁵⁸ or are subject to import restrictions that apply to consumer goods.⁵⁹

⁵⁸ SILs are tied to export performance and the balance of payments, and they can be purchased in the open market from exporting firms at markups ranging between 5 and 14 percent. SILs are generally available for firms whose annual exports exceed \$23,000 (Rs1 million) in c.i.f. value. SILs can be transferred freely and are usually valid for a period of 12 months from the date of issue. The United States has criticized India for its SIL system which, according to many WTO members, is an export subsidy for Indian firms engaged in the export business, equal to the amount of profit derived from the sale of a license. However, with the phasing out of import restrictions by April 1, 2001, SILs will have decreasing importance.

⁵⁹ Office of the United States Trade Representative, *2000 National Trade Estimate Report on Foreign Trade Barriers* (Washington, D.C.: GPO, 2000), p. 157; Centre D'Etudes Economiques Et Institutionnelles *Market Access Study to Identify Trade Barriers Affecting the EU Textiles Industry in Certain Third Country Markets* (Brussels: CEEI, 1999), p. 82; and Economic Consulting Services, Inc. (ECS), *The Market for U.S. Cotton Products in India*, pp. 65-66.

The GOI first took action to eliminate its market access barriers with the implementation of the United States-India Textile Agreement of January 1, 1995, by providing immediate market access for fibers, yarns, and industrial fabrics. On March 31, 1999, the GOI revised its Export-Import (EXIM) policy by eliminating import licensing requirements for 894 items of consumer goods, agriculture products, and textiles, compared to 600 items required under its WTO commitments.⁶⁰ India also removed another 414 items from the "restricted list", allowing these to be imported against a SIL.

On December 28, 1999, the United States and India reached agreement on a timetable to lift quantitative restrictions on imports of 1,429 agricultural, textile, and consumer products, including apparel. This agreement followed a WTO ruling that these restrictions were no longer justified under the BOP provisions of GATT Article XVIII:B. India

⁶⁰ "Import Regime Eased in Phase II of Reforms," *The Times of India*, Apr. 1, 1999, found at <http://www.timesofindia.com/today/01home1.htm>, retrieved Apr. 1, 1999.

removed restrictions on 715 tariff items as of April 1, 2000, and agreed to remove restrictions on the remainder by April 1, 2001.⁶¹ Once the restrictions are lifted, India will allow, without restriction, imports of apparel and other made-up textile goods.

Customs Procedures

Trade sources in India claim that the country has cumbersome customs procedures that are regarded as highly bureaucratic and time-consuming. Documentation requirements are extensive and delays frequent. Reportedly, imports are often misclassified and improperly valued for assessment of duties and procedures are not consistent among different ports of entry.⁶² One problem cited is that imports of missing components of kits are often assessed duties twice, once when the kit is originally imported and again, when the missing component is separately imported (despite a “no charge” notation on the invoice).⁶³ Similar difficulties and bureaucratic delays with the export and reimport of capital goods for repairs are also cited.

Marking, Labeling, and Packaging Requirements

Marking, labeling, and packaging requirements applicable to textile and apparel products are technically complex and difficult to fulfill.⁶⁴ Textiles Regulation 1988, which is designed to protect consumers, imposes strict safety and marking guidelines on fabrics and other textile products that are sold in the home market. This regulation originally applied only to domestic products; however,

⁶¹ While agreeing to remove import restrictions, the GOI announced that it would reimpose quantitative restrictions (QRs) under WTO provisions if the domestic industry is hurt by less expensive imports from low-cost countries. A bill is expected to be introduced in the Parliament that would amend the Foreign Trade (Development & Regulation) Act by reintroducing QRs as a safeguard mechanism. The GOI is also planning to initiate measures such as antidumping duties and countervailing duties in such cases. To protect the SSI sector, the GOI would raise tariffs, if needed, within the bound rates. See “Maran Warns of Curbs on Cheap Imports,” *The Times of India*, found at <http://www.timesofindia.com/ today/ 04busu1.htm>, retrieved May 4, 2000.

⁶² ECS, *The Market for U.S. Cotton Products in India*, p. 65.

⁶³ *Ibid.*

⁶⁴ Information in paragraph is from CEEL, *Textile Market Access Study (Final Report)*, Mar. 23, 1999, pp. 83-84, and Office of the Textile Commissioner, Ministry of Textiles, Public Notice dated July 22, 1998, No. TDRO/CLB/98/misc.1.

on July 22, 1998, the GOI extended the regulation to cover imported textile products. The regulation requires all tops, yarns, and fabrics to have the statutory markings prescribed in the government notification and states that such markings should in no way mislead consumers. Cloth, for example, must be marked with the name and address of the manufacturer, a description of the cloth, sort number, length in meters and width in centimeters, and washing instructions. Manmade fiber cloth must also indicate whether the cloth was made from spun or filament yarn, the month and year of packing, and the exact composition of the cloth. The marking must appear on the face plait of each piece of cloth and on every alternate meter of the cloth at a height not exceeding 2.5 centimeters from the selvage. Word and letter markings must be made in Hindi, Devanagary script, and English (in capital letters) with international numerals. The height of characters must not be more than 0.5 centimeter for tops, yarn, and cloth; 0.25 centimeter for packed yarn, and 3 centimeters for bales or cases.

Export-Import Policy

The GOI's EXIM policy provides for a variety of largely export-related assistance to firms engaged in the manufacture and trade of textile products. This policy includes fiscal and other trade and investment incentives contained in various programs, as discussed below.

Duty Entitlement Passbook Scheme (DEPS)

DEPS is available to Indian export companies and traders on a pre- and post-export basis. The pre-export credit requires that the beneficiary firm has exported during the preceding 3-year period. The post-export credit is a transferable credit that exporters of finished goods can use to pay or offset customs duties on subsequent imports of any unrestricted products.

Export Promotion Capital Goods (EPCG) Scheme

The EPCG scheme is available to export companies and traders who provide the GOI with information on the type and value of capital goods they are importing and the exports they expect to produce using those imports. Depending upon the level of the export commitment at the time of import of goods, the GOI provides exporters with a license allowing them to import capital goods duty-free or at

preferential rates of duty. In an effort to enable producers to afford small-scale modernization, on April 1, 1999, the GOI lowered the threshold limit for its duty-free EPCG scheme from \$4.6 million (Rs200 million) to \$230,000 (Rs10 million) for the chemicals, plastics, and textile sectors.⁶⁵ Whereas imports of secondhand capital goods were previously allowed under the EPCG scheme, only imports of new capital goods are now permitted under the EPCG scheme. Textile firms importing machinery and equipment under the EPCG scheme must export at least six times the c.i.f. value of imported goods within 6 years. This scheme provides a benefit to Indian exporters of forgone cost of duty.

Pre- and Post-Shipment Financing

The Reserve Bank of India (RBI) provides Indian exporters with pre-shipment financing through commercial banks that may be used to purchase raw materials and packing materials by presenting a confirmed order or letter of credit. RBI also provides post-shipment financing through commercial banks at preferential rates (including bank discounting of foreign customer receivables) to Indian exporters presenting export documents. These programs make a financial contribution to Indian firms to the extent of the difference between benchmark short-term interest rates and the preferential interest rates.

Export Processing and Special Economic Zones

The EXIM policy provides for the establishment of export processing zones (EPZs) and special economic zones (SEZs). Units in the EPZs that export all of their output can import industrial inputs free of customs duty. A 5-year tax holiday is allowed to any industrial unit in a EPZ and all profits of 100-percent EOUs are exempted from income tax.⁶⁶ Units that are not considered 100-percent EOUs receive tax

⁶⁵ Prior to April 1, 1999, any textile firm planning to modernize its plant had to import at least \$4.6 million worth of machinery and equipment to qualify under the zero duty EPCG scheme. See "Import Regime Eased in Phase II of Reforms," *The Times of India*, Apr. 1, 1999.

⁶⁶ One-hundred-percent EOUs are allowed to sell up to 25 percent of their output in the domestic market and still receive the full tax exemption on their earnings. Effective for FY 2000-01, 80 percent of export profits will be tax exempt and this benefit will be gradually reduced by 20 percentage points a year until it is completely phased out over a 5-year period. "Union Budget: Highlights of Budget 2000-01," *The Hindu*, found at <http://www.the-hindu.com/holnus/01292001.htm>, retrieved Feb. 29, 2000.

exemptions only on their export earnings. To attract investment, the GOI allows 100-percent foreign ownership of units in the EPZs as well as the SEZs. The SEZs were created recently, with the conversion of four EPZs into SEZs. The GOI treats SEZs as foreign territory for trade and tariff purposes. Units in SEZs may engage in manufacturing, trading, and services; are exempt from routine examination of exports by customs; and can sell in the domestic market on payment of duty as applicable to imported goods.⁶⁷

Nontrade Policies

Technology Upgradation Fund

The GOI has set up a Technology Upgradation Fund (TUF) to alleviate the problem of high capital costs in India and to encourage modernization of the textile and apparel industry. The \$6 billion fund, which was made available for a 5-year period beginning on April 1, 1999, is expected to address the industry's technology needs, especially in the weaving, processing, and apparel sectors, and enhance its global competitiveness. India's National Institute of Fashion Technology is assisting the apparel sector to improve its technology under the TUF scheme to help cater to the growing needs of India's fashion industry.⁶⁸

High capital costs in India have discouraged capital investment in the textile and apparel industry, thereby limiting its product range, export opportunities, and chances for reaching economies of scale. Under the TUF scheme, textile and apparel units may be eligible to receive medium- and long-term loans from the Industrial Development Bank of India (IDBI), the Small Industries Development Bank of India (SIDBI), and the Industrial Finance Corporation of India at interest rates that are 5 percentage points lower than the normal lending rates of these institutions.⁶⁹ These financial institutions will use their normal lending criteria to identify textile units that are eligible for

⁶⁷ "SEZs Activated Following Conversion of EPZs," *The Economic Times*, found at <http://www.infodriveindia.com/news/newshop.asp>, retrieved Feb. 2, 2001.

⁶⁸ The GOI established this institute in 1980 as an autonomous body under the Ministry of Textiles, in collaboration with the Fashion Institute of Technology, New York.

⁶⁹ Ministry of Textiles, found at <http://www.nic.in/texmin/tuf1.htm>, retrieved Sept. 7, 1999. Also USITC staff interviews.

loans.⁷⁰ According to GOI officials, the GOI-subsidized interest rate reduction brings the capital cost for modernization closer to international costs.

The TUF restricts loans to selected machinery items, captive power plants, and pollution control equipment. The program also covers information technology and research and development (R&D) facilities for product development or diversification; however, it does not provide loans for working capital. Financial norms also require that promoters contribute 20 percent of the cost of the modernization.

⁷⁰ Financial norms of IDBI stipulate that the amount of a loan for spinning mills will be need-based, subject to the attainment of minimum economic size (i.e., 25,000 spindle capacity for spinning mills). The SSI spinning mills, which normally have less than 4,000 spindles each, are eligible for assistance from SIDBI. Mills with spindle capacity ranging from 4,000 to 25,000 will not be eligible for assistance from IDBI or SIDBI; the GOI has directed commercial lending institutions to finance such units.

According to government and industry sources, the textile industry response to TUF has been disappointing so far. As of February 29, 2000, the GOI received 304 applications and sanctioned 201 projects amounting to an outlay of about \$385 million (Rs16,689 million). The GOI has disbursed \$115 million (Rs5,014 million) to 94 applicants.⁷¹ The largest recipients of these loans were the composite mills and spinning units (see table 3-4).

⁷¹ The Ministry of Textiles has faced problems in the TUF implementation. Industry executives and trade association officials claim that the financial institutions which had been designated for loan disbursement were not being cooperative. The Ministry has invited suggestions from industry to overcome problems. The GOI is also planning to provide additional funds for TUF if needed. Several industry executives believe that many hidden costs, such as additional loan costs averaging 1.05 percent of the loan, prepayment penalty, and higher lending rates of financial institutions compared with commercial banks, serve as disincentives for seeking TUF loans. USITC staff interviews.

Table 3-4
Utilization of Technology Upgradation Fund by the textile and apparel industry sector as of Feb. 29, 2000

Industry sector	Applied			Sanctioned			
	Number of loans	Project cost	Loan amount	Number of loans	Loan amount	Amount disbursed	
		— Million rupees—				— Million rupees—	
Spinning	84	10,800	7,077	60	4,422	1,067	
Viscose filament yarn	2	241	118	2	118	61	
Synthetic filament yarn (texturing, twisting)	17	1,120	719	5	336	157	
Weaving	23	2,481	1,490	14	1,113	237	
Composite mills	44	25,226	11,836	27	6,728	1,538	
Knitting	21	276	192	13	103	25	
Made-ups manufacturing	3	84	48	1	8	7	
Garment manufacturing	35	1,642	880	24	665	232	
Processing	57	7,211	4,186	42	2,964	1,657	
Ginning and pressing	8	288	140	8	109	18	
All other	10	390	254	5	123	15	
Total (Rs)	304	49,759	26,940	201	16,689	5,014	
Total (million dollars)		1,160	630		385	115	

Source: Compiled from official statistics of the Office of the Textile Commissioner, Ministry of Textiles, GOI, retrieved from <http://texmin.nic.in/ermiudel.htm>, June 6, 2000.

Cotton Technology Mission

The GOI has set up a Cotton Technology Mission to increase research on improving productivity and quality of Indian cotton and bringing about improvements in the marketing infrastructure and the raw cotton processing sector. A goal of the GOI, as specified in the National Textile Policy 2000 (discussed later in this chapter), is to increase cotton production by 50 percent and improve both the quality and productivity of cotton through the Cotton Technology Mission. The Ministries of Agriculture and Textiles fund and oversee the project. The Ministry of Textiles will contribute 25 percent of the total estimated project cost of \$16-\$19 million and the Ministry of Agriculture will provide the balance.⁷²

Hank Yarn Obligation

The GOI's hank yarn obligation mandates that each spinning mill produce 50 percent of its yarn for the domestic market in hank yarn form (80 percent of which must be in counts of 40s and lower) for use in the handloom sector. Exports of cotton yarn in counts of 40s and lower are subject to a ceiling to protect the interests of the handloom sector.⁷³ In October 1998, the GOI relaxed the hank yarn obligation for EOUs.⁷⁴ In January 1999, the GOI issued an order exempting composite mills from the statutory obligation to produce hank yarn if all of the yarns made by a mill were for captive consumption.

Quota Entitlement Policy

Textile and apparel trade was for many years largely governed by the terms of the 1974 Multifiber Arrangement (MFA) and predecessor arrangements. On January 1, 1995, the Agreement on Textiles and Clothing (ATC) entered into force as part of the WTO agreements and replaced the MFA. Under the MFA, the United States, the European Union (EU), Canada, and Norway negotiated bilateral agreements with India and other textile and apparel exporting countries

that established quantitative limits or quotas on their exports of certain textile and apparel articles. The ATC provides for the elimination of the quotas and complete "integration" of textiles and apparel into the WTO regime (i.e., subject to the same rules as trade in other sectors) over a 10-year transition period ending on January 1, 2005.

