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U.S. - China Competition in the Indian Market

William Greene
U.S. International Trade Commission

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Address correspondence to:
Office of Economics
U.S. International Trade Commission
Washington, DC 20436 USA

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ABSTRACT: This paper presents an overview of India's external trade, with a focus on trade with the United States and China. Since joining the WTO in 2001, China has emerged as the world's third largest trading nation and an emerging competitor for the United States in many emerging markets, including India. Many analysts view President Bush's March 2005 trip to India as part of a long-term strategy to contain China's expansion in Asia. However economic cooperation between China and India has been growing and in 2005 China emerged as India's largest single source of imports supplanting the United States. The paper will describe India's import market response to China's ascension as its leading source of imports and how that may affect U.S. exports in the Indian market. It will also identify differences and similarities in India's exports to the United States and China. The paper will also explore why the United States is losing market share in India's import market and the role of other competitors, especially those in East and Southeast Asia, for a share of India's import market. The vast majority of India's imports from the United States and China are concentrated in Harmonized Tariff Schedule Chapter 84 (computers, components, and parts) and Chapter 85 (telecommunications equipment, components, and parts).

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Introduction

With a population greater than 1 billion and an estimated middle class nearly the size of the United States India potentially represents one of the world's largest markets for major international producers. From a relatively low base, India is experiencing a tremendous expansion and modernization of its economy through foreign direct investment, the importation of capital goods, and the transfer of advanced technology. Although India's per capita annual income is comparatively low, between 200 million and 350 million class Indians possess sufficient annual income to join a growing consumer class.¹ India's domestic market is projected to nearly double during the 1998 to 2007 period as Indian consumers embrace a Western style consumer culture, and as the number of "high income" households grow to more than 44 million by 2010.²

Bilateral trade between the United States and India has grown rapidly over the last several decades and the United States continues to be India's largest single trading partner. Two-way trade between the two nations grew to \$15.8 billion in 2005 and in March 2006 the two governments pledged to double bilateral trade to \$40 billion by the end of 2009.³ Despite record trade levels between the United States and India, China is poised to supplant the United States as India's largest trading partner. During January-September 2005, bilateral trade between India and China reached record levels of \$10.5 billion, representing an increase of 52 percent from the corresponding period of 2004. Also during this period, China emerged as India's single leading source of imports.

In April 2005, during a state visit to India, Chinese Premier Wen Jiabao's stated that bilateral trade between the two nations would reach \$20 billion by 2008 and \$30 billion by 2010. Chinese Commerce Minister Bo Xilai recently said that "if the present trend in trade flow is maintained by 2010, then bilateral trade could reach \$50 billion."⁴ Some Indian analysts agree that China is set to become India's leading trade partner if bilateral growth trends continue to grow at an annual average rate of 30 percent, and "China should emerge as India's largest trading partner overtaking the US within a year or two, with two-way trade exceeding \$30 billion by 2007."⁵ Likewise, China's Ambassador to India stated that bilateral trade between the two nations could reach \$50 billion by 2010 if all trade barriers were removed.⁶ However, Arun Kumar of Jawaharlal Nehru University stated that "the U.S. will continue to remain India's largest trading partner despite the rapid increase in trade with China." Kumar continued by saying, "India-China trade is dominated by products using low or intermediate technologies. With the U.S. it is hi-tech trade, which will grow because the U.S. is technologically superior to China."⁷

India's evolving trade profile

In the late 1980s, recurring fiscal deficits and negative balances of payments encouraged the Indian Government to initiate an economic reform package to move the country from central planning to

¹ The actual size of India's middle class is subject to debate, but there are approximately 20 million Indian who are among the richest consumers in the world.

² *India in Business*, FICCI.

³ Paranjoy Guha Thakurta, "China could overtake US's India trade," *Asia Times*, March 15, 2006.

⁴ "China to displace US as India's largest trading partner," *domain-b*, March 16, 2006.

⁵ Paranjoy Guha Thakurta, "China could overtake US's India trade," *Asia Times*, March 15, 2006.

⁶ "The mother of all FTAs," *bilaterals.org*, March 31, 2005.

⁷ Paranjoy Guha Thakurta, "Will China Overtake US as India's Trade Partner?," *IPSnews*, March 13, 2006.

a market economy.⁸ At the behest of international financial agencies, the package of reforms instituted in 1991 under the “New Economic Policy” included privatization of some public enterprises, convertibility of the currency, liberalization of rules for foreign investment, lowering of tariff rates, and reduction of import barriers.⁹

Although India in 2005 had the world’s second-fastest growing economy (after China) and was the fourth largest in terms of purchasing power parity, India continues to be a minor player in world trade. India moved up from the world’s 24th largest merchandise importer to the 17th largest and it rose from the world’s 16th largest merchandise exporter to its 11th largest, accounting for 1.2 percent of world imports and 0.9 percent of world exports.¹⁰ India’s trade volume as a share of GDP pales in contrast with other major Asian countries, and its import tariffs remain comparably high. Indian trade in goods and services set a series of record highs in 2003-2005. Indian imports and exports have grown at accelerated rates over the last 3 years, and the rate of import growth exceeds the rate of export growth.

India’s total merchandise trade has grown at accelerated rates since the late 1990s, nearly doubling during the 1999-2004 from \$80.4 billion to \$172.9 billion (table 1).¹¹ The increase in India’s imports outpaced its growth in exports during 1999-2004, with imports growing by approximately \$52 million while exports grew by nearly \$40 million.¹² Although India has experienced high rates of export growth, its trade deficit continues to expand, growing from approximately \$9.5 billion in 1999 to more than \$29.4 billion during the January-September period of 2005. To a large extent, India’s burgeoning trade deficit can be tied to soaring international prices and increased demand for imported crude oil. Oil accounted for 32 percent of India’s merchandise imports by value during 2004, and 34 percent during January-September of 2005.

⁸ India found itself facing severe financial problems, high inflation, and plunging foreign reserves. By the late 1980s, India’s foreign reserves had slipped by almost \$1 billion and by 1991 its share of world trade had dropped to 0.53 percent from 1.8 percent in the 1950s.

⁹ Under the terms of a 1991 IMF standby loan program India moved away from self-sufficiency and 4 decades of central planning by initiating a series of reforms including an emphasis on international trade. India lowered tariffs, reduced nontariff barriers, eliminated quantitative restrictions (negative-import restricted list), delicensed most of its industries, invited foreign direct investment, and liberalized its capital markets.

¹⁰ G. Srinivasan, “India moves ahead in merchandise imports,” *Business Line*, Apr. 12, 2006.

¹¹ Import growth continued by another 30 percent in January-September 2005 compared to 2004.

¹² India’s growing imports have also been driven in part, by the growing purchasing power, lower cost of borrowing, and easy access to retail credit among India’s emerging middle class. Since 1999 India’s economy has generated a significant number of middle class jobs that have generated a sizable growth in disposable income, especially in the business services sector, that altered middle class consumption patterns as more Indians are now willing to purchase expensive manufactured and consumer goods such as cars, televisions, cell phones, DVD players, and computers. Haresh Soneji and Shivom Chakravarti, “The Rising: India’s tenth largest economy, and growing,” *The Economic Times*, July 14, 2005.

Table 1: India's merchandise external trade with the world (\$million)							
Year	Exports	Percent change	Imports	Percent change	Exports + imports	Percent change	Trade balance
1999	35,445		44,920		80,365		-9,475
2000	42,299	16.2	50,578	12.6	92,877	15.6	-8,278
2001	43,314	2.4	50,143	-0.9	93,457	0.6	-6,829
2002	49,299	14	56,771	13	106,070	13.5	-7,472
2003	57,457	17	71,183	20	128,640	21.3	-13,725
2004	75,631	32	97,313	37	172,944	34.4	-21,682
Jan-Sept 2004	55,167		69,380		124,547		-14,212
Jan-Sept 2005	67,140	22	96,567	39	163,707	31.4	-29,427

Source: World Trade Atlas.

Trends in India's merchandise imports: India traditionally has been one of the world's most protected markets. Nonetheless, India's imports more than doubled (\$51.6 billion) during the January-September period of 2005 compared to 1999 reflecting growing consumer and business demand, as well as the soaring price of imported crude oil. India's import boom has been driven by a gradual liberalization of India's trade regime (such as a progressive reduction in tariffs and the phasing out of quantitative restrictions); increasing demand for industrial inputs, especially goods and industrial raw materials needed for export; a cheaper U.S. dollar; increased demand for consumer goods; and higher imports of capital goods and move away from longstanding import-substitution policy.

One of the lasting legacies of India's import substitution and industrialization policies that severely restricted imports is that many foreign companies chose to establish manufacturing facilities in India to serve that market rather than rely on exports to India.¹³ U.S. white goods producer Whirlpool, for example, manufactures and markets no-frost and direct cool refrigerators, washing machines, air conditioners, and microwave ovens through its subsidiary, Whirlpool of India. Whirlpool of India is one of India's leading white goods manufacturers and presently enjoys a market share of 22.8 percent in the direct cool refrigerator segment, 17.5 percent in the frost-free refrigerator segment, and 14 percent in the washer segment.¹⁴ Likewise, other global white goods manufacturers such as LG Electronics (Korea), Haier (China), Samsung (Korea), and Matsushita (Japan) have set up manufacturing and marketing facilities in India to serve the domestic market. The same is true for many other industries ranging from cell phones (Haier) to aircraft engines (General Electric) to glass fiber (3M) to soft drinks (Coke and Pepsi) and automobiles and parts (Ford, General Motors, Mitsubishi, Honda, Suzuki, and BMW).

Leading imports in 2004 and 2005 included crude oil and other petroleum products, capital goods, engineering goods (electrical and non-electrical machinery and transport equipment), uncut precious stones (primarily diamonds), iron and steel, nonferrous metals, and chemicals (dyes, organic-inorganic chemicals, fertilizers, pharmaceuticals, plastics). These accounted for 89 percent of India's

¹³ One significant policy change was the introduction of the Export Promotion Capital Goods scheme that allowed duty-free or concessional duty-based imports of capital goods in exchange for a commitment to fulfill specified export targets over an agreed upon time period. India also set up Special Economic Zones (SEZs) similar to those in China where export production could take place unimpeded by government import-export rules or regulations. In 2005, SEZs were located in the cities of Cochin, Kandla, Kolkata, Mumbai, Noida, Surat, and Vishakapatnam.

¹⁴ Whirlpool's Indian subsidiary is also used as an export platform exporting refrigerators and washing machines to approximately 35 countries including the United States, Mexico, Hong Kong, and China. "Whirlpool Special Section India & Asia Operations: Success in India," *Appliances Magazine.com*, Apr. 2003. Richa Mishra, "Whirlpool's export target," *The Hindu*, Apr. 25, 2003.

total merchandise imports during 2004 and 90 percent during the first nine months of 2005 (table 2). India's petroleum imports accounted for an average of approximately 31 percent of total merchandise imports during 1999-2001 before increasing to 34 percent during the January-September period of 2005. The country's non-oil imports accounted for an average of approximately 69 percent of India's total merchandise imports during the 1999-2004 period before declining to 66 percent during the first nine months of 2005. Capital goods averaged 21 percent of India's total merchandise imports during 1999-2004 before declining to 16 percent during the first nine months of 2005.¹⁵

Commodity	2001	2002	2003	2004	Jan-Sept. 2004	Jan-Sept. 2005
Machinery & equipment	8,283	10,446	14,094	18,671	13,132	16,843
<i>Electrical machinery</i>	2,953	4,342	6,269	8,266	6,010	6,921
<i>Other machinery, computers, appliances, turbines, boilers</i> . .	4,181	4,824	6,327	8,603	5,816	8,264
<i>Medical & surgical equipment</i> . .	1,139	1,280	1,498	1,802	1,306	1,685
Mineral fuel, oil	15,752	17,862	21,707	31,083	23,018	32,933
Mineral, metals, mineral products	13,018	13,743	16,897	24,668	17,332	26,707
<i>Gems and precious metal</i>	9,689	10,131	12,486	17,551	12,355	18,918
<i>Iron and steel</i>	1,044	1,123	1,530	2,685	1,908	3,766
<i>Articles of iron and steel</i>	333	426	553	811	575	818
Transportation equipment	695	1,194	1,882	2,449	1,500	1,995
<i>Aircraft and parts</i>	144	284	504	476	352	682
Chemicals	5,211	5,774	7,227	9,456	6,631	8,716
<i>Organic chemicals</i>	1,737	2,061	2,846	3,780	2,642	3,453
<i>Inorganic chemicals</i>	1,099	1,111	1,144	1,502	1,082	1,301
<i>Plastics</i>	712	876	1,136	1,479	1,040	1,515
<i>Fertilizers</i>	432	368	472	683	383	932
Textiles, apparel, footwear	1,415	1,705	1,944	2,062	1,613	1,755
Agricultural, horticultural, food, marine products	3,197	3,600	4,545	5,243	3,573	4,294
<i>Fats & oils</i>	1,479	1,544	2,370	2,416	1,831	1,712
Paper, paperboard, wood	1,480	1,366	1,861	2,375	1,692	1,815
Other products	1,101	1,056	1,029	1,306	893	1,394
Total	50,152	56,746	71,186	97,313	69,384	96,452
Source: World Trade Atlas.						

At the commodity level, India's merchandise imports are dominated by petroleum oils and related products that accounted for 28 percent of total import during 2004 (table 3).¹⁶ Other leading

¹⁵ Nearly 60 percent of all diamonds sold internationally pass through India and diamond imports were valued at \$6.4 billion in 2004 and \$8.5 billion during January-September 2005. Harti Mehta, "Indian set to wear crown at world's diamond HQ," *The Economic Times*, May 10, 2006.