India's Ministry of Textiles implemented the "Quota Entitlement Policy" or Export Entitlement Policy to allocate quotas on the country's exports of textiles and apparel to the above-referred countries. The textile ministry revises the policy from time to time with the prime objective of promoting exports and attaining its policy goals. In this regard, the textile ministry has created nine export promotion councils, each responsible for a specific textile or apparel sector. For example, the Apparel Export Promotion Council (AEPCC) administers and monitors export entitlements for readymade garments shipped to countries with quotas.

The GOI in November 1999 announced a new textile and apparel quota policy for the years 2000-04 to boost exports and encourage new investment.⁷⁵ The new policy increased the share of quotas earmarked for apparel units investing in new plants and machinery from 5 percent to 15 percent and abolished the nonquota entitlement category for textiles.⁷⁶

For yarn, fabrics, and made-ups (except apparel and handloom products under quantitative restraint in the United States), 55 percent of India's total world quotas for each of these product categories are allocated based on past performance (PPE) and 15 percent are allocated under the manufacturer-exporter entitlement (MEE) system. Quota allotment under the MEE system for FY 2000-01 are made to manufacturer-exporters who have substantially modernized their plant and machinery in the base year (1999-2000) and meet the eligibility criterion of the TUF scheme. For yarn, the remaining 30 percent is allocated under the ready goods entitlement (RGE) system,⁷⁷ while for fabrics and made-ups, the remaining 30 percent is equally divided between the

⁷² *The Financial Express*, May 8, 1998, found at <http://www.financialexpress.com/fe/daily/19980508/12855564.html>, retrieved Oct. 27, 1999.

⁷³ The Textile Commissioner's office suggested that the hank yarn obligation could be reduced to 30 percent in view of a decline in the number of handlooms in the country. Khatua and Singh interviews.

⁷⁴ The spinning sector has been protesting its hank yarn obligation for many years, claiming that the hank yarn produced for the handloom sector at lower prices is being clandestinely used by the powerloom sector. See "Government to Review Hank Yarn Obligation," *Deccan Herald*, Feb. 2, 1999, found at <http://www.deccanherald.com/deccanherald/feb02/yarn.htm>, retrieved Feb. 2, 1999.

⁷⁵ Ministry of Textiles, Notification dated Nov. 12, 1999, found at <http://www.texmin.nic.in.>, retrieved Mar. 24, 2000.

⁷⁶ *Ibid.* The former policy allocated quotas based on exporters' performance in nonquota categories.

⁷⁷ *Ibid.* Products under the RGE system include those that become available by way of surrender by license holders, flexibility, or otherwise. Entitlement under the RGE system will be opened four times a year—40 percent on Jan. 10, 30 percent on Apr. 10, 20 percent on July 10, and 10 percent on Oct. 10. Quotas are allotted against applications based on the unit value of applicants' exports and these nontransferable quotas are valid for a period of 50 days from the issue date.

powerloom exporters entitlement (PEE) system⁷⁸ and the RGE system. The GOI introduced PEE quotas in 1992 to encourage new exports by the powerloom sector; allotment under this system increased from 3 percent in 1992 to 10 percent in 1999 and to 15 percent under the new quota policy. Among all types of quotas, only PPE quotas are transferable.

For apparel, India allocates 70 percent of its quotas based on the PPE system, 15 percent under a new investors entitlement (NIE) system, 5 percent under a nonquota entitlement (NQE) system, and the remaining 10 percent under a first-come first-served entitlement (FCFS) system.⁷⁹ Allotments under the NIE system are made only to exporters registered as manufacturer-exporters who have invested a minimum of about \$125,000 (Rs5 million) in new machinery to produce apparel for export. Allotments under the NQE system are for exporters who have exported a minimum of about \$50,000 (Rs2 million) during the base year to nonquota countries and nonquota garments to quota countries. Entitlement under the FCFS system is open twice a year: 50 percent on the 10th of January and the other 50 percent on the 10th of April. The director general of the AEPC regulates the apparel quota transfers under the PPE system through an on-line electronic transfer scheme. This network displays the offers of intending transferees in the AEPC regional offices, including the quantity and offer prices, and the intending transferees' request for transfers on the basis of displayed offers.⁸⁰

Investment Policies and Foreign Direct Investment

As a part of its economic reforms, the GOI has liberalized its investment policies for the textile industry. The RBI now grants automatic approval within a period of 2 weeks to all proposals involving foreign equity up to 51 percent in the manufacture of textile products in the composite mills and in the

⁷⁸ Ibid. Allotment under the PEE system is made to powerloom-manufacturer applicants in the SSI industry sector, each owning at least 12 powerlooms. The quota distribution depends on the each applicant's operation size. For example, an applicant operating 21 to 30 powerlooms is allotted twice the quota allotted to an applicant operating 12 powerlooms. Those operating over 30 powerlooms are allotted the maximum quotas, or 2.5 times the quotas allotted to an applicant with 12 powerlooms.

⁷⁹ Ibid.

⁸⁰ Rajiv Takru, director general, Apparel Export Promotion Council, interview by USITC staff, Feb. 11, 2000, New Delhi.

manufacture of waterproof textile fabrics.⁸¹ The RBI also gives automatic approval to these mills for technology collaboration agreements as long as (1) lump sum payments for technology transfer do not exceed \$2 million, (2) royalty payments that can be repatriated are limited to 5 percent for domestic sales and 8 percent for exports, and (3) royalty payments do not exceed beyond 7 years from the date of commercial production or 10 years from the date of the agreement whichever is earlier.⁸²

FDI in India's textiles industry has been low largely because the GOI first allowed FDI rather late in the mid-1990s, when most funds were being invested in Southeast Asian countries such as Indonesia and Thailand.⁸³ Between 1994 and June 1998, India approved 402 textile projects totaling \$650 million (Rs26 billion) in FDI.⁸⁴ Of these projects, 63 involved technical assistance and 339 involved financial assistance. Actual FDI inflow totaled an estimated \$143 million, or 22 percent of the amount approved.⁸⁵

National Textile Policy 2000

Faced with new challenges and opportunities in a changing global trade environment, the GOI unveiled its National Textile Policy 2000 (NTP 2000) on November 2, 2000. The NTP 2000 aims to improve the competitiveness of the Indian textile industry in order to attain \$50 billion per year in textile and apparel exports by 2010.⁸⁶ The NTP 2000 opens the country's apparel sector to large firms and allows up to 100 percent FDI in the sector without any export obligation. According to the GOI, the deregulation will help the apparel sector develop state-of-the-art apparel manufacturing facilities and reach economies of scale to withstand competition from low-cost countries and increase apparel exports to \$25 billion by 2010.⁸⁷ The GOI is reviewing a proposal to deregulate the knitting mills from the SSI sector.

⁸¹ "Investment Policy and Opportunities," *Doing Business in India*, found at http://indiintl.com/india_investment.html, retrieved Sept. 7, 1999.

⁸² Ibid.

⁸³ USITC staff interviews.

⁸⁴ Office of the Textile Commissioner, *Foreign Direct Investment in Textile Industry, 1994 to 1998*, found at <http://texmin.nic.in/aptcf/fdi.htm>, retrieved June 6, 2000.

⁸⁵ Ibid.

⁸⁶ Ministry of Textiles, *National Textile Policy-2000*, found at http://texmin.nic.in/policy_2000.htm, retrieved Nov. 3, 2000. Industry and government sources in India predict that, if the GOI deregulates and creates a competitive environment for the industry, India's textile and apparel exports will double by 2005 and reach nearly \$50 million by 2010 for a world export share of 10 percent. USITC staff interviews.

⁸⁷ Ibid.

In formulating the NTP 2000, the GOI acknowledged that over-regulation and targeted tax benefits to SSI and decentralized sector units were harmful to the growth of the country's textile industry. The NTP 2000 liberalizes government controls and regulations so that different sectors within the textile and apparel industry can function in a more competitive environment. Additional efforts will be made to revive the organized mill sector and encourage the setting up of modern processing units to improve fabric quality and value. To achieve this goal, the NTP 2000 encourages Indian mills to seek joint ventures with international textile firms and set up large integrated textile mills and processing units.

The new policy also directs Indian firms to focus on new products and retailing strategies and apply information technology to enhance efficiency and productivity. In view of the growth potential for technical textiles and the need for foreign investment and technology in this sector, the GOI will offer special incentives and benefits for investors in this sector. The GOI also plans to provide an exit policy with adequate protection for workers displaced through closing of nonviable mills. Other NTP 2000 goals include plans for a growth-oriented customs and excise duty structure and promotional measures to help the industry achieve production and export goals.

CHAPTER 4

Textile and Apparel Market and Trade

Market Profile

India is the world's fourth-largest economy, the third-largest in Asia, and the second-largest among emerging nations.⁸⁸ The Indian market reflects considerable diversity in income levels and lifestyles. Although India's per-capita GDP is one of the lowest among the developing countries, a significant segment of the population (an estimated 200 million people) has significantly higher income. A 1998 study by the National Council of Applied Economic Research (NCAER) projects that India's middle class will expand to include nearly half the country's total population by 2006.⁸⁹ The same study projects that the rich and the middle income class together will increase from 29.6 million households in 1997-98 to 97.1 million households in 2006-07. According to a recent article in *The Strategist*, Indian consumer credit is growing by 35 to 40 percent annually; new cardholders are increasing by 25 to 30 percent annually.⁹⁰ Buying has become a year-round phenomenon in India; seasonal demand has gradually disappeared from the Indian market in just the past 5-10 years.

Nearly 70 percent of the Indian population lives in rural areas. While both rural and urban markets are growing significantly, the rural market is estimated to be growing twice as fast as the urban market. According to the NCAER study, the rural share of total consumer purchases rose from 54.2 percent in FY 1989-90 to 57.9 percent in

FY 1995-96. A number of factors have fueled consumer spending growth, including rising prosperity and the emergence of a thriving consumer finance business. According to another NCAER study, *Indian Demographics Report 1998*, consumer preferences have shifted from low-valued items toward the higher priced products.⁹¹

Consumers in India spend approximately 9 percent of their disposable income on clothing and footwear and nearly 47 percent on food, alcohol, and tobacco, compared with 5 percent for clothing and shoes and 36 percent on food, alcohol, and tobacco in the United States.⁹² Clothing expenditures in India tend to be relatively higher for households with higher incomes.⁹³ Currently, disposable incomes of the majority of Indian consumers are so low relative to their basic needs that there is little residual for spending on better quality clothing.⁹⁴ As disposable

⁹¹ The share of low-priced goods in the rural basket (less than Rs1,000) declined from 83 percent in FY 1989-90 to 75 percent in FY 1995-96, while the share of medium-priced items (Rs1,000-6,000) rose from 13.5 to 20 percent, and the share of high-valued items (over Rs6,000) rose from 3.6 to 4.9 percent.

⁹² "The Indian Consumer That is Interested in Western Goods is a Hard One to Pin Down; A Look at the 100 Million or so "Middle Class" Consumer Market in India," *Business & Industry*, found at <http://www3.xls.com/cgi-bin/rdssuite.exe>, retrieved Nov. 23, 1999.

⁹³ Sri Ram Khanna, International Business Consultants, interview by USITC staff, Oct. 22, 1996, New Delhi. According to a clothing expenditure study of India's population, only 16 percent of the lowest income households (making less than \$775 per year) spend over \$116 per year on apparel. In comparison, about one-half of households with incomes of \$775-\$1,550, two-thirds of households with incomes of \$1,550-\$2,325 and over three-fourths of households with incomes over \$2,325 spend over \$116 per year on apparel.

⁹⁴ Nearly 36 percent of India's population lives below the poverty line according to a survey conducted by the National Sample Organization, India. "35.9 Percent of Population Below Poverty Line," *Deccan Herald*, found at <http://www.deccanherald.com/aug11/ntc.htm>, retrieved Aug. 10, 2000.

⁸⁸ "Market Entry Strategy," *Doing Business in India*, found at http://indiaintl.com/india_market_entry.html, retrieved Sept. 7, 1999; and "Indian Economy is Fourth Largest in the World," *The Hindu*, found at <http://www.the-hindu.com/holnus/01121604.htm>, retrieved Sept. 12, 2000. When ranked on the basis of GDP by purchasing power parity, India is now behind only the United States, China, and Japan. When ranked using the exchange rate method, India is the 13th-largest economy in the world.

⁸⁹ "The Consumer Market," *Doing Business in India*, found at http://indiaintl.com/india_consumer_market.html, retrieved Sept. 7, 1999.

⁹⁰ One-fourth of premium readymade garments priced above Rs650 (\$16) are bought using a credit card.

income increases, consumers are expected to spend more on purchases of quality clothing.

The size of the Indian market for consumer durables is estimated at 100 million people, according to a recent survey by KSA-Technopak covering some 7,300 consumers in 12 major cities in India.⁹⁵ The Indian market for branded products such as jeans, trousers, shirts, and other consumer goods is estimated at no larger than 40 million consumers. Indian consumers are typically more loyal to their stores than to brands. About three-fourths of the survey respondents reported that they would revisit the stores where they had previously purchased apparel. The survey also revealed that brand is the second most important factor in purchase decisions. In south India, consumers are generally more brand loyal than consumers from the north. Price, however, is the most important factor for the consumers in east India. Home/TV shopping or mail order are not yet popular in India, though consumers are aware of these distribution channels. Indian consumers like to touch and feel the product before they buy it.

Domestic Consumption of Textiles

Yarn and Fabrics

Indian consumption of yarn and fabrics reflects growing Indian consumer preferences for manmade-fiber textiles and blended items. From FY 1994-95 to FY 1999-2000, yarn consumption rose by 44 percent to 4.5 million tons, fueled by the rapid growth in consumption of manmade fibers and filament yarns, which nearly doubled to 1.9 million tons (see table 4-1). Consequently, the share of

⁹⁵ The survey conducted by KSA-Technopak, the Indian arm of Kurt Salmon Associates, Atlanta, GA, was based on the market potential for brands such as Peter England Shirts, Levi's, Reebok, and Colgate toothpaste. See "The Indian Consumer is a Hard One to Pin Down," *Business & Industry*.

Indian yarn consumption accounted for by manmade fibers and filament yarn rose by 10 percentage points to 42 percent, while the share accounted for by cotton yarn fell by an identical margin to 55 percent (see table 4-2). Consumption of other fibers such as silk and wool remained relatively unchanged at 3 percent of the total.

Estimated Indian consumption of all fabrics increased by 17 percent between FY 1994-95 and FY 1998-99 to 27.8 billion square meters (see table 4-3), valued at an estimated \$40 billion.⁹⁶ During the period, demand declined for cotton products but increased significantly for blended and noncotton items, reflecting a shift in consumption patterns among Indian consumers and an increased demand for polyester in the production of home textiles, apparel, automobiles, and other industrial applications. Prices have declined, however, because of excess capacity (in India and other major world producers of manmade fibers) and competitive prices (from Taiwan and Korea due to the depreciation of their currencies).⁹⁷ Fabrics of polyester or polyester blended with cotton or wool have become the fabrics used in most apparel products due to price considerations and changing lifestyles of consumers, who prefer wrinkle-free, easy-maintenance apparel. As a result, the share of total fabric consumption accounted for by cotton fabrics declined from 59 to 46 percent during the period (see table 4-3).