¹⁶ The share of India's oil imports declined from 35 percent of total imports during 1999 to 32 percent in 2004. India, with one of the world's fastest growing automobile markets, has emerged as the world's sixth-largest consumer of crude oil, importing more than 70 percent of its needs. India consumes approximately 2.3 million

imports included vegetable oils (soybeans and palm oils), unwrought gold; civilian aircraft and parts; steel inputs (coal, ores, coke, scrap, and concentrates); parts of computers and telecommunications equipment; and oil tanker ships. India is the world's fourth largest producer of vegetable oils and its largest importer relying of foreign sources for nearly 40 percent of annual domestic consumption of approximately 11 million tons.¹⁷ India is the world's largest importer of palm oil, which it imports from Indonesia (crude palm oil) and Malaysia (refined, bleached and deodorized oil). India is also a large consumer of imported soybeans oils produced by Argentina, Brazil, and the United States.¹⁸ Important imports by country of origin include: diamonds (Belgium, United Kingdom, United Arab Emirates); gold (Australia, South Africa, Switzerland, United Arab Emirates (UAE)); computers and parts (Germany, China, Singapore, Korea, United States); telecommunications equipment (Germany, United States, Singapore, China, Korea); aircraft and parts (United States, France); organic chemicals (United States, China, Singapore, Germany); and ores, slash, and ash (China, Australia).

HTS No.	Commodity description	2001	2002	2003	2004
2709.20	Crude oil	12,865	14,557	18,054	24,579
7102.31	Diamonds, unworked	3,809	5,407	5,537	6,350
7108.12	Unwrought forms of gold	4,481	3,423	4,104	5,595
7108.13	Other non-monetary semi-manufactured forms of gold	506	252	1,283	3,068
2710.00	Oil (not crude) obtained from bitumens	1,080	1,478	1,539	2,724
7102.39	Other non-industrial diamonds	342	426	892	1,869
8525.20	Radio -TV with reception apparatus	252	577	1,661	2,346
2701.19	Other coal	935	930	1,072	1,576
8473.30	Parts-accessories for computers	654	599	737	1,502
1511.90	Other palm oil	374	87	357	928
1511.10	Crude palm oil	395	882	1,224	742
2704.00	Coke & semi/coke of coal/lignite/peat w/n agglomerated; retort carbon	188	207	263	726
2809.20	Phosphoric acid & polyphosphoric acids	632	664	586	728
8708.99	Other parts of motor vehicles	162	192	264	472
7204.49	Other ferrous waste and scrap	292	272	301	530
2603.00	Copper ores & concentrates	299	321	332	677
8905.90	Tankers	14	74	209	465
4403.49	Other tropical wood	340	192	264	472
1507.10	Soybean crude oil	369	365	503	509
2711.13	Liquified butanes	132	113	337	562
	Other	22,031	25,728	31,667	40,893
	Total	50,152	56,746	71,186	97,313

Source: World Trade Atlas.

barrels of oil per day, representing approximately 3 percent of world daily oil production. In 2004-2005, India imported 95.9 million tons of crude oil and 10.5 million tons of petroleum products (cooking gas, kerosene, petrol, and diesel). "Oil import bill swells 52% to \$44.64 bn," *Business Standard*, May 24, 2006.

¹⁷ "India could harvest bigger summer oilseed crop," *Daily Times*, Jan. 22, 2006.

¹⁸ In value terms, India dominates the world's cut and polished diamond market, supplying approximately 55 percent of the world's polished diamond market and 9 percent of its jewelry market. India is the world's second-leading diamond cutting and polishing destination as it imports primarily low- and middle-quality rough diamonds for processing and re-export. *India's Gem and Jewellery Exports*.

There has been a significant change in the makeup of India's import suppliers over the last 10 years. India has shifted away from a reliance on traditional partners like the United States, the European Union, and Japan, toward developing countries, especially those of Southeast and East Asia. With this diversification, the value of India's imports from its Southeast and East Asian countries grew from \$10.5 billion in 1999 to \$22.8 billion during 2004, or by \$12.3 billion (table 4), while imports from the United States increased by \$2.3 billion and imports from the European Union increased by \$5.8 billion during the same period.¹⁹

Region	1999	Percent of total	2004	Percent of total	Percent change
European Union	10,461	23.4	16,345	16.8	59.1
Former USSR & Eastern Europe	954	2.1	2,136	2.2	123.9
Sub Saharan Africa	4,940	11.0	2,978	3.1	-39.7
North America	4,166	13.0	6,437	6.6	54.4
East Asia	5,795	13.0	14,522	14.9	150.6
Southeast Asia	4,294	10.0	8,234	8.5	91.8
South Asia	363	0.8	860	0.9	136.9
Middle East - North Africa	7,097	15.8	8,028	8.2	13.1
Latin America	703	1.6	1,739	2.8	147.1
Unspecified country	0	0	27,522	28.3	NA
Other	6,147	13.7	8,512	8.7	38.5

Source: World Trade Atlas.

China emerged as India's single largest supplier of imports in 2004, and this trend continued during January-September 2005. As seen in table 5, the share of India's imports originating from the United States declined from 6.1 percent of the total in 2001 to 5.9 percent during January-September 2005, whereas; China's share grew from 3.6 percent to 6.2 percent during the same period. Of non-oil imports, China accounted for 9 percent of India's merchandise imports during 2004 and 10 percent during the January-September period of 2005; and the United States accounted for 9 percent of India's non-oil merchandise imports during 2004 and 8 percent during the first nine months of 2005. As seen in table 5, Switzerland emerged as India's second-leading source of imports during the January-September period of 2005.²⁰ If greater China is considered (China and Hong Kong), then China's share of India's total merchandise imports grew from 5 percent in 1999 to 8 percent during the January-September period of 2005.

¹⁹ India's shifting trade patterns have given rise to recent free trade agreements (FTA) with Sri Lanka (1998), Singapore (2002), and Thailand (2005) and ongoing FTA negotiations with MERCOSUR, COMESA, Indonesia, Malaysia, China, and South Africa.

²⁰ India's imports from Switzerland consisted primarily of gold, accounting for 87 percent Switzerland's exports to India during 2004 and 97 percent during the January-September period of 2005. India's entire demand for gold is met through imports. It currently consumes approximately 25 percent of the world demand for gold.