About one-fourth of the total volume of India's fabric consumption consists of finished fabrics (printed, dyed, and yarn-dyed), which are generally purchased as piece lengths and custom tailored as shirts, dresses, jackets, and trousers.⁹⁸ Another 37 percent of fabric consumption consists of fabrics for producing traditional Indian garments such as dhoties (worn by men as a substitute for pants) and sarees (worn by women).⁹⁹ Ready-to-wear garments

⁹⁶ The value estimate is based on per-capita fabric consumption data available from the Office of the Textile Commissioner, found at <http://texmin.inc.in/ermiudel.htm>, retrieved May 24, 2000.

⁹⁷ There is an adequate supply of raw materials such as PTA, DMT, and MEG to meet domestic demand. Huge backward integration of the market leader Reliance has reduced production costs, which are now comparable to those of producers in Taiwan and Korea. See "India Now: Polyester Supply Still Exceeds Demand," *JTN Monthly*, Nov. 1998, pp. 62-64.

⁹⁸ Calculated from data in Economic Consulting Services, Inc. (ECS), *The Market for U.S. Cotton Products in India*, p. 42.

⁹⁹ *Ibid.*

Table 4-1
India's textile industry: Textile fiber/yarn consumption by type of fiber, FY1994-95-FY1999-2000
(1,000 tons)

Fiscal year	Cotton	Manmade fiber		Manmade filament		Other fibers	Total
		Cellulosic	Synthetic	Cellulosic	Synthetic		
1994-95	2,065	195	348	56	382	105	3,151
1995-96	2,295	207	350	55	433	126	3,466
1996-97	2,566	186	460	53	528	120	3,913
1997-98	2,719	198	571	54	673	126	4,341
1998-99	2,485	183	597	51	771	132	4,219
1999-2000 ¹	2,516	204	676	48	955	131	4,530

¹ USITC staff estimate based on 10 months data for the year.

Source: Compiled from official statistics of the Office of the Textile Commissioner, Ministry of Textiles, GOI, retrieved from <http://texmin.nic.in/ermiudel.htm>, June 6, 2000.

Table 4-2
India's textile industry: Share of textile fiber/yarn consumption by type of fiber, FY1994-95-FY1999-2000
(Percent)

Fiscal year	Cotton	Manmade fiber/filament	Other	Total
1994-95	65.5	31.2	3.3	100.0
1995-96	66.2	30.2	3.6	100.0
1996-96	65.6	31.3	3.1	100.0
1997-98	62.6	34.5	2.9	100.0
1998-99	58.9	38.2	3.1	100.0
1999-2000 ¹	55.5	41.6	2.9	100.0

¹ USITC staff estimate based on 10 months data for the year.

Source: Compiled from official statistics of the Office of the Textile Commissioner, Ministry of Textiles, GOI, retrieved from <http://texmin.nic.in/ermiudel.htm>, June 6, 2000.

Table 4-3
Consumption of fabrics in India by type,¹ FY1994-95 and FY1998-99

Type	1994-95	1998-99	Percent share	
			1994-95	1998-99
<i>Million square meters</i>				
Cotton	13,960	12,895	58.7	46.4
Blended	2,995	4,075	12.6	14.6
100% noncotton	6,843	10,842	28.7	39.0
Total	23,798	27,812	100.0	100.0

¹ USITC staff estimate based on per capita availability of fabrics for Indian consumers.

Source: Compiled from official statistics of the Office of the Textile Commissioner, Ministry of Textiles, GOI, retrieved from <http://texmin.nic.in/ermiudel.htm>, June 6, 2000.

consume another 23 percent. Home furnishings and other items account for the remaining 15 percent. Between 1992 and 1996, growth in consumption of all fabric types for shirts, coats, and dresses was significant. At the same time, overall demand for dhoties and sarees fell because of the increasing number of young people adopting Westernized clothing.

Regarding fabric used in home furnishings, available market data are limited. From 1992 to 1996, the market for sheets increased nearly 22 percent by quantity and 138 percent by value, while the market for towels increased by 2 percent by quantity and by 63 percent by value,¹⁰⁰ reflecting the growing affluence of Indian consumers who can afford higher quality products. The fiber base of all home furnishings is overwhelmingly cotton.

An analysis of India's domestic fabric consumption by different income groups for 1996 showed that high-income households consumed more expensive fabrics relative to low-income households (see table 4-4). The average retail price for all

fabrics was \$1.40 per meter, compared with \$1.86 per meter for the high-income group. Purchases of blended and manmade fiber textiles by all income groups during 1992-96 increased by 29 percent in quantity, from 5.7 million meters to 7.4 million meters, and by 7 percent in value, from \$11.3 billion to \$12.0 billion. However, the total value of fabric consumption during 1992-96 increased by 49 percent to \$3.9 billion among the low income households and by 29 percent to \$10 billion among the middle income households.

Apparel

The Indian market for domestic readymade apparel is estimated at \$5.5 billion (Rs200 billion) to \$8 billion (Rs300 billion) annually.¹⁰¹ Trade sources estimate that menswear accounts for 25 percent of the readymade apparel market (by quantity); women's wear, 48 percent; and children's wear, 17 percent.¹⁰² Approximately 20 percent of the apparel produced in India consists of branded

¹⁰¹ Ibid., p. 37.

¹⁰² Ibid.

¹⁰⁰ Ibid.

Table 4-4
Aggregate consumption of textiles in India, by fiber and income group, 1996

Income group ¹	Cotton	Manmade and blends	Other	Total
Low income:				
Quantity (million meters)	1,648	1,862	60	3,570
Value (million dollars)	1,358	2,401	163	3,922
Average (dollar/meter)	0.82	1.29	2.72	1.10
Middle income:				
Quantity (million meters)	3,451	3,800	212	7,463
Value (million dollars)	3,132	5,882	988	10,002
Average (dollar/meter)	0.91	1.55	4.66	1.34
High income:				
Quantity (million meters)	1,311	1,743	117	3,171
Value (million dollars)	1,443	3,752	699	5,894
Average (dollar/meter)	1.10	2.15	5.97	1.86
All income groups:				
Quantity (million meters)	6,410	7,405	389	14,204
Value (million dollars)	5,933	12,035	1,850	19,818
Average (dollar/meter)	0.93	1.63	4.76	1.40

¹ Per household per year. Below \$400 = Low income; \$400 to \$1,600 = middle income; over \$1,600 = high income.

Source: Compiled from data presented by Economic Consulting Services, Inc., Washington, DC, "The Market for U.S. Textile and Apparel Products in India," prepared for the American Textile Manufacturers Institute, Dec. 30, 1998, p. 45.

ready-to-wear garments.¹⁰³ Brands are more prominent in menswear, particularly shirts, trousers, and jackets.¹⁰⁴ Most national and regional brands are supplied by the large organized apparel firms.

The Indian market for readymade woven garments expanded 38 percent by quantity and 94 percent by value during 1992-96, whereas the market for knit garments expanded 7 percent by quantity and 68 percent by value, reflecting the improvement in quality and a change in product mix. Cotton is the primary material in women's blouses and petticoats, while polyester-cotton blends are dominant for most other goods.

Marketing Infrastructure¹⁰⁵

Distribution

India has a large family-owned and fragmented sales and distribution network, with centralized purchasing for chain stores and supermarkets only a recent (5-10 year) phenomenon. There are over 1 million market intermediaries—wholesalers, stockists, transporters, and retailers—involved in the distribution of consumer goods, including apparel. While urban areas have outlets ranging from supermarkets to small neighborhood retail stores, villages are served by smaller stores. Since the distribution channels are largely independently owned and supply multiple brands, dealer development is of the utmost importance in both urban and rural areas.

There are six types of commercial distributors in the market: importers, indenting agents, wholesalers, commission agents, retailers, and dealers. Because the Indian market was completely closed to textile and apparel imports prior to April 1995, the distribution structure for imported textile products is

¹⁰³ Ibid., p. 39.

¹⁰⁴ Approximately 500 shirt brands, 200 denim wear brands, and 200 trouser brands are present in the Indian market, accounting for about 80 to 85 percent of branded ready-to-wear garments. In all, there are 67 national brands, more than one-half in shirts and T-shirts, and 48 regional brands, almost all in shirts and trousers, according to various product surveys conducted by DFM magazine.

¹⁰⁵ Information in this section is from "Marketing Infrastructure," *Doing Business in India*, found at http://indiaintl.com/india_marketing.html, retrieved Sept. 7, 1999, except as noted.

not well developed. Importers generally handle a broad portfolio of goods rather than specializing in a specific textile or apparel product. For shirt fabrics, bedsheets, towels, and other home furnishings, retailers typically source from wholesalers who, in turn, source from importers. However, retail stores play an important marketing role in home furnishings, vis-a-vis commercial offices, designers, architects, and furnishers, and tend to seek an exclusive arrangement for these products.¹⁰⁶ In industrial fabrics, specialized dealers, rather than retailers or wholesalers, work directly with importers.

Transportation and Communication

Railways, road, and air are the principal means of transportation in India. India has one of the largest railway networks in the world—almost 63,000 kilometers (km) with more than 7,000 stations. India also has a fairly developed trucking system, with many private-sector firms providing freight services; the road network extends to 2.7 million km and links all towns and over 50 percent of the villages. There are 5 international airports and 88 domestic airports linked by private- and public-sector airlines. In addition, 11 major and 139 minor ports along India's nearly 7,000 km coastline provide links between the coastal towns and villages, although poor development of ports and inadequate docking facilities cause delays and other shipping problems. An expansion of the courier business, with the entry of global leaders like DHL and Federal Express during the 1990s, has greatly enhanced the reach of Indian marketers. Telecommunication services have improved substantially during the past 5 years with new policies promoting private-sector participation.

Consumer Finance

India has about 300 commercial banks with more than 61,000 branches. Over half the branches are located in rural areas.¹⁰⁷ Consumer financing has become an accepted method of marketing consumer durables. Several nonbanking financial intermediaries are engaged in leasing and hire-purchase activities which help sales of consumer durables. The credit

¹⁰⁶ ECS, *The Market for U.S. Cotton Products in India*, p. 53.

¹⁰⁷ Several multinational banks such as Citibank, Bank of America, American Express, Hong Kong, Deutsche, Amro, and some 30 others operate in the country.

card business is growing rapidly, with the number of credit card holders doubling since 1997 to 2 million. All standard international cards, as well as cards offered by 21 domestic banks, are accepted in the country.

Advertising and Market Research

Advertisers in India can reach 75 percent of the population through television and almost the entire population through radio. Television advertising is available at reasonable cost in India. According to a study by *Hindustan Thompson Associates*, an advertising research firm in India, a 10-second advertisement costs about \$3,100 during prime time; however, such advertising is mostly ineffective since the majority of people who watch television cannot afford the products. Several market research companies provide market intelligence services in India. The NCAER is the leading group performing survey-based economic research on consumer demographics on a regular basis. Other groups such as the Marketing & Research Group and the Indian Market Research Bureau provide primary research services. The Operations Research Group conducts detailed audits of India's retail outlets. The world's leading advertising agencies (such as Ogilvy & Mather, J.W. Thompson, BBDO, Young & Rubican, Lintas, McCann, Ericsson, and Leo Burnett) have a major presence in India. Marketers have access to information on television ratings, audience profiles, opinion polls, and other value-added information on the Indian market.

Market Entry Strategy for Foreign Investors¹⁰⁸

Franchising is a rapidly expanding method for U.S. and other foreign companies to enter the Indian market. Franchisees are required to submit a proposal to, and receive approval from, the Foreign Investment Promotion Board (FIPB) and the Ministry of Industry. Franchise fees are normally 5 percent of gross revenues and may be paid in foreign currency.

Joint ventures are another method for foreign companies to enter the Indian textile market. Approval must be obtained from the FIPB. For designated industries (defined as the manufacture of

¹⁰⁸ Information in this section is from "Market Entry Strategy," *Doing Business in India*, except as noted.

cotton textiles, wool, silk, manmade fibers, and water-proof textile fabrics), automatic approval is granted for FDI up to levels of 51 percent. Automatic approval is also granted to designated industries for technology collaboration agreements, subject to limitations on technology transfer fees and royalty payments.

Until recently, opportunities for FDI were limited in the apparel sector unless a foreign firm wanted to use India as a manufacturing base for export markets. However, the NTP 2000 deregulates the apparel sector and provides for FDI up to 100 percent without any export obligation. The NTP 2000 paves the way for foreign firms to set up large apparel plants in India, either owned fully or jointly with local producers. Foreign firms could also enter the Indian market through licensing of popular brands.

The RBI gives automatic approval for foreign equity investments up to 51 percent for setting up trading companies that are engaged primarily in exports.¹⁰⁹ Foreign companies engaged in manufacturing and trading are permitted to open branch offices to act as buying and selling agents, undertake trading activities, or provide technical and financial collaborations between Indian and foreign companies. Foreign firms can also open project offices for a specified period of time (turnkey projects) or open liaison offices to oversee their existing business interests. Profits and dividends earned in India are repatriable after payment of taxes. Companies also can sell products or services in India through distributors, without establishing a local presence (by way of a subsidiary, joint venture, or branch).

Textile and Apparel Trade

India's exports of textiles (yarn, fabrics, and made-up textile articles) and apparel totaled \$10.7 billion in FY 1998-99, representing 32 percent of India's total merchandise exports.¹¹⁰ In 1997, India was the world's 12th-largest exporter of textiles, with 3.8 percent of world exports, and the 9th-largest exporter of apparel, with 2.9 percent of world exports. Its share of global textile and apparel exports has increased in recent years, but at a slower pace than that of other major suppliers such as China. India's textile imports totaled about

¹⁰⁹ "Investment Policy and Opportunities," *Doing Business in India*, found at http://indiainl.com/india_investment.html, retrieved Sept. 7, 1999.

¹¹⁰ The Indian Cotton Mills' Federation, *Annual Report, 1998-99*, p. 33.

\$450 million in 1998, accounting for only 0.3 percent of world textile imports. India's imports of apparel are very small, largely because of import restraints and other market access barriers. Almost all of the \$9 million in imports of clothing and accessories in 1998 consisted of apparel parts and trimmings, which were imported duty-free by export-oriented units for use in the production of garments for export.

India's major export markets for textiles and apparel are the United States and EU, which accounted for 46 percent of its textile exports and 74 percent of its apparel exports in 1997 (see tables 4-5 and 4-6, figures 4-1 and 4-2). However, India's export shares in the U.S. and EU markets have declined since 1994, which Indian industry sources have attributed to tighter quotas in these markets for products in which they are competitive and formation of preferential trade agreements by the United States and the EU. In an effort to expand its exports, India has diversified its export markets to nonquota countries and, in some instances, relocated production to neighboring countries such as Nepal and Mauritius which, at that time, had few quotas.¹¹¹

Apparel accounted for just over half of India's exports of textiles and apparel in FY 1994-95 and FY 1998-99 (see table 4-7 and figure 4-3). India's exports of yarn grew rapidly during this period, with their share of India's textile and apparel exports increasing by nearly 4 percentage points to 16 percent. Slightly more than 80 percent of India's yarn exports consisted of cotton yarn; India now

supplies about 20 percent of world exports of cotton yarn. Made-up textile articles also increased their export share from 13 to 16 percent, while the export share for fabrics dropped by 3.5 percentage points to 17 percent.

India's exports of readymade apparel grew at an average annual rate of 10.2 percent in volume and 11.2 percent in value between FY 1991-92 and FY 1998-99. Cotton apparel was the dominant category of apparel to be exported from India, accounting for 71 percent of total apparel exports by value in FY 1998-99 (see table 4-8). The growth in cotton apparel exports was fueled by the rapid growth in knit garment exports, which rose 55 percent by value to increase its share of apparel exports from 21 percent to 28 percent. Noncotton apparel remained at 28 to 29 percent of total apparel exports.

India's imports of textiles increased by 21 percent during 1994-97 to \$392 million (see table 4-9). Nearly 70 percent of the imports in 1997 came from other Asian countries, with China, Hong Kong, Korea, and Taiwan together supplying 44 percent; the ASEAN region, 17 percent; and South Asia, 9 percent. The EU and the United States supplied 14 percent and 5 percent, respectively. The dominance of Asian suppliers reflected their price competitiveness relative to U.S. and EU suppliers. Indian industry and trade sources believe that the United States and the EU will be able to compete in the Indian market only for some specialty products such as technical textiles, manmade fibers, and specialty yarns and fabrics.¹¹²

¹¹¹ Trade and Development Centre (a joint venture of the World Bank and the WTO), "Country Studies: India, Part 4: Textiles," p. 6.

¹¹² D.K. Nair, secretary general, The Indian Cotton Mills' Federation, interview by USITC staff, Feb. 11, 2000, New Delhi.

Table 4-5
Textiles: India's exports, by selected countries and country groups, 1994-97

Country/group	Exports				Share of trade	
	1994	1995	1996	1997	1994	1997
	<i>Million dollars</i>				<i>Percent</i>	
North America	588	658	839	860	15.4	16.4
United States	532	602	761	756	13.9	14.4
Canada	48	51	69	89	1.3	1.7
All other	8	5	9	15	0.2	0.3
European Union-15	1,427	1,584	1,582	1,629	37.3	31.1
United Kingdom	381	404	424	410	10.0	7.8
Germany	343	381	380	339	9.0	6.5
Italy	175	209	182	243	4.6	4.6
Belgium	161	163	158	165	4.2	3.1
France	91	103	100	110	2.4	2.1
Spain	69	91	98	106	1.8	2.0
All other	207	233	240	256	5.4	4.9
South Asia	335	364	438	384	8.7	7.3
Bangladesh	265	287	353	291	6.9	5.6
All other	70	77	85	93	1.8	1.7
China and Hong Kong	89	158	297	333	2.3	6.4
Middle East	447	520	489	617	11.7	11.8
United Arab Emirates	263	265	239	270	6.9	5.1
All other	184	255	250	347	4.8	6.7
Japan	159	147	156	185	4.2	3.5
Sub-Saharan Africa	188	269	318	382	4.9	7.3
ASEAN region	157	164	179	157	4.1	3.0
Former Soviet Union (FSU)	73	86	101	95	1.9	1.8
North Africa	24	39	58	86	0.6	1.6
Non-EU West Europe	58	62	63	71	1.5	1.4
South America	15	27	55	71	0.4	1.4
Eastern Europe (except FSU)	15	17	33	37	0.4	0.7
All other	254	263	328	336	6.6	6.4
World	3,829	4,358	4,936	5,243	100.0	100.0

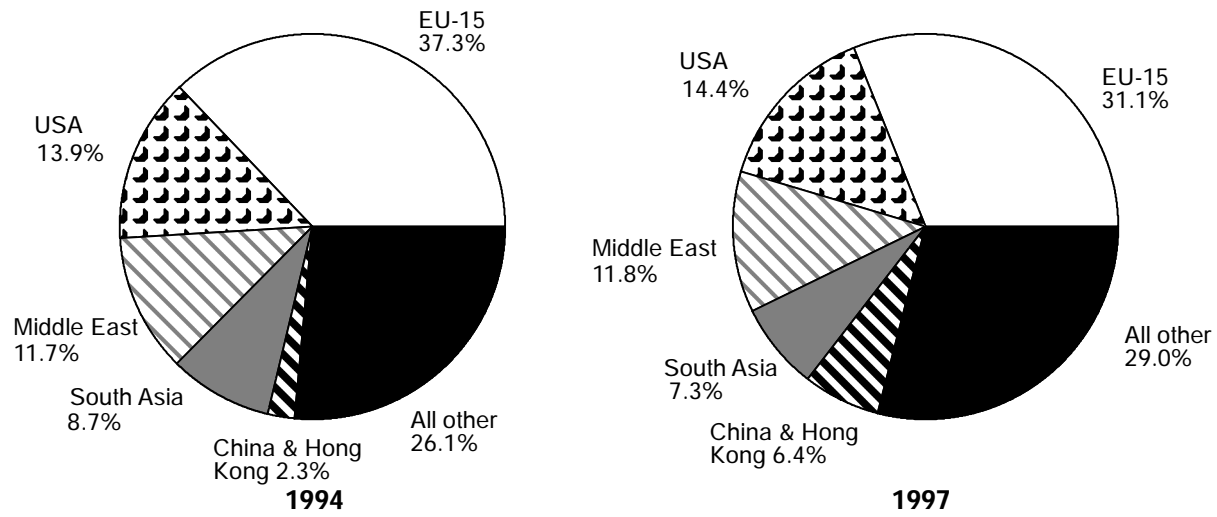
Source: Compiled from United Nations data for Standard International Trade Classification (SITC) division 65 (Textile Yarn, Fabrics, Made-up Articles, and Related Products).

Table 4-6
Apparel: India's exports, by selected countries and country groups, 1994-97

Country/group	Exports				Share of trade	
	1994	1995	1996	1997	1994	1997
	Million dollars				Percent	
North America	1,311	1,363	1,525	1,545	35.4	35.6
United States	1,179	1,228	1,370	1,374	31.9	31.6
Canada	106	125	138	148	2.9	3.4
All other	26	10	17	23	0.6	0.6
European Union-15	1,674	1,933	1,900	1,827	45.2	42.1
Germany	497	574	567	507	13.4	11.7
United Kingdom	364	404	403	360	9.8	8.3
France	232	295	296	315	6.3	7.3
Italy	164	194	163	200	4.4	4.6
Netherlands	146	175	170	153	3.9	3.5
All other	271	291	301	292	7.3	6.7
Japan	114	120	91	80	3.1	1.8
Middle East	155	177	203	278	4.2	6.4
United Arab Emirates	110	119	136	176	3.0	4.1
All other	45	58	67	102	1.2	2.3
Non-EU West Europe	113	110	100	94	3.1	2.2
Former Soviet Union (FSU)	78	105	95	132	2.1	3.0
Sub-Saharan Africa	76	72	58	90	2.1	2.1
South America	21	36	44	67	0.6	1.5
ASEAN region	32	36	34	37	0.9	0.9
Central America	24	17	11	22	0.6	0.5
China and Hong Kong	14	18	20	22	0.4	0.5
Eastern Europe (except FSU)	15	22	26	36	0.4	0.8
All other	74	101	110	112	2.0	2.6
World	3,701	4,110	4,217	4,342	100.0	100.0

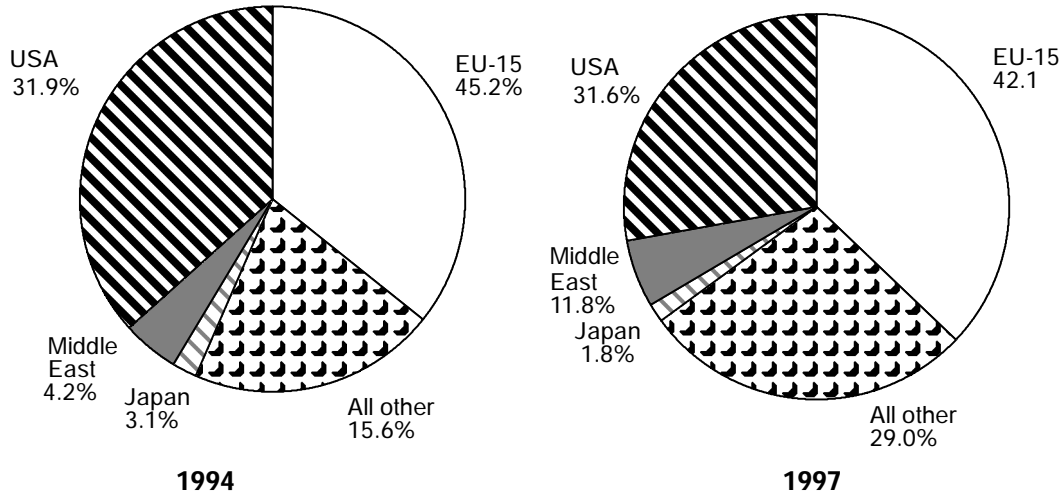
Source: Compiled from United Nations data for Standard International Trade Classification (SITC) division 84 (Apparel and Clothing Accessories).

Figure 4-1
Textiles: India's export share by country/region, 1994 and 1997



Source: Compiled from United Nations data for Standard International Trade Classification (SITC) division 65, (Textile Yarn, Fabrics, Made-up Articles, and Related Products).

Figure 4-2
Apparel: India's export share by country/region, 1994 and 1997



Source: Compiled from United Nations data for Standard International Trade Classification (SITC) division 84, (Apparel and Clothing Accessories).

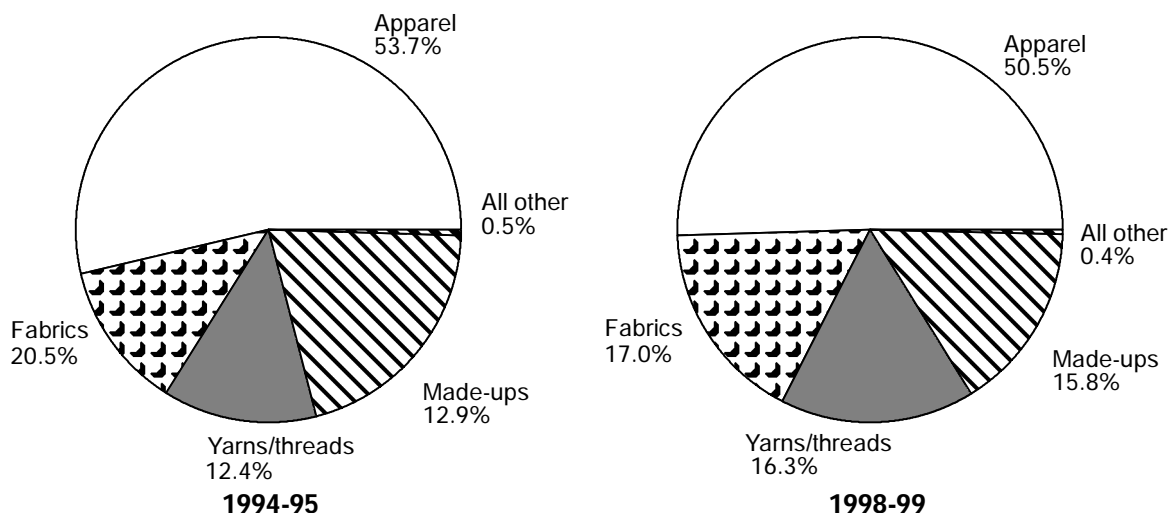
Table 4-7
Textiles and apparel: India's exports by product sectors, FY1994-95 and FY1998-99

Product sector	Exports		Percentage share of total	
	1994-95	1998-99	1994-95	1998-99
	— Million dollars —		— Percent —	
Yarn and thread	1,045	1,744	12.4	16.3
Fabrics	1,731	1,827	20.5	17.0
Made-ups	1,086	1,700	12.9	15.8
Apparel	4,528	5,423	53.7	50.5
Other	41	42	0.5	0.4
Total	8,431	10,736	100.0	100.0

Note.—Data provided in rupees was converted into U.S. dollars at an exchange rate of \$1 = Rs 31.374 in 1994/95 and Rs 41.259 in 1998/99.

Source: The Indian Cotton Mills' Federation, *Annual Report, 1998-99*, p. 33.

Figure 4-3
India's export of textiles and apparel by product sector, FY 1994-95 and FY 1998-99



Source: The Indian Cotton Mills' Federation, New Delhi, *Annual Report, 1998-99*, p. 33.

Table 4-8
Apparel: India's exports by product types, FY1994-95 and FY1998-99

Product type	Exports		Percentage share of total	
	1994-95	1998-99	1994-95	1998-99
	— Million dollars —		— Percent —	
Cotton:				
Woven	2,160.6	2,260.8	47.5	42.6
Knitted	967.1	1,500.7	21.3	28.3
Total	3,127.7	3,761.5	68.8	70.9
Noncotton	1,331.0	1,507.8	29.3	28.4
Silk	85.9	39.6	1.9	0.7
Total	4,544.6	5,308.9	100.0	100.0

Source: The Indian Cotton Mills' Federation, New Delhi, *Annual Report, 1998-99*, p. 34.

Table 4-9
Textiles: India's imports, by selected countries and country groups, 1994-97

Country/group	Imports				Share of trade	
	1994	1995	1996	1997	1994	1997
	— Million dollars —				— Percent —	
China	33	34	41	54	10.2	13.8
Korea	67	57	58	51	20.6	13.0
Taiwan ¹	50	47	38	42	15.4	10.7
ASEAN region	42	60	65	65	12.9	16.6
Thailand	7	23	31	29	2.2	7.4
Indonesia	24	23	23	27	7.4	6.9
All other	11	14	11	9	3.3	2.3
North America	16	15	19	22	4.9	5.6
United States	15	14	18	20	4.6	5.1
All other	1	1	1	2	0.3	0.5
European Union-15	41	53	47	56	12.6	14.3
Germany	15	21	19	19	4.6	4.8
United Kingdom	8	12	9	12	2.5	3.1
Italy	5	6	6	10	1.5	2.6
All other	13	14	13	15	4.0	3.8
South Asia	13	15	18	35	4.0	8.9
Nepal	8	11	15	25	2.5	6.4
All other	5	4	3	10	1.5	2.5
Hong Kong	16	23	20	24	4.9	6.1
Japan	31	19	14	18	9.5	4.6
Middle East	5	5	7	10	1.5	2.6
All other	11	17	12	15	3.4	3.8
World	325	345	339	392	100.0	100.0

¹ Estimated.

Source: Compiled from United Nations data for Standard International Trade Classification (SITC) division 65 (Textile Yarn, Fabrics, Made-up Articles, and Related Products).

CHAPTER 5

Competitive Assessment

As one of the world's largest producers of textiles and apparel, India accounts for about 15 percent of the world production of cotton textiles and is the largest exporter of cotton yarn, with about 20 percent of global exports. Although India's share of global textile and apparel exports increased gradually from 1.8 percent in 1980 to 3.3 percent in 1998, the growth lagged behind that of most other Asian countries, some of which increased their shares as much as tenfold during the period.¹¹³ The elimination of textile and apparel quotas by January 1, 2005, is likely to generate intense worldwide competition and present significant challenges and opportunities for the Indian textile and apparel industry, both at home and abroad. This chapter assesses the competitive strengths and weaknesses of India's textile and apparel industry and its opportunities and perceived threats in a quota-free global market.