Country	2001	2002	2003	2004	Jan-Sept 2004	Jan-Sept 2005
China	1,809 (3.6)	2,586 (4.6)	3,570 (5.0)	6,008 (6.2)	4,167 (6.0)	6,193 (6.4)
Switzerland	3,420 (6.8)	2,233 (3.9)	3,103 (4.4)	4,421 (4.5)	3,612 (4.4)	5,800 (6.0)
United States . . .	3,059 (6.1)	3,751 (6.6)	4,813 (6.8)	5,712 (5.9)	3,971 (5.7)	5,090 (5.3)
UAE	910 (1.8)	868 (1.5)	1,429 (2.0)	3,766 (3.9)	2,404 (3.5)	4,053 (4.2)
Belgium	2,481 (5.0)	3,565 (6.3)	3,660 (5.1)	4,306 (4.4)	3,187 (4.6)	3,913 (4.1)
Germany	1,885 (3.8)	2,285 (4.0)	2,721 (3.8)	3,525 (3.6)	2,421 (3.5)	3,574 (3.7)
Australia	1,217 (2.4)	1,321 (2.3)	2,015 (2.8)	3,221 (3.3)	2,455 (3.5)	3,184 (3.3)
United Kingdom	2,733 (5.5)	2,639 (4.7)	2,969 (4.2)	3,221 (3.3)	2,422 (3.5)	3,026 (3.1)
S. Korea	1,132 (2.3)	1,219 (2.2)	2,342 (3.3)	3,044 (3.1)	2,117 (3.1)	2,654 (2.8)
Japan	1,756 (3.5)	2,091 (3.7)	2,321 (3.3)	2,930 (3.0)	2,114 (3.1)	2,373 (2.5)
Singapore	1,334 (2.7)	1,324 (2.3)	1,800 (2.5)	2,428 (2.5)	1,699 (2.5)	2,077 (2.2)
South Africa	1,397 (2.8)	1,932 (3.4)	1,933 (2.7)	3,944 (1.8)	1,192 (1.7)	1,947 (2.0)
Indonesia	951 (1.9)	1,209 (2.1)	1,819 (2.6)	2,370 (2.4)	1,784 (2.6)	1,830 (1.9)
Malaysia	1,127 (2.3)	1,255 (2.2)	1,862 (2.6)	2,203 (2.3)	1,573 (2.3)	1,607 (1.7)
Hong Kong	709 (1.4)	927 (1.6)	1,358 (1.9)	1,565 (1.6)	1,106 (1.6)	1,555 (1.6)

Source: World Trade Atlas.

Trends in India's merchandise exports: Although India's share of world exports is low, accounting for less than one percent of global exports, its exports have grown at one of the fastest rates in the world, especially after the Indian government abandoned its import substitution policies in favor of export promotion. India's merchandise exports more than doubled from \$33.5 billion in 1999 to \$67.1 billion in 2004. India's exports have grown to account for between 10 and 11 percent of GNP.²¹ Although the technological sophistication of India's export basket is still rather low when compared with that of China or the United States, India has made progress in transitioning from an export regime based on raw materials and natural resources to one featuring more sophisticated value-added products such as textiles and garments, chemicals, pharmaceuticals, manufactured goods, and machinery and transport equipment.

India's expanding exports can be linked to the worldwide recovery after the 2000-2002 recession, increasing international prices for metals and mineral ores; expansion of India's domestic manufacturing sector; various government policy initiatives for export promotion and market diversification; and by China's demand for raw materials and semi-finished items.²²

India's exports consisted mainly of cut and polished diamonds and gold jewelry; textiles, garments, and footwear; electrical and non-electrical machinery and equipment; and chemicals (table 6). These products accounted for 56 percent of India's total exports in the January-September 2005 period. Diamond exports, a leading source of foreign exchange, accounted for nearly 17 percent of India's non-oil merchandise exports in 2004.²³ Approximately 50 percent of India's cut and polished diamond exports are shipped either directly to the United States, India's largest-single diamond export market, or indirectly through jewelry design centers such as Singapore and Hong Kong.²⁴

In the post-quota environment for textiles and apparel after January 2005, India's textile and apparel exports dropped by 10 percent to \$4.7 billion during the January-September period of 2005

²¹ Ministry of Commerce & Industry.

²² Manoj Pant, "Off the cuff," *The Financial Express*.

²³ According to India's Gem and Jewellery Export Promotion Council (GJEPC) Chairman Bakul R. Mehta, "the gem and jewelry sector continues to be the forerunner and highest contributor to the total value addition of the country, contributing \$3.5 billion in fiscal year 2006." "India gem, jewelry exports up in fiscal 2006," *National Jeweler*, Apr. 13, 2006.

²⁴ Abhrajit Grangopadhyay, "SARS, war take sheen off diamond exports," *Business Lines*, Apr. 16, 2003.

compared to the corresponding period of 2004. India, the world's 6th leading exporter of textiles, saw its exports of garments also declined by approximately 2 percent to \$5 billion. India's exports of textiles to the EU, which represents nearly 35 percent of India's total textile exports, increased to \$3.4 billion, by only 3.7 percent during the January-September period of 2005. India's textile exports to the United States grew by 24 percent during the aforementioned period of 2005.²⁵ Exports of textiles and garments increased in value terms, but declined as a percentage of India's exports from 26 percent in 1999 to 18 percent during the January-September period of 2005.

During January-September 2005, India's exports of primary products such as mineral fuels, iron and steel and articles of iron and steel, and transportation equipment more than doubled in value. India is one of the world's leading exporters of iron ore with a significant presence in the Chinese market, the world's largest market for iron ore.

²⁵ "Textile imports from China up 600%," *India Biznews*, Feb. 14, 2006.

Table 6: India: Leading merchandise exports to the world (\$million)						
Commodity	2001	2002	2003	2004	Jan-Sept. 2004	Jan-Sept. 2005
Machinery & equipment	3,121	3,410	4,351	5,417	3,962	4,790
<i>Electrical machinery, parts</i>	1,281	1,378	1,771	1,949	1,453	1,643
<i>Other machinery, computers, appliances, turbines, boilers</i>	1,541	1,684	2,168	2,917	2,115	2,709
<i>Optic, photo, medical instruments</i>	299	348	436	551	394	438
Mineral fuel, oil	2,157	2,365	3,595	6,111	4,048	6,725
Mineral, metals, mineral products	11,025	14,216	17,292	23,672	16,929	22,620
<i>Gems and jewelry</i>	7,013	8,878	10,441	12,708	9,300	12,446
<i>Iron and steel</i>	911	1,449	2,301	3,499	2,457	2,930
<i>Articles of iron and steel</i>	1,007	1,073	1,347	2,027	1,429	1,820
Transportation equipment	963	2,022	1,608	2,634	1,915	2,690
<i>Vehicles, except railway or tramway, parts</i>	848	1,023	1,484	2,248	1,639	2,124
Chemicals	4,950	5,901	6,587	9,456	6,617	7,934
<i>Organic chemicals</i>	1,619	1,979	2,518	3,290	2,358	2,986
<i>Tanning, dye, paint, putty, inks</i>	503	566	1,130	1,902	505	521
<i>Plastics</i>	761	951	622	678	1,276	1,482
<i>Misc. Chemical products</i>	436	469	1,538	1,895	454	663
Textiles, apparel, footwear	11,007	11,803	13,031	14,916	11,965	12,249
<i>Woven apparel</i>	3,238	3,276	3,253	3,747	2,496	3,300
<i>Knit apparel</i>	1,792	2,106	2,202	2,601	2,104	1,889
<i>Cotton, yarn and woven fabric</i>	2,077	2,087	2,033	2,472	1,938	1,541
<i>Misc. textile articles</i>	1,080	1,200	1,485	1,828	1,392	1,509
Agricultural, horticultural, food, marine products	8,061	8,305	8,874	10,752	7,227	7,725
<i>Fish and seafood</i>	1,231	1,340	1,235	1,140	1,341	1,605
<i>Cereals</i>	897	897	1,354	1,811	782	887
Paper, newsprint, wood	266	266	386	491	428	493
Other	1,722	1,776	1,739	2,189	1,650	1,918
Total	43,314	49,299	57,457	75,631	55,167	67,140
Source: World Trade Atlas.						