Textiles

Competitive Strengths and Weaknesses

The competitive strengths of India's textile industry largely reflect its vast fiber base, abundant and low-cost skilled labor force, large and diversified textile infrastructure, huge (and growing) domestic market, and manufacturing flexibility. India's textile industry has access to a large inexpensive pool of skilled workers as well as competent technical and management personnel. Hourly labor costs in the Indian textile and apparel industry average less than 5 percent of those in the United States and most other industrialized nations, and are significantly lower than those of the Asian newly industrialized

¹¹³ Ibid. See D.S. Alva, "Country Perspectives: India," paper presented at the 1998 ITMF (International Textile Manufacturers Federation) Annual Conference, Melbourne, Australia, Oct. 18-21, 1998.

economies (Hong Kong, Singapore, South Korea, and Taiwan).¹¹⁴

India's textile and apparel industry also has numerous competitive weaknesses. The Indian textile industry lags considerably behind that of developed countries and most of Asia in production technology, and it lacks the capital to upgrade. Although the industry is open to FDI, such investments generally require large capital outlays and a more developed textile infrastructure than India has to offer, particularly in dyeing and finishing.

Other concerns about India's textile and apparel industry include competition between different sectors within the industry, lack of coordination among links in the supply chain, a slow pace of modernization, a lack of indigenous research and development, low productivity, inadequate worker training, a restricted fabric base, and overdependence on cotton.¹¹⁵ In addition, the contamination level of Indian cotton is perhaps the world's highest, the productivity in cotton ginning is low, and the quality of cotton ginning is poor, which results in defective textile production.¹¹⁶ The competitive weaknesses of the textile and apparel industry also stem from GOI policies such as the reservation of certain textile products for the SSI sector, restrictive labor legislation preventing automation, and multiple fiscal and local taxes, as well as high finance costs, poor infrastructure, and a lack of resources and incentives to modernize plants and equipment.

Level of Technology and Rate of Modernization

The Indian textile industry generally experiences low labor productivity and product quality, largely

¹¹⁴ Werner International Management Consultants, "Hourly Labor Costs in the Textile and Apparel Industry: 1996-98" (includes social benefits and fringes).

¹¹⁵ USITC staff interviews. Almost all those interviewed echoed the same structural weaknesses of India's textile and apparel industry.

¹¹⁶ Ibid.

attributable to low technology levels and inadequate worker training. A multicountry analysis of modern textile equipment use reveals that the technology level in the Indian weaving segment is low compared with that of other major textile producers. Of the 1.6 million powerlooms installed in India's decentralized powerloom sector, fewer than 1 percent are shuttleless looms, considered the latest technology. In India's organized mill sector, shuttleless looms account for only 5.8 percent of the total, compared with more than 80 percent in the United States, Taiwan, and Korea, and 62 percent in Pakistan (see table 5-1). As shown in table 5-2, new shuttle and shuttleless looms installed in India's weaving sector during 1989-98 accounted for only 1.6 percent of total installed capacity in 1997, with most of the modernization occurring in the organized mill sector.

The Indian spinning sector is relatively more modernized than the weaving sector. Still, 60 to 65 percent of installed spindles are more than 10 years old and open end (OE) rotors account for less

than 1 percent of total installed spindles. India was the world's leading buyer of spinning equipment during 1989-98, accounting for 28 percent of global shipments. Indonesia was a distant second at 7 percent, followed by the United States, Pakistan, and China, each with 4 percent of global shipments. Spindles purchased during this period accounted for about 33 percent of India's installed spinning capacity (see table 5-3), and 68 percent of the OE rotors in place were less than 10 years old.

In both draw texturing and knitting machinery, India's modernization rate has been significant. India was the largest buyer of draw texturing machinery at 19 percent of global shipments during 1995-98, followed by Taiwan at 16 percent, China at 11 percent, Korea at 8 percent, and the United States at 7 percent.¹¹⁷ In knitting machinery, India took 5 percent of global shipments during this period, compared with 16 percent for the United States, 10 percent for China, and 5 percent for Brazil.

¹¹⁷ International Textile Manufacturers Federation (ITMF), *International Textile Machinery Shipment Statistics* (Zurich), vol. 21/1998, pp. 18-19.

Table 5-1
Weaving sector: Level of technology in India and selected countries, 1998

Country	Installed capacity		Level of technology ¹ Percent
	Total looms	Shuttleless looms	
	Number of looms		
India, total ²	1,726,590	10,170	0.6
Composite mill sector	123,590	7,170	5.8
United States	68,750	60,990	88.7
Mexico	49,500	14,500	29.3
Brazil	133,400	35,200	26.4
China	733,300	45,800	6.2
Pakistan, total ²	221,300	13,200	6.0
Composite mill sector	21,300	13,200	62.0
Indonesia	227,000	27,000	11.9
Korea	32,000	27,000	84.4
Taiwan	23,090	20,050	86.8
Thailand	55,000	10,000	18.2
Other	789,650	418,080	52.9
Total ³	2,256,580	678,990	30.1

¹ Share of shuttleless looms in total installed looms.

² Includes looms in the decentralized powerloom sector.

³ Excludes looms in the decentralized powerloom sector.

Source: Compiled from statistics of International Textile Manufacturers Federation, *International Textile Machinery Shipment Statistics* (Zurich), vol. 21/1998, June 1999, pp. 24-33.

Table 5-2
Weaving sector: Rate of modernization in India and selected countries, 1998

Country	Installed capacity, 1997	Cumulative shipments, 1989-98	Rate of modernization ¹
	— Number of looms —		Percent
India, total ²	1,726,590	28,710	1.6
Composite mill sector	123,590	28,710	23.2
United States	68,750	28,270	41.1
Mexico	49,500	6,339	12.8
Brazil	133,400	12,648	9.5
China	733,300	130,151	17.7
Pakistan, total ²	221,300	9,187	4.2
Composite mill sector	21,300	9,187	43.1
Indonesia	227,000	46,736	20.6
Korea ³	32,000	94,059	293.9
Taiwan ³	23,090	31,706	137.3
Thailand	55,000	11,315	20.6
Other	789,650	224,826	28.5
Total ⁴	2,256,580	623,947	27.7

¹ New machinery installed during 1989-98 as a percentage of total installed capacity as of 1997.

² Includes 1.603 million powerlooms in the decentralized sector in India and an estimated 200,000 powerlooms in the decentralized sector of Pakistan. No separate shipments data are available for the composite mill sector, but this sector is believed to account for almost all of shipments.

³ The "high" rates of modernization shown for Korea and Taiwan could reflect rationalization of fabric production in these countries and shipments of some of the used machinery to other lower cost developing countries.

⁴ Excludes looms in the decentralized powerloom sector.

Source: Compiled from statistics of International Textile Manufacturers Federation, *International Textile Machinery Shipment Statistics* (Zurich), vol. 21/1998, June 1999, pp. 24-33.

Table 5-3
Spinning sector: Rate of modernization in India and selected countries, 1998

Country	Installed capacity, 1997	Total shipments, 1989-98	Rate of modernization ¹
	— 1,000 spindles —		Percent
India	36,133	11,854	32.8
Indonesia	7,236	2,832	39.1
Pakistan	8,513	1,685	19.8
China	46,905	1,590	3.4
United States	6,112	1,724	28.2
Brazil	6,983	1,203	17.2
Korea	2,690	886	32.9
Taiwan	3,813	1,285	33.7
Thailand	4,235	1,291	30.5
Other	68,401	17,677	25.8
Total	191,021	42,027	22.0

¹ New machinery installed during 1989-98 as a percentage of total installed capacity as of 1997.

Source: Compiled from statistics of International Textile Manufacturers Federation, *International Textile Machinery Shipment Statistics* (Zurich), vol. 21/1998, June 1999, pp. 9-13.

Production Cost Comparison in Spinning and Weaving

An annual survey of textile production costs for selected countries showed that India's low labor costs are mostly offset by its high capital and energy costs and low productivity (see table 5-4).¹¹⁸ Brazil and Korea, despite having relatively higher labor costs, are more competitive than India in ring yarn spinning, weaving, and knitting. Whereas average labor costs in India's ring spinning sector are only half those of Brazil and less than one-third those of Korea, India's total production costs per kilogram of yarn are about 10 to 12 percent higher than those of Brazil and Korea. Similarly, India's production costs for woven and knitted ring yarn fabrics are about 4 to 13 percent higher than those of Brazil and Korea.

¹¹⁸ The cost calculations in India and six other countries are based on the assumption that the cotton yarn is spun in a new mill equipped with identical machines with the same level of technology and identical rates of output. The different efficiency standards prevailing in the

Apparel

Limited Fabric Supply

India's apparel sector does not have access to quality fabrics at reasonable prices from the domestic mill sector, which adversely affects its global competitiveness.¹¹⁹ Sources in the organized mill sector claim that the composite mills need to invest heavily in manufacturing technology to improve productivity and reduce costs, which are high in part because of high infrastructure costs and

¹¹⁸—Continued

countries have been taken into consideration by varying the number of workers required to obtain the output levels indicated. See ITMF, 1999 International Production Cost Comparison: Spinning/Texturing/Weaving/Knitting (Zurich), Jan. 2000.

¹¹⁹ Premal Udani, president, Clothing Manufacturers Association, and managing director, Kaytee Corp., interview by USITC staff, Feb. 3, 2000.

Table 5-4
Comparison of costs in spinning, weaving, and knitting in selected countries, 1999

Item	Brazil	India	Italy	Indonesia	Korea	Turkey	United States
	Percent						
Ring spinning:							
Waste	6	6	6	6	7	7	7
Labor	4	2	24	1	6	4	17
Power	4	10	8	3	5	6	5
Auxiliary materials	4	3	3	3	4	3	3
Capital (depreciation and interest) . . .	34	36	20	46	30	34	24
Raw material	48	43	39	41	48	46	44
Total (per kilogram of yarn)	\$2.64	\$2.96	\$3.28	\$3.37	\$2.70	\$3.18	\$3.11
Weaving (ring yarn fabric):							
Waste	5	4	4	5	5	5	4
Labor	8	4	34	1	13	6	28
Power	7	16	11	5	8	10	8
Auxiliary materials	7	8	6	5	8	6	6
Capital (depreciation and interest) . . .	38	37	22	52	33	40	26
Raw material	35	31	23	32	33	33	28
Total (per yard)	\$0.63	\$0.72	\$0.97	\$0.75	\$0.69	\$0.76	\$0.86
Knitting (ring yarn fabric):							
Waste	6	5	5	6	6	7	6
Labor	5	2	28	1	9	5	22
Power	4	11	8	3	6	6	6
Auxiliary materials	5	4	4	3	4	4	4
Capital (depreciation and interest) . . .	37	39	21	49	32	36	24
Raw material	43	39	34	38	43	42	38
Total (per yard)	\$1.19	\$1.33	\$1.55	\$1.50	\$1.22	\$1.42	\$1.46

Source: International Textile Manufacturers Federation, 1999 International Production Cost Comparison: Spinning/Weaving/Knitting (Zurich), Jan. 2000, pp. 20-24.

high domestic taxes on their output.¹²⁰ Fabrics made in the powerloom sector are lower in cost because of low wages, low depreciation costs on machinery and equipment, tax exemptions, and, according to officials in the organized textile sector, evasion of excise taxes by powerloom units.¹²¹ In general, powerloom fabrics are of low quality because of an underdeveloped dyeing and finishing segment.¹²² As a result, the GOI allows fabric to be imported duty-free provided it is used in apparel produced for export. Otherwise, fabric imports are subject not only to relatively high tariffs, but also to excise and other levies (see chapter 3 for details) to offset the taxes and levies imposed on domestic fabric production.

Technical Backwardness

India's apparel production until recently had been reserved for SSI-registered units, which effectively eliminated large-scale investment in this sector, except for export-oriented units. The average annual investment in machinery per establishment in India's apparel sector is only \$2,900, compared with Hong Kong's \$2.5 million and China's \$1 million.¹²³ The new precutting machines are being installed at an average annual rate of 2.9 machines per unit in South Korea, compared with 2.3 machines per unit in China, 2.0 machines per unit in Thailand, and almost nil in India.¹²⁴ The low level of technology has contributed to low productivity and deprived the sector of benefits of economies of scale. Under Indian labor laws, firms had been discouraged from

¹²⁰ USITC staff interviews.

¹²¹ V.Y. Tamhane, secretary general, The Millowners' Association, interview by USITC staff, Feb. 4, 2000, Mumbai, and Nair interview.

¹²² Many apparel exporters in India have set up their own fabric processing units, and some have even established weaving units.

¹²³ "Regional Notes: India, All-round Survey," *Textile Asia*, Mar. 2000, p. 89.

¹²⁴ *Ibid.* However, the GOI's new quota system, which provides additional export quotas to those who have invested a minimum amount of money in new machinery, appears to have encouraged apparel producers to upgrade technology as evident from the growing number of firms eligible for quota allocation under the Manufacturer Exporters' Entitlement system. Further, the Technology Upgradation Fund is expected to enhance industry technology as evidenced by the fact that more firms are applying for investment funds under the scheme.

installing labor-saving machinery and equipment,¹²⁵ thereby leading to low sector productivity and inferior product quality.

Fragmentation

The GOI policy of limiting apparel firms to an investment of not more than \$230,000 had contributed to the highly fragmented structure of the apparel sector. Only small firms were allowed to produce for the domestic market while the larger firms were required to export at least 50 percent of their output. This long-practiced policy had fostered inefficiency and low product quality in the apparel sector and encouraged the use of low-quality and inexpensive fabrics from the powerloom and handloom sectors. It had effectively eliminated any economic incentive for the organized mill sector to invest in new fabric-weaving technology. To counter the GOI's policy of reserving domestic market access to small firms, large apparel firms had found it profitable to set up a number of small units to cater to the domestic market. The highly fragmented structure of the apparel sector largely explains why Indian apparel producers are not competitive in the high-volume, low-margin international environment that demands far greater consistency in product quality than the Indian market.

Product Range and Geographic Distribution

A limited fabric base and lack of product specialization are major weaknesses of the Indian apparel sector. India's production of apparel for export is dominated by cotton. The predominance of cotton apparel reflects the fact that Indian cotton traditionally has been much less expensive than synthetics and cotton blends. In addition, India's customs and excise taxes on synthetic fibers, yarns, and fabrics have been significantly higher than those on cotton.¹²⁶

Few exporters in India have concentrated their efforts on product specialization. Almost all offer a wide range of garments.¹²⁷ This lack of product specialization has limited the growth of many Indian

¹²⁵ The GOI's NTP 2000 provides an exit policy for workers who are displaced due to automation and consolidations.

¹²⁶ "India's Apparel Exports: Slow but Steady Growth," *JTN Monthly*, Dec. 1998, pp. 67-69.

¹²⁷ *Ibid.* For example, an exporter might market children's wear, men's shirts, and even ethnic Indian folklore items.

exporters in the global market.¹²⁸ Quality problems are another deterrent to expanding export shares in the global market. The majority of fabrics made in India are of low quality and limited varieties, which limits the product range and tends to lower the unit value realized in dollar terms.¹²⁹ Further, India has historically concentrated on exporting apparel to the EU and U.S. markets; most Indian exporters are too small to deal with buyers from diverse, non-English speaking countries.