At the individual product level, India's top 20 exports in 2004 (including principal markets) were dominated by: cut and polished diamonds (Belgium, Hong Kong), jewelry (United States, United Arab Emirates), petroleum oils and products (Indonesia, Singapore, Sri Lanka, UAE), iron ores (China), organic compounds (United States), oil-cake from soybean oil (Netherlands, UAE), cashew nuts (United States), frozen prawns and shrimp (United States, Japan, Belgium), rice (Bangladesh, Saudi Arabia), and textiles and clothing (United States) (table 7). Other important exports included coffee and tea, insecticides, cotton yarn and fabrics, products of high speed steel, wire or refined copper, castor oil, granite and aluminum oxide, and medicaments.

Table 7: Leading Indian exports to the world (\$million)					
HTS No.	Commodity description	2001	2002	2003	2004
7102.39	Diamonds	5,615	7,189	8,427	8,696
2710.19	Oil (not crude) from petroleum	(¹)	(¹)	1,653	4,011
7113.19	Jewelry from precious metals (other than silver)	1,051	1,303	1,599	2,720
2601.11	Other iron ores & concentrates	339	703	686	1,943
1006.30	Semi/wholly milled rice w/n polished/glazed	604	878	878	1,158
2942.00	Other organic compounds	454	550	826	1,106
7210.49	Other flat-rolled products of iron or non-alloy steel, width of 600 mm or more	146	114	129	874
6109.10	T-shirts , singlets, tank tops, ect of cotton	531	642	722	776
2701.11	Light oils and preparations	(¹)	(¹)	609	1,338
6206.30	Blouses, shirts & shirt-blouses of cotton	479	658	601	735
0306.13	Shrimp & prawns - frozen	804	869	813	755
6205.20	Men's & boys' shirts of cotton	596	586	584	645
3004.90	Other pharmaceutical products	483	647	827	1,011
6304.92	Other furnishing articles of cotton	429	481	532	638
2304.00	Soybean residue	384	363	389	767
0801.32	Cashen nuts fresh/dried shelled	361	388	347	491
7117.19	Other jewelry	12	13	19	572
6105.10	Men's-boy's knit shirts of cotton	371	376	343	409
3902.10	Polyethylene	169	213	255	402
8708.99	Other parts of motor vehicles	200	235	303	458
	Other	30,286	33,091	36,915	46,126
	Total	43,314	49,299	57,457	75,631

(¹) HTS subheading 2710.10 and 2701.11 first appeared in 2003; previous imports of these products appeared elsewhere in Chapter 27. Source: World Trade Atlas.

India is in the process of shifting away from its traditional reliance on North America and the EU as its largest export markets. India's exports to North America increased from approximately \$8.7 billion in 1999 to nearly \$14.3 billion in 2004, representing an increase of 63 percent. The decline in importance of the North American and EU markets has been offset by a shift to East Asia, particularly China, which more than doubled its imports of Indian products. The value of India's exports to its Southeast Asian, East Asian, and South Asian neighbors grew from \$9 billion in 1999 to \$24 billion in 2004, growing from 21 percent of total exports to 32 percent (table 8).

Region	1999	Percent of total	2004	Percent of total	Percent change
European Union	9,087	21	15,974	21	76
Former USSR & Eastern Europe	1,266	3	1,735	2	37
Sub Saharan Africa	1,369	3	3,964	5	190
North America	8,698	20	7,866	10	-10
East Asia	5,315	12	11,028	15	108
Southeast Asia	2,078	5	7,542	10	263
South Asia	1,646	4	5,444	7	231
Middle East - North Africa	4,459	10	6,749	9	51
Latin America	474	1	1,385	2	192
Unspecified country	0	0	404	NA	NA
Other	8,922	21	13,540	18	52

Source: World Trade Atlas.

The United States continues to be India's largest-single export market, accounting for 17 percent of its merchandise exports in 2004 (table 9). India's exports to the United States grew annually through 2004 before declining during the January-September period of 2005. Also, the U.S. share decline from 21 percent in 2002 to 17 percent in 2004; and from 18 percent during the January-September period of 2004 to 16 percent during the January-September period of 2005. India's other leading export markets include the UAE, that accounted for 8 percent, and the EU that accounted for 21 percent of Indian exports during the January-September period of 2005.

Country	2001	2002	2003	2004	Jan-Sept 2004	Jan-Sept 2005
United States ..	8,310 (19)	10,329 (21)	10,986 (19)	13,072 (17)	9,737 (18)	10,813 (16)
UAE	2,551 (6)	3,100 (6)	4,131 (7)	6,683 (9)	4,865 (9)	5,665 (8)
Hong Kong	2,407 (6)	2,333 (5)	3,229 (6)	3,338 (4)	2,501 (5)	3,377 (5)
UK	2,165 (5)	2,384 (5)	2,685 (5)	3,390 (5)	2,486 (5)	3,133 (5)
China	916 (2)	1,473 (3)	2,473 (4)	4,107 (5)	2,715 (5)	4,262 (6)
Germany	1,758 (4)	1,994 (4)	2,256 (4)	2,671 (4)	2,040 (4)	2,202 (3)
Belgium	1,383 (3)	1,613 (3)	1,743 (3)	2,207 (3)	1,660 (3)	2,036 (3)
Singapore	910 (2)	1,411 (3)	1,687 (3)	3,414 (5)	2,429 (4)	3,801 (6)
Japan	1,532 (4)	1,763 (4)	1,684 (3)	1,846 (2)	1,300 (2)	1,628 (2)
Italy	1,254 (3)	1,257 (3)	1,543 (3)	2,035 (3)	1,488 (3)	1,724 (3)
Bangladesh	1,001 (2)	825 (2)	1,350 (2)	1,567 (2)	1,152 (2)	1,195 (2)
Netherlands ...	848 (2)	952 (2)	1,187 (2)	1,453 (2)	1,021 (2)	1,413 (2)
Sri Lanka	610 (1)	829 (2)	1,186 (2)	1,401 (2)	994 (2)	1,280 (2)
France	972 (2)	1,012 (2)	1,124 (2)	1,553 (2)	1,193 (2)	1,432 (2)
Saudi Arabia ...	780 (2)	905 (2)	999 (2)	1,373 (2)	1,020 (2)	1,210 (2)

Source: World Trade Atlas.