Other Factors

Although the Indian rupee remained relatively stable during 1993-97, the currencies of most of its competitors depreciated significantly against the currencies of the United States and EU countries, which made India's products less price competitive against its competitors. When consumer demand began moving away from cotton to manmade fibers, India did not have a large production base for manmade-fiber fabrics, so prices were high. Adding to production costs is the low productivity of Indian workers. For example, the average worker in India produces 7 to 8 shirts per day, compared with 16 to 17 shirts for the Chinese counterpart.¹³⁰ Also adversely affecting the Indian apparel sector is the lack of dock and airport facilities and a costly, inadequate power supply.

Opportunities and Challenges

India has an efficient, export-oriented spinning industry with state-of-the art technology and low conversion costs, which has enabled India to become the world's largest exporter of cotton yarn. The ongoing expansion of the manmade fiber and filament sector has widened India's participation in the global synthetics market. The labor-intensive made-up textiles and apparel sectors, with the availability of quality yarn and fabrics, are expected to be competitive in the value-added global trade. As WTO countries phase out their textile and apparel quotas, India's textile and apparel industry has a much greater chance to grow in a quota-free market.

India's textile and apparel industry also faces global threats. Indian textile leaders claim that the

proliferation of free trade areas and regional free trade agreements will have an adverse impact on India's global competitiveness and opportunities.¹³¹ According to Indian textile leaders, trade and tariff preferences under the North American Free Trade Agreement (NAFTA) and the Caribbean Basin Economic Recovery Act (CBERA) have favored Mexico, Canada, and the Caribbean countries to the detriment of Indian and other Asian exports to the United States. Turkey's membership in the EU and the possible future entry of many Eastern European countries into the EU will pose greater competitive challenges for India in the EU market. The EU and Mexico have entered into a free-trade agreement, which is likely to help European textile and apparel producers and U.S. firms based in Mexico.¹³² In Southeast Asia, the first stage of the Association of Southeast Asian Nations (ASEAN) Free Trade Area took effect on January 1, 2000. Also perceived as major threats by Indian government and textile industry officials are the newly enacted U.S. legislation providing expanded trade benefits for CBERA and sub-Saharan African countries, the ongoing dialogue on free trade among Asian Pacific Economic Council members, and the possible free trade agreement among countries in the Western Hemisphere.

GOI and Indian textile industry officials fear that with the elimination of quotas on January 1, 2005, there will be a wave of protectionist measures in the industrialized countries, such as antidumping and countervailing duties and use of environmental and labor issues to protect the domestic industry in these countries.¹³³ Industry sources note that while the industrialized countries are pressuring India to eliminate its market access barriers immediately, these countries have phased out few quotas on textile and apparel products for which India is a major supplier and they will continue to maintain quotas on

¹³¹ V.K. Bhartia, vice president - marketing; V.K. Bakshi, general manager; and G.S. Singh, technical director, Raymond (India) Ltd., interview by USITC staff, Jan. 31, 2000, Mumbai.

¹³² Under the terms of the agreement, effective July 1, 2000, tariffs on 82 percent of Mexico's industrial product exports to the EU will be eliminated. EU duties on the remaining 18 percent of Mexican exports will be phased out by January 1, 2003. Mexican tariffs on industrial goods will be lowered to 5 percent by 2003 and to zero by 2007. See "The EU Goes to Mexico," *Euro-Focus*, The Center for Strategic and International Studies (CSIS), Washington, DC, vol. 6, No. 2, Feb. 22, 2000, found at <http://www.csis.org/euro/efv6n2.html>, retrieved Dec. 5, 2000.

¹³³ USITC staff interviews.

¹²⁸ Ibid.

¹²⁹ Udani interview.

¹³⁰ Ibid.

sensitive goods until January 1, 2005. The industry also claims that the application of transitional “safeguards” by importing countries during the phaseout period is another way of restricting market access. The phaseout of quotas also means freer competition, which poses a big challenge for India as it faces competition from lower cost suppliers such as China, Indonesia, Bangladesh, and Pakistan.¹³⁴

¹³⁴ Anticipating heightened competition when textile quotas are abolished in 2005, Indian and Sri Lankan producers are planning to discuss joint ventures in textile and apparel sectors. See “Sri Lanka Plans U.S. Logistics Centers,” *Journal of Commerce Trade News*, found at <http://www.joc.com/issues/20000509/t1rade/e35185.htm>, retrieved May 12, 2000. Sri Lanka and India are finalizing a free-trade agreement under which 8 to 10 million pieces

India has a large domestic market that consumes an estimated 60 percent of its domestic textile and apparel output. Domestic demand has been rising by about 15 percent annually. Several of India’s major competitors, such as Hong Kong and Taiwan, have small domestic markets; their textile and apparel industry cannot sustain production levels against a backdrop of rapidly rising wages, which reduces the price competitiveness of their products in the global market. In contrast, India’s huge domestic market can lead the industry to greater competitiveness through economies of scale.

¹³⁴—*Continued*
of Sri Lankan garments could enter India at half the regular tariff rate. See “India and Sri Lanka to Settle a Deal on Garment Trade,” *Emerging Textiles*, Feb. 2, 2000, found at <http://www.emergingtextiles.com/cgi-bin/more.cgi/trade020200.html>, retrieved Feb. 7, 2000.

CHAPTER 6

Principal Findings and Trade and Investment Opportunities

The textile and apparel industry plays a major role in India, ranking among the country's largest sources of economic activity, foreign exchange, and employment. As such, the global competitiveness of the industry is of critical concern to India. The industry benefits from low wage rates and access to a huge domestic market, an abundant supply of skilled labor, and a large production base for raw materials and intermediate inputs. However, low productivity and product quality, limited product diversification and differentiation, high energy and capital costs, and an underdeveloped infrastructure, especially as it relates to weaving and finishing fabrics, undermine the industry's competitiveness. In addition, sources in India claim that the industry's competitiveness is harmed by GOI tax, labor, and trade policies that favor the small production units relative to the larger ones, which have discouraged investments in large-scale manufacturing technologies, and limited large-scale manufacturing. As India carries out its WTO commitments to open its markets to import competition, and as WTO countries phase out their import quotas on textiles and apparel by January 1, 2005, the Indian industry will face increasingly intense competition in markets both at home and abroad, especially from other exporting developing countries. This chapter highlights recent initiatives adopted by the GOI and the Indian textile and apparel industry to meet the competitive challenges facing the industry in a liberalized trade environment, and identifies potential growth areas in India for U.S. exports and investment.

GOI Initiatives

The GOI has introduced several initiatives in recent years to liberalize trade and investment policies, promote investment in new technologies, deregulate segments of the industry, and encourage restructuring and consolidation. On April 1, 1999, the GOI implemented the Technology Upgradation Fund (TUF) to spur investment in new textile and

apparel technologies. Under the 5-year \$6 billion program, eligible textile and apparel firms can receive loans for upgrading their technology at interest rates that are 5 percentage points lower than the normal lending rates of specified financial institutions in India. According to GOI officials, this interest rate incentive is intended to bring the cost of capital in India closer to international costs. GOI officials claim that the industry response to the TUF scheme has been relatively low so far, and that the principal loan recipients have been the large vertically-integrated composite mills and the independent spinning mills.

To promote modernization of Indian industry, the GOI set up the Export Promotion Capital Goods (EPCG) scheme, which permits a firm importing new or secondhand capital goods for production of articles for export to enter the capital goods at preferential tariffs, provided that the firm exports at least six times the c.i.f. value of the imported capital goods within 6 years. Any textile firm planning to modernize its operations had to import at least \$4.6 million worth of equipment to qualify for duty-free treatment under the EPCG scheme. In an effort to spur investment in the textile industry, on April 1, 1999, the GOI reduced the amount to \$230,000 and eliminated preferential treatment for imports of secondhand equipment under the EPCG scheme.

On November 2, 2000, the GOI unveiled the National Textile Policy (NTP) 2000, which incorporated many of the recommendations of the S.R. Satyam Expert Committee (SEC) to enhance the competitiveness of the Indian textile and apparel industry.¹³⁵ Chief among the SEC recommendations included in the NTP 2000 was the removal of

¹³⁵ In a resolution of July 24, 1998, the Ministry of Textiles created the SEC (Expert Committee and Terms of Reference under the chairmanship of S. R. Satyam, former Textile Secretary) to examine the impact of existing textile policy and suggest policy measures in the context of global competition. In 1999 the SEC issued its recommendations, many of which were incorporated into the NTP 2000.

readymade apparel articles from the list of items reserved for the small-scale industry (SSI) sector. As a result, foreign firms may now invest up to 100 percent in the apparel sector without any export obligation. The GOI also agreed to establish a \$1.2 billion (Rs50 billion) fund to help small apparel units in the SSI sector invest in new technology and obtain credit guarantees.¹³⁶ The GOI is reviewing the SEC proposal to dereserve the knitting mills, but has ruled out the dereservation of the handloom sector, fearing a loss of millions of jobs in this cottage industry.

The NTP 2000 calls for India's textile and apparel industry to achieve annual exports of \$50 billion by 2010, which would effectively expand the country's share of world textile and apparel exports to 10 percent from the current 3-percent level. Indian sources claim that India has the potential to attain this export goal, provided that the GOI swiftly implements the programs outlined in the NTP 2000 and acts on other SEC proposals. For example, the Confederation of Indian Industry (CII) recommends that the GOI should reduce domestic taxes for the organized mill sector and introduce long-term measures to convert the core competence of the textile industry to high-value-added production.¹³⁷ Currently, India's exports of textiles and apparel compete mainly on price, which Indian officials believe is not sustainable in the long run. Indian trade sources contend that India may have difficulty competing in the U.S. and EU markets because exports of many countries benefit from duty-free access to these markets, an advantage that India lacks.

The NTP 2000 calls on India's cotton growing sector to expand production by 50 percent and to increase cotton quality. Although India is the world's third-largest producer of cotton (after China and the United States), its textile industry is forced to import cotton because of the high contamination level and inconsistent quality of Indian cotton. In addition, Indian cotton growers experience low yields. The GOI's Cotton Technology Mission is conducting research to improve cotton quality and yields in India and bring about improvements in the marketing infrastructure and raw cotton processing sector.

¹³⁶ "SSI Ministry May Accept Dereservation of Garments," *The Times of India*, July 12, 2000, found at <http://www.timesofindia.com/today/12busi24.htm>, retrieved July 12, 2000.

¹³⁷ "Remove Taxation Anomalies in Textile Sector: CII," *The Hindu*, Nov. 28, 2000, found at <http://www.the-hindu.com/holnus/06282004.htm>, retrieved Nov. 28, 2000.

The NTP 2000 also calls for programs to revive the organized mill sector, set up modern dyeing and finishing units, and promote production of technical fabrics. The NTP 2000 also aims to develop a growth-oriented customs and excise duty structure and implement an exit policy with adequate protection for displaced workers.

Industry Initiatives

India's textile and apparel industry is undergoing structural changes in an effort to improve its competitiveness, with a number of producers investing in new technology, expanding capacity, and forming joint ventures with foreign firms. A list of selected Indian textile and apparel firms involved in major modernization, expansion, and joint venture activities is presented in appendix B.

The yarn spinning sector plans to undergo large-scale consolidation, in part because of excess capacity worldwide, especially following the Asian crisis.¹³⁸ Sources in India claim that consolidation in the sector would accelerate, if the GOI were to rationalize the domestic tax structure. Although spinning is the most modernized segment of the Indian textile industry, 12 million of the 37 million spindles in place are nonviable and fit for scrapping. Consolidation and investment in new technology are expected to lead to greater productivity and economies of scale in the spinning sector, which is characterized by a proliferation of small mills and excess capacity. Consolidation will likely lead to centralized research and development, warehousing, purchasing, and marketing functions, which will likely enhance the spinning sector's ability to compete internationally through improved product quality and resource productivity.

The weakest links in India's textile industry are the fabric weaving and finishing sectors, whose use of obsolete technology often leads to low fabric quality and environmental concerns. A number of composite mills in the organized mill sector are investing in new weaving and finishing technologies; the composite mills as a group were the largest recipient of TUF loans as of February 29, 2000. To achieve the export target for textiles and apparel stipulated in the NTP 2000, industry sources in India contend that the industry will need to modernize the fabric weaving and finishing sectors and that the GOI will need to rationalize the excise duty structure and formulate uniform standard pollution control

¹³⁸ P.R. Subramanian, secretary, The Southern India Mills' Association, interview by USITC staff, Feb. 5, 2000, Coimbatore, India.

norms. The SEC had recommended measures to improve the competitiveness of the fabric finishing sector, including the establishment of 200 new high-technology and 200 medium-technology finishing units, and a committee to monitor their pollution emission levels. The SEC had also proposed accelerated depreciation or an investment credit for finishing equipment and more favorable lending norms under the TUF scheme for finishing units because of their high capital intensity.

Other sectors in India's textile industry have modernized and expanded operations and entered into joint ventures with foreign firms during the past decade, including mills making manmade-fiber fabrics, denim fabrics, and technical textiles (e.g., fabrics for industrial applications). Some of the joint ventures entail certain export obligations, or buyback arrangements, under which the foreign joint venture participant agrees to buy all or part of the output of the joint venture. In apparel, most joint ventures involve licensing and contracting arrangements or technical assistance.

Trade and Investment Opportunities

Although India's current share of the global textile and apparel trade is small, the GOI in the NTP 2000 envisages that India's textile and apparel exports will reach \$50 billion by 2010. Growth of such magnitude would provide opportunities for U.S. and other foreign investors to enter this rapidly growing Indian market. A 1999 study concluded that India will likely achieve significant market growth in technical textiles, home textiles, and apparel, and that to achieve this growth, the GOI should strengthen the structure of the textile and apparel industry through tax rationalization and FDI.¹³⁹

¹³⁹ The study, conducted by the German-based Rowland Berger consulting firm, was presented at the 3d International Conference on Textiles and Clothing held at Chandigarh in Northern India in December 1999. The study also recommended that the GOI dereserve the knitting and apparel sectors, exclude the textile and apparel industry from the purview of the Essential Commodities Act, modify labor laws to narrow disparities between the organized mill sector and SSI sector units, and rationalize taxes on manmade fibers. The study included proposals to close excess and unproductive capacities, consolidate capacities through mergers and acquisitions, attract more FDI, create more design centers, adopt new information technology as a tool to upgrade skills, and promote the India brand image. See "India Today: A 21 Point Action Plan," *JTN Monthly*, Jan. 2000, p. 51.

The SEC also came up with similar recommendations in 1999.

Although high tariffs and other domestic levies are likely to limit Indian imports of most textile and apparel products from the United States, the potential exists for U.S. firms to export specialized yarns and fabrics to India and to enter into joint ventures with Indian firms to produce quality apparel fabrics, home textiles, industrial/technical fabrics, and branded apparel for local markets. Such joint ventures might give potential Indian customers confidence in the quality of the goods because the parent U.S. company would have an established record of quality service. Indian industry sources expect that almost all the import growth in India will likely be in nonapparel items, such as manmade-fiber staple and filament yarns,¹⁴⁰ specialty fabrics, home textiles, and industrial fabrics for which U.S. firms are among the world's leading and most efficient producers.

Manmade Fibers

India is the fifth-largest producer of manmade fibers in the world. However, India's costs of polyester production are high. Reliance Industries is the dominant producer of polyester and its raw materials. Because India's imports of the raw materials are subject to high customs and excise duty rates, smaller producers of polyester in India buy their inputs from Reliance, the only Indian polyester producer that is competitive in global markets. Investment opportunities exist in polyester filament yarn (PFY), for which Indian demand exceeds supply by about 250,000 tons. FDI opportunities for polyester staple fiber (PSF) are limited, partly because supply and demand conditions in India are now balanced and India's imports of PSF are duty-free if the fiber is used for export production.

Technical Textiles

Indian textile industry officials contend that FDI opportunities exist in technical textiles, which consist mainly of woven and nonwoven fabrics for use in aviation, automotive, civil engineering (e.g., geotextiles), and other industrial applications. India is a small producer of technical textiles, the production of which generally is capital-intensive.

¹⁴⁰ Apparel accounts for most of the polyester consumed in India. Nonapparel applications account for only 10 percent of polyester consumption in India, compared with 59 percent for the rest of the world. See "India Today: Cotton Stocks Continue to Mount," *JTN Monthly*, Jan. 2000, pp. 50-52.

India's domestic market for technical textiles has grown recently due to strong demand for automotive fabrics from a rapidly expanding automobile industry. The liberalization of the Indian economy has created opportunities for Indian producers of technical textiles to import capital goods and advanced technology at preferential tariffs and enter into joint ventures with foreign firms.

The global market for technical textiles is projected to grow from \$42 billion (9.3 million tons) in 1995 to \$61 billion (13.7 million tons) in 2005.¹⁴¹ Industry sources claim that India has the potential to become a major supplier, if Indian producers improve their competitiveness and the GOI provides excise duty exemptions and other tax concessions for technical textiles.¹⁴² The SEC singled out technical textiles as a potential growth area and urged the GOI to grant duty-free treatment to imports of machinery used for technical textiles. The SEC also recommended that the GOI grant a preferential 8-percent excise duty rate on technical textiles, and textile machinery and components, and exempt such goods from sales and other local taxes of State governments for 10 years.¹⁴³ Indian industry sources assert that the powerloom sector, which accounts for most of India's fabric production, lacks the resources to meet future market demand for technical textiles, which is expected to grow at least 15 percent per year during the next 5 years.¹⁴⁴ As a result, India's technical textile sector has the potential to attract significant FDI activity; at least 25 firms, including many foreign ones, are predicted to enter this area.¹⁴⁵ If India achieves its targeted 10-percent global market share by 2010, its share will likely amount to about \$6 billion.

Among the technical textiles likely to post significant market growth in India are manmade-fiber nonwoven fabrics. India's market for such fabrics is expected to grow rapidly as a result of increasing disposable income, a growing health consciousness, the rising cost of natural fibers, expanding and cost-effective production of synthetic

fibers, and lighter-weight, higher-strength and adaptability of nonwoven fabrics.¹⁴⁶ India's market for such fabrics in 2000 was expected to reach an estimated 102,000 tons, representing about 4 percent of world consumption.¹⁴⁷ India's market for nonwoven fabrics by market segments is as follows (in tons):¹⁴⁸

Item	Quantity	Item	Quantity
Agriculture	12,000	Furnishings	12,000
Apparel	15,000	Geotextiles	5,000
Automotive	10,000	Household	7,000
Coatings	6,000	Hygiene napkins	6,000
Durable papers	15,000	Medical	4,000
Filtration	8,000	Other	2,000

India's production and exports of nonwoven fabrics are expected to grow significantly, providing trade and investment opportunities for foreign firms; its export potential for such fabrics is estimated at 56,000 tons.¹⁴⁹

Home Textiles¹⁵⁰

Although data on India's home textiles market are not available, industry sources claim that the market grew between 10 and 20 percent during the 1990s, as increasingly affluent consumers began to spend more of their disposable income on home textiles. The market is dominated by the decentralized powerloom and handloom sectors, which supply unbranded cotton goods. Largely because of numerous GOI incentives, the handloom sector is highly price competitive in heavier-weight home-textile goods such as bedcovers, which are similar to furnishing fabrics and used for decoration; however, the sector is not competitive in products made from finer yarn counts. The powerloom sector dominates production of home textiles made with finer yarn counts, such as sheets and pillowcases.

¹⁴⁶ Mohan Gandhi, managing partner, G.M. Swamy, Inc., interview by USITC staff, Feb. 7-9, 2000, Coimbatore.

¹⁴⁷ Ibid. World consumption of nonwoven fabrics in 1996 was 2 million tons and is estimated to grow to 2.6 million tons in 2001. See "Nonwoven Production with Spun-laid Technologies," *Nonwovens Industrial Textiles*, vol. 3, 1998, p. 42.

¹⁴⁸ Gandhi interview.

¹⁴⁹ Ibid.

¹⁵⁰ Information in this section is mainly from "India Now: Home Textiles, Growing Exports, Domestic Demand," *JTN Monthly*, Feb. 1998, pp. 75-78.

¹⁴¹ "Regional Notes: India, A Technical View," *Textile Asia*, Feb. 1999, p. 73, and "Fusible Nonwoven Interlinings," *Nonwovens Industrial Textiles*, Apr. 1999, pp. 8-14.

¹⁴² Gandhi interview.

¹⁴³ "Regional Notes: India, All-round Survey," *Textile Asia*, Mar. 2000, p. 90.

¹⁴⁴ "Regional Notes: India, Technical Development," *Textile Asia*, Jan. 2000, p. 71.

¹⁴⁵ Ibid.

The organized mill sector supplies most of the Indian market for brand-name home textiles, estimated at \$40 million per year. In FY 1995-96, the organized mill sector produced slightly more than 70 million square meters of bed sheets, 2.3 million square meters of tapestry, and 10.6 million square meters of towels. India's exports of home textiles in FY 1998-99 totaled \$1.75 billion (Rs70 billion), most of which were cotton goods made in the decentralized sectors. A large portion of India's fabric exports are used to make home textiles. India currently exports about 1 billion square meters of fabric annually for use in bed linens (enough fabric for about 400 million bed sheets); most of these exports comprise low-valued unfinished fabrics destined for EU markets.

Investment in the home textiles sector has lagged behind product demand in the Indian domestic market. The market for home textile fabrics lacks product quality and selection, and competitive prices. Indian consumers have limited access to brand-name home textiles. India has the potential to become a huge market for brand-name home textiles. According to Indian industry sources, the fastest-growing market segments are cotton and cotton/polyester bed sheets and cotton terry towels. Significant export and investment opportunities likely exist for U.S. and other foreign producers of brand-name, better-quality home textiles. Indian industry sources claim that the present environment in India is more conducive to investments in large-scale production of home textiles, in part because the prices of PFY and PSF in India have declined to global levels, and India has reduced tariffs on imports of these raw materials in the recent GOI budget.

Denim

Annual denim output in India's mill sector totals slightly less than 200 million meters, or about 8 percent of global demand estimated at 2.5 billion meters. Per-capita denim consumption of an estimated 0.1 meter represents about one-fifth of the global average and is expected to increase with Indian economic growth. Capacity utilization of Indian denim mills currently averages 50 to 60 percent; thus, no further investment in denim capacity appears imminent. Overcapacity in the world denim market as a result of a recent shift in fashion trends from jeans to casual wear has led to a significant decline in denim prices and producer profitability. According to industry sources in India, demand for Indian-produced denim will likely

increase now that the GOI has removed ready-made garments from the list of products reserved for the SSI sector, which will likely encourage investments in large-scale production of denim jeans and other apparel.

Apparel

India has the potential to become a rapidly growing market for better-quality apparel, particularly brand-name fashion goods. The country's sizable middle class of an estimated 200 million, which is expected to double in the next 10 years, includes an estimated 40 million people who prefer brand-name fashions. India's "westernized" college students are another large market for foreign casual attire. Trade sources in India claim that the Indian apparel market is underdeveloped, largely because GOI trade and investment policies have shielded local producers from foreign competition. Under the NTP 2000, however, the GOI removed ready-made apparel articles from the list of products reserved for the SSI sector and opened the apparel sector to FDI. In addition, India recently reduced tariffs on imports of apparel to 35 percent ad valorem and will eliminate import restrictions on apparel by April 1, 2001. Although tariffs are still relatively high, the potential exists for U.S. apparel firms to export garments to India, particularly specialty or brand-name goods in which they are most competitive and for which demand is high there. Opportunities also exist for U.S. firms to enter the Indian market through licensing or joint venture arrangements with local producers and to establish a production base in India in order to benefit from low wage rates and GOI incentives.

India has the potential to benefit significantly from ongoing global trade liberalization in apparel, particularly now that the GOI has deregulated the apparel sector. A recent study of the Indian textile and apparel industry concluded that India has the potential to double its current world market share in apparel during the next 5 years, provided that the apparel sector invests about \$16.6 billion in new production technology.¹⁵¹ The GOI's Apparel Export Promotion Council projected that India's apparel exports will grow by 10 percent per year during the next 5 years, which translates into \$9 billion in exports by FY 2004-05. In addition, the NTP 2000 set a goal of \$25 billion in apparel exports by 2010.

¹⁵¹ Study conducted on behalf of CII by Ronald Berger Global Consultants, presented at the 3d International Conference on Textiles and Clothing held at Chandigarh in Northern India on December 2-4, 1999.

To help achieve the apparel export target, Indian industry and GOI officials are calling for fabric mills to increase their range of apparel fabrics and fabric quality, and for a massive restructuring of the apparel sector and large-scale investment in modern production equipment in order to benefit from greater economies of scale.¹⁵² Apparel firms are being encouraged to adopt the “batch system” of apparel production,¹⁵³ diversify and differentiate their products, and improve product quality, productivity, and marketing efforts. In addition, industry sources claim that the apparel sector will need to broaden its product offerings for global markets from cotton goods to also include garments of manmade fibers or manmade fiber-cotton blends. To facilitate this transition, sources in India have urged the GOI to reduce import duties and excise taxes on manmade-fiber fabrics so that apparel manufacturers will have access to domestic or imported synthetic fabrics at or below international prices. The GOI also supports greater use of “outward processing traffic” (OPT) to help boost Indian apparel exports.¹⁵⁴

¹⁵² The apparel market is expected to grow much faster in India than in industrialized countries. The dereservation of the apparel sector from SSI status will provide opportunities for large-scale investment and could result in consolidations and closure of inefficient units. Udani interview.

¹⁵³ Ibid. The current system calls for one worker to complete the entire product on nonautomated machines.

¹⁵⁴ Under the OPT facility, Indian exporters can import fabric from the EU, cut and sew it into garments, and re-export the garments to the EU.

To spur exports of Indian-made apparel, the GOI created the India Brand Equity Fund (IBEF) in collaboration with the apparel industry to promote Indian brands worldwide.¹⁵⁵ India’s apparel exports are consistently of low-value-added goods, in part because of the absence of recognized brands. Because few Indian brands are known internationally, India can increase its unit value realization only through moving up the value chain with superior product quality, changing its product mix, or entering into joint ventures with producers of established U.S. or foreign branded apparel. The major disincentive is India’s huge domestic market, which readily absorbs substandard goods. For many Indian consumers, limited disposable incomes preclude them from buying more expensive clothing.

Although most U.S. apparel exports may not be competitive in the price-sensitive Indian market, U.S. firms will be able to enter the Indian market through alliances with local firms when the GOI relaxes its regulations. Since India has few recognized brands, U.S. apparel firms should be in a potentially strong position to enter the Indian market through licensing or joint venture arrangements with Indian firms and provide a competitive edge over competing goods.

¹⁵⁵ The fund, created 4 years ago with the goal of raising Rs5 billion (\$1.2 billion), has attracted only Rs1,250 million (\$30 million) so far, contributed mainly by the GOI. The industry had been largely indifferent to brand promotion.

APPENDIX A
LIST OF TEXTILE FIRMS/EXECUTIVES,
ASSOCIATIONS, GOVERNMENT
OFFICIALS, AND TRADE
CONSULTANTS INTERVIEWED
IN INDIA, DEC. 17-20, 1999, AND
JAN. 31-FEB. 11, 2000

Bangalore

Federation of Karnataka Chamber of Commerce and Industry
Tallam Venkatesh, President

Chennai (Madras)

Apparel Export Promotion Council
M. Chitrakaran, Joint Director
Handloom Export Promotion Council
Sabitha Bhengre, Executive Director
Madras Chamber of Commerce and Industry
R. Subramanian, Secretary General

Coimbatore & Tirupur

Amarjothi Spinning Mills Ltd.
N. Rajan, Chairman
R. Premchander, Managing Director
B.K.S. Mills
Senthil Kumar, Managing Director
G.M. Swamy Inc.
Mohan Gandhi, Managing Partner
National Textile Corporation (Tamilnadu & Pondicherry)
S. Rajah, Director (Commercial)
Sri Ramakrishna Mills Ltd.
D. Lakshminarayananaswamy, Managing Director
The South India Textile Research Association
Indra Doraiswamy, Director
The Southern India Mills' Association
P.R. Subramanian, Secretary

Mumbai (Bombay)

Alok Textile Industries Limited
Dilip Jiwrajka, Managing Director
The Bombay Dyeing & Manufacturing Co. Ltd.
Prem Malik, Executive Director
S.K. Chakrabarti, Vice President-Manufacturing
P.K. Mukherjee, Vice President-Planning & Development
Raakesh Bhargava, Vice President-Export
N. Satish Rao, General Manager
Clothesline Media Pvt. Ltd.
Vineet Sodhani, Assistant Manager
Clothing Manufacturers Association of India
Premal H. Udani, President & Chairman of Kaytee Corporation Ltd.
The Cotton Textiles Export Promotion Council
D.S. Alva, Chairman
Siddartha Rajagopal, Executive Director

Crawford Bayley & Co.
Darius Shroff, Solicitor & Advocate
Grasim Industries Limited
S.B. Agarwal, Group Executive President
Indo-American Chamber of Commerce
Kamal Vora, Executive Secretary
Kranti Nagvekar, Manager-Resources
The Millowners' Association, Mumbai
V. Y. Tamhane, Secretary General
The Morarjee Goculdas Spg. & Wvg. Co. Ltd.
Pramod K. Gothi, Managing Director
Raymond Textiles, Limited
V.K. Bhartia, Vice-President, Marketing
V.K. Bakshi, General Manager
G.S. Singh, Director, Technical Services
The Simplex Mills Co. Ltd.
Nandan Damani, Chairman
Synthetic & Art Silk Mills Association Ltd.
K. A. Samuel, Secretary General
V.S. Chalke, Chairman
Mr. Doshi, Industrialist
The Synthetic & Rayon Export Promotion Council
Anil Bamba, Executive Director
K. Vijay Mani, Secretary
Office of the Textile Commissioner
B.C. Khatua, Textile Commissioner
Shashi Singh, Director
Vision Strategies (P) Ltd.
O. P. Dhawan, Managing Director