India's trade with the United States

The United States and India have seen their bilateral trade relations improve steadily since India's economic liberalizations of the 1990s. Two-way bilateral trade continues to be relatively modest, but it has been growing at an increasing rate. In 2006, U.S. Trade Representative Rob Portman indicated

that bilateral India-U.S. trade is expected to reach \$60 billion by 2009.²⁶

India makes up a small fraction of total global U.S. trade and accounted for 0.9 percent of U.S. exports and 1.1 percent of U.S. imports during 2005. India ranked as the United States' 24th largest 2-way trading partner, its 18th largest import supplier, and 21nd largest export market during 2005. Total bilateral trade between the two nations grew from \$11.7 billion in 1999 to \$18.8 billion in 2004, representing an increase of 60 percent. The United States continues to be India's single largest merchandise trading partner and foremost export market, accounting for 17 percent of total bilateral merchandise trade in 2004 and 10 percent during the January-September period of 2005. Although the value of India's external merchandise trade with the United States continued to grow during the January-September period of 2005, as a percent of India's total external trade, the United States' share declined from 18 percent in the January-September period of 2004 to 16 percent during the January-September period of 2005. The United States has experienced a long-standing trade deficit with India that grew from \$4.2 billion in 1999 to \$7.4 billion in 2004 (table 10).

Table 10: U.S. merchandise trade with India, 1999-Sept 2005 (\$million)					
Year	U.S. exports to India	Percent Change	U.S. imports from India	Percent Change	U.S. Trade balance
1999	3,754		7,994		-4,240
2000	2,859	-24	2,699	-66	-160
2001	3,059	7	8,310	208	-5,251
2002	3,751	23	10,329	24	-6,578
2003	4,813	28	10,986	6	-6,173
2004	5,712	19	13,072	19	-7,360
Jan-Sept 2004	3,971		9,737		-5,766
Jan-Sept 2005	5,090	33	10,813	11	-5,723

Source: World Trade Atlas.

U.S. merchandise exports to India: With the opening up of the Indian economy and continued trade liberalizations, India's imports from the United States have grown from \$3.8 billion in 1999 to approximately \$5.7 billion in 2004, or by 50 percent. Despite the extraordinary growth in U.S. exports to India, India remains a relatively small market for U.S. manufacturers that accounted for less than one percent of total U.S. merchandise exports during 2004. U.S. merchandise exports to India are heavily concentrated in chemicals, electrical machinery (recording and sound media and telecommunications equipment), other machinery (computers and components, gas turbines), and minerals and metals that accounted for 75 percent of total U.S. exports in 2004. The growth in U.S. exports of machinery and equipment contributed to much of this increase as this category grew from \$1.3 billion in 2001 to approximately \$2.5 billion in 2004, representing an increase of 93 percent (table 11).

²⁶ USTR, "India, US agreed to an action plan to increase bilateral economic engagement Fourth Meeting of the US-India Trade Policy Forum," May 30, 2006.

Table 11: Leading U.S. merchandise exports to India (\$million)						
Commodity	2001	2002	2003	2004	Jan-Sept 2004	Jan-Sept 2005
Machinery & equipment	1,303	1,749	2,209	2,494	1,776	2,071
<i>Electrical machinery, sound equipment</i>	446	726	882	945	679	718
<i>Other machinery, computers, appliances, turbines, boilers</i>	584	700	934	1,098	775	937
<i>Optical-surgical instruments</i>	273	323	393	451	322	416
Mineral fuel, oil	25	41	133	286	208	269
Mineral, metals, mineral products	404	411	562	646	523	753
<i>Gems and jewelry</i>	197	196	329	386	276	386
<i>Iron and steel</i>	74	82	68	151	114	198
<i>Iron-steel products</i>	30	42	62	88	63	66
Transportation equipment	119	266	373	248	162	239
<i>Aircraft and parts</i>	65	161	142	40	9	12
<i>Ships & boats</i>	36	82	189	169	126	184
Chemicals	598	621	830	1,134	773	1,065
<i>Organic chemicals</i>	186	212	271	390	267	328
<i>Inorganic chemicals</i>	60	32	40	73	42	90
<i>Plastics</i>	98	123	156	187	131	181
<i>Fertilizers</i>	107	136	134	243	192	194
<i>Misc. Chemical products</i>						
Textiles, apparel, footwear	37	164	174	123	43	72
Agricultural, horticultural, food, marine products	314	195	186	218	168	185
Paper, paperboard, wood	162	167	198	221	154	167
Books, newspapers	94	109	130	137	96	101
Other	100	137	143	263	162	264
Total	3,059	3,751	4,813	5,712	3,971	5,090

Source: Wold Trade Atlas.

At the individual commodity level, the majority of U.S. exports to India consisted of high value-added items like gas turbines, computers and components, wireless and fixed line telecommunications equipment, recorded media, electronic circuits and switches, oil and gas field machinery, civilian aircraft jet engines and parts, heavy industrial equipment, optical and medical instruments as well as precious stones and diamonds, mineral fuels, jewelry, cotton, peas and almonds, wood pulp and newsprint, and chemicals (table 12).

HTS No.	Commodity description	2001	2002	2003	2004
2707.99	Other oil & oil products of distillation of high temperature coal tar	24	37	128	192
7102.39	Diamonds	97	108	184	216
2701.19	Other coal, not agglomerated	1	3	2	89
4707.90	Other recovered waste and scrap paper	60	67	93	87
8471.50	Central processing units	17	35	48	56
3105.20	Dominum hydrogen	55	19	83	94
8525.20	Cell phones, transceivers, radio-TV apparatus incorporating reception apparatus	39	92	34	58
8473.30	Parts-accessories for computers	74	83	125	115
8803.90	Other parts of airplanes and helicopters	33	77	160	145
8529.90	Other parts for radio-tv equipment	17	17	47	96
8524.91	Other recorded sound media	2	10	57	134
0802.12	Almonds, fresh or dried in shell	36	35	52	79
8517.90	Parts of telecommunications equipment	14	42	56	83
8517.50	Other telephone apparatus for carrier or digital line systems	17	34	52	81
8431.43	Parts of boring-sinking machinery	18	10	18	58
5201.00	Cotton, not carded or combed	102	90	121	58
2926.10	Acrylonitrile	13	22	33	56
3815.90	Other reaction initiators	18	16	16	56
7113.19	Jewelry of gold	8	16	26	50
7204.49	Other ferrous scrap and waste	13	26	10	49
	Other	2,401	2,912	3,468	3,860
	Total	3,059	3,751	4,813	5,712

Source: World Trade Atlas.