New Delhi

Apparel Export Promotion Council
Rajiv Takru, Director General
Federation of Indian Chambers of Commerce and Industry
Ashok Jha, Advisor
The Indian Cotton Mills' Federation
D.K. Nair, Secretary General
International Business Consultants
Sri Ram Khanna, Ph.D., President
Ministry of Textiles
K.K. Jalan, Director
Northern India Textile Mills' Association
H.B. Chaturvedi, President & Chairman of Shamken Group of Companies
K.J.S. Ahluwalia, Secretary

APPENDIX B
MAJOR EXPANSION/MODERNIZATION
ACTIVITY IN INDIA'S TEXTILE AND
APPAREL INDUSTRY DURING THE
1990s

**MAJOR EXPANSION/MODERNIZATION ACTIVITY IN INDIA'S TEXTILE AND APPAREL INDUSTRY
DURING THE 1990s**

Company/product	Expansion/modernization	Joint venture partner	Activity
1. Reliance Textiles (Fully integrated manmade fiber)	Investment of \$1 billion in new capacity to bring total capacity to 6 million tons per year by 1997		
	Polyester staple fiber, partially oriented yarn, industrial yarn	DuPont (USA)	Technical
	Ethylene and related products	Stone & Webster (USA)	Technical
	Polyvinyl chloride	BF Goodrich (USA)	Technical
	Polyethylene terephthalate (PET)	Sinco (Italy)	Technical
	Polyethylene plant	DuPont (Canada)	Technical
	Polyester industrial fiber	Hoechst Fibers (Germany)	50/50 joint venture
2. Arvind Mills (Fully integrated composite mill)	Investment of \$270 million to increase denim capacity to 100 million meters per year by 1997	None	Expansion
	\$83 million investment in new capacity to produce cotton and blended shirt fabrics	FM Hammerle (Austria)	Technical and marketing
	\$33 million unit to produce cotton and cotton-blend knit fabric	Almanac Knit Fabric (USA) (Div. of West Point Stevens)	Technical and marketing
	\$33 million unit to manufacture voiles	Spinneri & Weberei Dietfurt AG (Div. Oerlikon-Buhrle, Switz)	Technical and marketing
	\$70 million investment on home furnishings	West Point Stevens (USA)	Technical and marketing
	Production of blended cotton fabrics for trousers (negotiations are underway)	Lauffenmuhle (Germany) & Delta Woodside (USA)	Technical
	Lee jeans and Lee apparel with 500,000 units of jean production capacity increasing to 2 million per year in 3 years; maximum capacity 4 million	VF Corporation (USA)	Technical
	Arrow shirt production to double to 2 million units	Cluett Peabody & Co (USA)	Licensing
	Bed linens and towels (talks underway)	Not known	Joint venture
	1.3 million tons of paraxylene	None	Expansion

**MAJOR EXPANSION/MODERNIZATION ACTIVITY IN INDIA'S TEXTILE AND APPAREL INDUSTRY
DURING THE 1990s—Continued**

Company/product	Expansion/modernization	Joint venture partner	Activity
3. Raymond Ltd. (Diversified, woolen textiles)	Doubled capacity of worsted and blended woolen fabric to 10 million meters	None	Expansion
	Plan to commission a \$80 million unit to produce 5 million meters of high equality worsted and blended fabrics in 1997/98	None	Expansion
	New denim manufacturing unit with an annual capacity of 10 million meters	Calintri (Italy)	Joint venture
	Quality improvement and marketing	Piacenza (Italy)	Technical and marketing
Gaetano Marzotto (Italy)		Technical	
4. Century Textiles (Composite mill, cotton & manmade)	Addition of 25,000 spindles (plans underway)	None	Imported machinery
	\$30 million investment on 100 percent export-oriented denim-producing unit with a 10 million meter capacity which will double later	None	Diversification
	5,000-ton viscose filament yarn unit	None	Plans are on hold
5. Morarjee Mills (Fully integrated composite mill)	\$27 million spent during the last 3 years; another \$31 million planned	None	Modernization
	Plan to improve processing operation	Seeking partner	Joint venture
	Spindle capacity in one plant to double to 42,360	None	Expansion
	\$22 million investment in 100 percent EOU to produce high-value cotton fabrics for shirts with a 10 million meter capacity per year.	Manifattura di Valle Brembana (Italy)	50/50 joint venture
	\$50 million on casual wear fabrics new unit with 15 million meter capacity; will double in 3 years	Legler Industria Tessile (Italy)	50/50 joint venture
	Modernize processing facility	Manifattura Castiglioni (Italy)	Technical

**MAJOR EXPANSION/MODERNIZATION ACTIVITY IN INDIA'S TEXTILE AND APPAREL INDUSTRY
DURING THE 1990s—Continued**

6. Indo Rama (Cotton & manmade)	\$186 million integrated plant producing 67,000 tons per year of polyester fiber and filament complex in 1995		
	Partially oriented yarn	DuPont (USA)	Technical
	Polyester staple fiber	Toyobo (Japan)	Technical
	Output to increase by 235,000 tons with spindle capacity increasing to 59,180 in Sept. 96	DuPont & Toyobo	Technical
	Plan to produce PTA and para-xylene; \$320 million investment	None	Diversification
7. Vardhman Group (Cotton & manmade fiber textiles & thread)	\$215 million investment in 14 projects		
	\$86 million upstream to produce acrylic fiber	Japan Exlan Co. Ltd. (Japan)	Technical
	Dyehouse for fiber and yarn	Nihon-Sanmo Dyeing (Japan)	Technical
	Gas mercerized dyeing plant	Kyung Bang Ltd. (S.Korea)	Technical
	Manufacture of industrial threads	Barbour Campbell (Ireland)	Technical
	20,000 spindle capacity on EOU melange yarn	Kyung Bang Ltd. (S.Korea) & Marubeni Corp. (Japan)	Technical
	20,000 spindle capacity on EOU combed yarn	Marubeni Corp. (Japan) & Toho Rayen Co. (Japan)	Technical
8. GTN Textiles (Cotton yarn and knit fabrics)	Started 100 percent EOU (spinning)	Itochu Corp. (Japan)	Equity
	Increase capacity from 100,000 to 158,260 spindles; yarn processing capacity from 2 to 10 tons per day and knit fabrics from 3 to 20 tons per day	Italian firm	Technical
	Looking into joint ventures with overseas firms to process knitted fabrics (10 tons per day) and produce garments for export markets	Exploring	Joint venture
9. Ginni Filaments Ltd. (Yarn and fabrics)	Plan to invest \$71 million on a new plant with 80,000 ring spindles and 30 knitting machines	None	Expansion
	Plan downstream integration into processing, dyeing, finishing, and garment making	Exploring	Joint venture

**MAJOR EXPANSION/MODERNIZATION ACTIVITY IN INDIA'S TEXTILE AND APPAREL INDUSTRY
DURING THE 1990s—Continued**

Company/product	Expansion/modernization	Joint venture partner	Activity
10. LNJ Bhilwara Group (Diversified)	Vertically integrated denim production with an investment of \$100 million in 1996; capacity to produce 12 million meters initially, doubling in the second phase.	Swift Textiles (USA) Div. of Dominion Textiles	Joint venture
	An \$8 million project in 1995 to manufacture automobile fabrics with an annual capacity of 1.8 million meters; 40 percent for exports	Melba Industries (Australia)	50/50 joint venture
	100 percent EOU producing cotton knitwear	Devanlay (France)	Technical
	Flame-retardent yarn and fabrics	Hoechst (Germany)	Licensing
	Spinning and weaving capacity	None	Expansion
11. Mafatlal Textiles (Fully integrated composite mill)	Denim production expected to begin in 1997; 12 million meters per year initially	Burlington Industries (USA)	Technical with 50 percent buyback
	100 percent EO apparel unit began in 1994; shirts, casual wear, sleepwear for men	Gruppo La Perla (Italy)	Joint venture with 25 percent equity option
	Sunanda Industries (sub) with a capacity of 6 million pieces of knitwear per year, operation started in 1996	Schiesser (Germany)	Joint venture with 50 percent buyback
	Special and basic fabrics	Lauffenhanle, GmbH (Germany) (Integrated Mill)	Acquisition
12. Modern Group (Diversified)	Plan for a 26,850 ton per year polyester staple fiber plant	Zimmer AG (Germany)	Technical
	-Modern Denim Dyeing facilities	Atlantic Mills (Europe)	Joint venture
	-Modern Syntex Fully integrated project producing 52,500 tons per year of POY, PFY, and polyester chips	None	Expansion
	-Modern Thread \$33 million investment on modernization and new unit for additional 250,000 spindles	None	Expansion
	New 100 percent EOU with a capacity of 6,740. Spindles for spinning polyester/ viscose grey yarn of premium quality	None	Expansion
13. Ashima Syntex (Manmade fiber)	Expanding capacity from 10.2 to 26.5 million meters per year	None	Expansion

**MAJOR EXPANSION/MODERNIZATION ACTIVITY IN INDIA'S TEXTILE AND APPAREL INDUSTRY
DURING THE 1990s—Continued**

Company/product	Expansion/modernization	Joint venture partner	Activity
14. KG Denim (Fabrics)	Doubling capacity to 21 million meters per year by 1997	None	Expansion
15. Sanghi Polyesters Ltd. (Manmade fiber)	\$70 million modernization and expansion plans		
	Modernization of PFY unit	None	Import machinery
	250,000 tons per year of PTA manufacture	Technimount (Italy)	Technical
Kohap (S. Korea)		Technical	
16. Nova Petro Chemicals (Manmade fiber)	Invest \$18 million to manufacture PFY (partially oriented) at a capacity of 11,977 tons per year	None	Machinery from Germany
17. S. Kumar Synfabs Ltd. (Home furnishings & suit fabrics)	Invest \$101 million to manufacture house linen	Erbele & Textine Myster Hoff (Germany)	Joint venture
	Manufacture and market worsted suitings	Reid & Taylor (Scotland)	Joint venture
18. Bombay Dyeing Ltd. (Composite & fully integrated)	Increase dimethyl terephthalate (DMT) capacity from 112,000 to 160,000 tons per year	None	Expansion
	Paraxylene unit as a main feedback for DMT	None	Expansion
	Towel-producing plant by 1998	Not known	Expansion
19. Rajasthan Petro Synthetics (Diversified)	Started production of polyester filament yarn with a capacity of 3,550 tons per year	NOY Val Lesina (Italy)	Joint venture
20. BSL Ltd. (Textiles)	Plan to set up a unit producing premium quality suitings at an investment of \$13 million	None	Looms from Switzerland
21. Garware Polyester Diversified)	20,000 tons per year capacity DMT plant at \$13 million	None	Expansion
22. Banswara Syntex (Composite)	Modernize spinning and weaving at \$11 million		
	Install 9,120 spindles and 48 Sulzer Ruti airjet projectile looms	None	Expansion
	Upgrade processing, finishing & marketing	Altex Ltd. (U.K)	Technical and marketing

**MAJOR EXPANSION/MODERNIZATION ACTIVITY IN INDIA'S TEXTILE AND APPAREL INDUSTRY
DURING THE 1990s—Continued**

Company/product	Expansion/modernization	Joint venture partner	Activity
23. National Rayon Corp. (Manmade fiber)	Expanding viscose filament yarn (VFY) capacity from 1,000 to 1,200 tons per month with additional bleaching capacities, conveyor systems, and spinning and conditioning units	None	Expansion
24. GSL (India) Ltd. (Threads)	Set up a sewing thread plant	Threads U.S.A. (USA)	Technical and marketing
25. Indian Rayon (Manmade fiber)	Expand VFY capacity from 13,000 tons to 13,500 tons per year at a cost of \$12 million	None	Expansion
26. Alok Textiles (Cotton & manmade fiber textiles)	Expansion and diversification to cater to export sector with an investment of \$43 million	None	Expansion and diversification
	Start a modern plant to process 20 million meters of woven fabrics and 2,688 tons of knit fabrics per year	None	Expansion and diversification
27. Sharda Textile Mills (Manmade fiber)	Start a spinning unit of 25,000 spindles to draw yarn of polyester viscose and polyester cotton blends	None	Expansion
28. Birla Group Dormeuil Birla VXL Ltd. (Diversified and fully integrated, woolen textiles)	Started manufacturing suit fabrics for India and Nepal	Dormeuil Freres(France)	51percent French equity; design, technical and manufacturing
	Expand spindle capacity by 12,000 and fabric capacity from 4 to 7 million meters per year at an investment of \$80 million. Second phase has a production target of 20 million meters per year by 1998	None	Expansion
	Increase trouser production from 1,000 to 3,000 per day	None	Expansion
29. Gokuldas Images (Diversified, apparel)	Manufacture Levi Strauss jeans for Levi Strauss, India	Levi Strauss & Co. (USA)	Contracting
	Blazers and men's suits 25,000 units per year	Steilmann (Germany)	Joint venture
	Lingerie	Sara Lee (USA)	Joint venture
30. Hanil Era Textiles (Yarn, cotton & manmade fiber)	100 percent EOU producing quality yarns, both cotton, manmade fibers, and blended. Plan to increase capacity by 100,000 spindles.	Hanil Synthetic Fiber (S. Korea)	Technical and financial

**MAJOR EXPANSION/MODERNIZATION ACTIVITY IN INDIA'S TEXTILE AND APPAREL INDUSTRY
DURING THE 1990s—Continued**

Company/product	Expansion/modernization	Joint venture partner	Activity
31. Oswal Knit India (Woolen knitwear)	100 percent cashmere knitwear with cashmere imported from Pringle of U.K.	Pringle of Scotland (UK) Subsidiary of Dawson Int'l	Licensing and technology transfer
32. Niryat Sam Apparels (Apparel)	Investment of about \$6 million to produce 92,000 woolen suits per shift per year starting in 1996. Plan to double the production by 1997-98 with an additional investment of about \$2 million.	Samsung Corporation (S. Korea)	Technical 75 percent export obligation
33. Samtex Fashions (Apparel)	Started producing in 1994 in export processing zone. Daily production capacity of 1,000 trousers, 500 jackets, and 200 shorts. Plan to set up a new facility in EPZ to increase overall capacity to 1,700 trousers, 700 jackets and 400 shorts per day	Samsung Corporation (S. Korea)	Technical 75 percent export obligation
34. KB+T (Apparel)	Established in 1993; men's suits, separates, and trousers in wool, wool blends, and super wool fabrics. Has an installed capacity of 255,000 suits and 150,000 pairs of trousers per year	Marzotto (Italy)	Technical and financial
35. Filaments India Ltd. (Manmade textiles)	Commissioned state-of-the-art equipment from U.K. to manufacture high-quality polypropylene, fully drawn yarn in a single process	None	Expansion
36. ATL Group (Cotton textiles)	5 tons per day dyeing, printing, and processing knitted fabrics	None	Expansion
	Expansion of current 42,000 spindle capacity	None	Expansion
	A 6.6 tons per day cotton yarn processing plant	Unknown (Italy)	Joint venture
	Increase capacity of knitting unit from 30 to 300 tons per month	None	Expansion
37. Coats Viyella, India (Diversified, textiles and apparel)	Plan producing premium shirting and tire cords with a capital expenditure of about \$30 million	None	Expansion
38. Mitsubisti Chemical Corp (India)	PTA plant	None	New venture

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