U.S. merchandise imports from India: U.S. imports from India grew from approximately \$8 billion in 1999 to approximately \$13.1 billion during 2004. The value of India's exports to the United States is concentrated in minerals, metals, and related products; jewelry; and textiles and apparel that accounted for 66 percent of U.S. imports from India during 2004 and 65 percent during the January-September period of 2005 (table 13).²⁷ These products dominated India's exports to the United States averaging approximately 66 percent of total U.S. imports from India during 2002-2004.²⁸ India's exports of agricultural, marine (mainly frozen shrimp), and other food products to the United States declined in value from approximately \$1.1 billion in 1999 to \$990 million in 2004.²⁹

During 2004, India's exports of textiles and apparel to the United States grew from \$2.5 billion in 2001 to \$3.3 billion in 2004, or by 32 percent. According to industry sources, India's exports of textiles and apparel to the United States increased at a slower pace than China's during the January-

²⁷ India's textile exports to the United States have benefitted from the phase out of the Multi-fiber Arrangement (MFA). India is now on place to challenge Mexico as the second leading source of textiles for the United States. Prince Mathews Thomas, "Textile exports to US grow 25%," *Business Standard*, Apr. 19, 2006.

²⁸ On June 29, 2005, a Presidential proclamation was issued terminating the suspension of duty-free treatment of certain articles imported from India under the GSP program. For more detail see Federal Register, Vol. 70 No. 125, June 30, 2005.

²⁹ In 2005, the U.S. imposed anti-dumping duties on imports on noncanned, warm-water shrimp and prawns from India and 5 other countries. The U.S. imposed an import duty of 9.5 percent on Indian shrimp in 2004. "US imposes a 9.45% duty on shrimp from India," *The Economic Times*, Dec. 22, 2004.

September period of 2005 due to declining prices of Chinese exports in the U.S. market. India's textile and apparel exports to the U.S. market grew by 12 percent in volume and 18 percent in value.

Commodity	2001	2002	2003	2004	Jan-Sept 2004	Jan-Sept 2005
Machinery & equipment	553	577	737	944	689	901
<i>Electrical machinery, sound equipment</i>	235	183	246	276	207	512
<i>Other machinery, computers, appliances, turbines, boilers</i>	227	292	370	517	378	284
<i>Optical-surgical instruments</i>	91	102	121	151	104	105
Mineral fuel, oil	2	143	151	247	179	422
Mineral, metals, mineral products	2,987	4,188	4,427	5,409	3,984	4,114
<i>Gems and jewelry</i>	2,426	3,325	3,704	3,911	2,844	3,066
<i>Iron and steel</i>	95	305	133	630	494	271
<i>Iron-steel products</i>	264	305	301	485	351	443
Transportation equipment	118	287	208	302	204	260
<i>Vehicles, not railway</i>	103	154	199	266	197	257
<i>Aircraft and parts</i>	13	13	7	6	4	2
Chemicals	644	738	933	1,101	796	907
<i>Organic chemicals</i>	227	252	280	374	280	319
<i>Tanning, dyeing, paint, ect</i>	102	101	101	99	73	73
<i>Plastics</i>	71	91	112	144	108	129
<i>Pharmaceutical products</i>	123	156	289	312	212	185
Textiles, apparel, footwear	2,532	2,829	2,706	3,261	2,150	2,860
<i>Woven apparel</i>	1,122	1,157	1,156	1,248	1,024	1,178
<i>Textile floor coverings</i>	257	293	307	351	250	284
<i>Knit apparel</i>	413	471	237	522	410	486
<i>Misc. textile articles</i>	396	515	606	734	559	605
Agricultural, food, marine products	1,096	892	937	1,030	990	954
<i>Fish and seafood</i>	243	361	384	338	245	238
<i>Edible fruit and nuts</i>	205	223	174	238	170	175
<i>Lac, gum, resins, veg. sap</i>	76	91	89	90	67	95
<i>Misc. grain, seed, fruit</i>	61	52	52	71	55	35
Paper, paperboard, wood	33	42	51	57	55	50
Other	345	633	836	721	690	345
Total	8,310	10,329	10,986	13,072	9,737	10,813

Source: World Trade Atlas.

At the individual commodity level, the majority of U.S. imports from India were dominated by cut and polished diamonds, jewelry, and textiles and apparel (clothing and textile floor coverings) that accounted for 74 percent of the top 20 U.S. merchandise imports from India during 2003-2004 and 72 percent during 2004-2005 (table 14). Other products of note are chemicals and pharmaceuticals, food products (cashews, other nuts, spices, edible fruit), iron and steel products (hot rolled, galvanized coated steel, stainless steel, household items, cast iron, tubes, and pipes), machinery (taps, valves, transmission

shafts, gears, and pistons), seafood (mainly frozen shrimp), and vehicle parts.

HTS No.	Commodity description	2001	2002	2003	2004
0306.12	Shrimp & prawns- frozen	213	324	342	294
0801.32	Cashew nuts fresh-dried shelled	178	205	170	234
2710.19	Oil (not crude) of petroleum	(¹)	(¹)	50	142
2942.00	Other organic compounds	77	110	121	178
3004.90	Other pharmaceutical products	51	70	138	155
6105.10	Men's-boy's shirts of cotton	126	143	125	127
6109.10	T-shirts, singlets, tanktops; of cotton	126	145	136	156
6205.20	Men's or boys' shirts of cotton	143	192	194	230
6206.30	Blouses, shirts & shirts-blouses of cotton	236	297	276	285
6302.60	Toilet-kitchen linen of terry toweling	18	27	45	76
6304.92	Other furnishings articles of cotton, not knitted or crocheted	179	235	226	239
6307.90	Other made-up textile articles	84	120	158	186
6802.23	Simply cut-swn granite with a flat-even surface	78	108	120	114
7102.39	Diamonds	1,731	2,423	2,652	2,323
7113.19	Gold jewelry	559	751	881	1,387
7210.49	Flat rolled products of iron/nonalloy steel otherwise pltd/coated with zinc	5	21	3	311
7225.20	Flat rolled products of high speed steel, width less than 600 mm	14	41	48	111
7325.99	Other cast articles of iron or steel of malleable cast iron	64	67	68	121
8708.99	Other parts & accessories of cars, buses, and trucks	52	68	84	119
9701.90	Collages, ect	0.1	0.1	136	139
	Other	4,376	4,982	5,013	6,145
	Total	8,310	10,329	10,986	13,072

(¹) HTS subheading 2710.19 first appeared in 2003; previous imports of these products appeared elsewhere in Chapter 27.
Source: World Trade Atlas.

India's trade with China

Bilateral trade between India and China is among the fastest growing in the world. China has emerged from being an insignificant trading partner in the early 1990s to one poised to supplant the United States as India's largest single trading partner. In 2005, China became India's 3rd largest trading partner, behind only the United States and the UAE, and its single leading source of imports. Although bilateral trade started from a low base, trade between India and China grew at an exponential rate from approximately \$1.7 billion in 1999 to nearly \$6 billion in 2004.³⁰ During the January-September period of 2005, China supplanted the United States as India's single largest source of imports.

China's share of India's total merchandise trade also grew from 2 percent of the total during 1999 to approximately 6 percent during 2004. China has experienced a long-standing trade surplus with India, which grew from \$678 million in 1999 to \$1.9 billion in 2004 (table 15). Bilateral trade between

³⁰ Relations between India and China were severely hampered by a short border war in 1962. Border trade did not resumed until July 1992 with the opening of consulates in Mumbai and Shanghai in December 1992 and June 1993.

India and China is highly concentrated among a small number of products. India's leading 20 individual imports from China accounted for 74 percent of India's total imports and its leading 20 individual exports to China accounted for 46 percent of India's total exports to China during 2004. China's imports from India are dominated by low value-added primary and semi-finished products (minerals, iron and steel), whereas India's imports from China consist principally of high value-added machinery and electrical goods.³¹

Year	China's imports from India	Percent Change	China's exports to India	Percent Change	China's trade balance
1999	497		1,175		678
2000	732	47	1,465	25	733
2001	916	25	1,809	23	893
2002	1,475	61	2,586	43	1,113
2003	2,475	40	3,758	45	1,283
2004	4,105	66	6,008	60	1,903
Jan-Sept 2004	2,715		4,167		1,452
Jan-Sept 2005	4,262	57	6,193	49	1,931

Source: World Trade Atlas.

China's merchandise exports to India: In anticipation of Chinese Premier Wen Jiabo's state visit to India in April 2005, the China Council for Promotion of International Trade called for a Free Trade Agreement (FTA) between India and China. The two governments announced the initiation of a joint feasibility group to study a possible China-India FTA. Noting objections from the Indian business community, the Government of India countered with a Bilateral Investment Promotion and Protection Agreement that would provide China with Most Favored Nation (MFN) status, accord national treatment to Chinese companies, and allow for free repatriation and transfer of returns of investment.³² Previously, both countries had agreed to abide by the Bangkok preferential trade arrangement rather than by the MFN tariff rates with China offering India a preferential tariff line on 217 items in order to promote bilateral trade.³³

The Chinese alleged that India was creating unnecessary obstacles to trade because of India's refusal to grant China 'market economy' status. Likewise, Chinese officials were worried by Indian accusations that China was either dumping or subsidizing its exports and receiving an unfair price advantage in the Indian market.³⁴ These accusations resulted in India initiating more than 90 anti-dumping investigations, two investigations on safeguards measures, and one investigation on special

³¹ In April 2005, Chinese Premier Wen Jiabo announced plans to boost bilateral trade between China and India to \$30 billion from the present \$13 billion. China's Ambassador to India, Sun Yuxi, asserted that bilateral trade between the two countries has the potential to reach \$100 billion within the next 5 to 8 years. Biswajit Dhar of the Indian Institute for Foreign Trade stated that, "China has consistently enjoyed a favorable trade balance vis-a-vis India, which in 2003-04 was almost 50 percent higher than the level recorded in the late 1990s. Furthermore, the commodity composition of India-China trade has been such that it is China which, on balance, stands to benefit." Indrajit Basu, "China willing, India shy," *Asia Times*, Apr. 14, 2005.

³² P. Vaidyanathan Iyer & Amiti Sen, "India yes to Bipa, no to FTA/RTA," *Financial Express*, April 11, 2005.

³³ Anil K. Joseph, "China's exports to India zoom 40.8% in 2002," *rediff.com*, March 31, 2003.

³⁴ "China charges India with creating trade obstacles," *Press Trust of India*, March 16, 2006.

safeguard measures, representing a combined value of \$720 million. In May 2006, the Government announced the imposition of provisional anti-dumping duties on imported Chinese silk fabric weighing 20 to 100 grams per meter and originating or exported from China, in order to remove injury suffered by India's powerloom industry. Anti-dumping margins on these products ranged between 57 percent to 115 percent, depending on the weight and variety of the imported fabric.³⁵

Nonetheless, India's imports from China grew nearly six fold from approximately \$1.2 billion in 1999 to a record high of \$6.0 billion in 2004. Although still a minor share of China's total trade at only 1.5 percent, India's imports from China's grew by 68 percent during 2004 compared to 2003 and by 49 percent during the January-September period of 2005 compared to the corresponding period of 2004.³⁶ With this tremendous growth, China moved from India's third largest source of imports in 2004 to its largest in 2004, supplanting the United States. China's percentage of India's total merchandise imports also grew from 3.6 percent of the total in 2001 to 6.2 percent in 2004.

China's exports to India's have been dominated by organic chemicals, silk, edible vegetables and fruits, textiles (man-made filaments), and high value-added manufactured products such as machinery, electrical machinery, and electronics products (table 16). These products constituted about 57 percent of India's total merchandise imports from China during 2004 and 56 percent during the January-September period of 2005.³⁷ The fastest growing import item from China included electrical machinery and sound equipment that grew more than four fold from \$210 million in 2001 to \$869 million in 2004. India's imports of Chinese textile, apparel, and footwear products grew from \$224 million in 2001 to more than \$640 million in 2004.³⁸ China's share in the Indian textile and apparel market has also grown from 13 percent in 2000-2001 to 37 percent in 2004-2005.³⁹

³⁵ "Anti-dumping duty on Chinese silk imports," *The Economic Times*, May 24, 2006.

³⁶ *Economic & Commercial Report March 2005*, Embassy of India, Beijing.

³⁷ Biswajit Dhar of the Indian Institute of Foreign Trade asserted that China "stands to gain enormously more [from bilateral trade with India] simply because its exports are focused on the higher end of the value chain."

³⁸ "Textile imports from China up 600%," *India Biznews*, Feb. 14, 2006.

³⁹ According to Assocham President Anil K. Agarwal, "Chinese textile imports to India rose because their prices internationally witnessed a downturn in the period which ushered cut throat competition among all leading economies of textile products. China survived because of its higher production of textile products with lower prices." "Textile imports from China up 600%," *India Biznews*, Feb. 14, 2006.

Table 16: China's merchandise exports to India (\$million)						
Commodity	2001	2002	2003	2004	Jan-Sept 2004	Jan-Sept 2005
Machinery & equipment	464	880	1,459	2,612	1,770	2,713
<i>Electrical machinery, sound equipment</i>	210	592	997	869	1,124	1,520
<i>Other machinery, computers, appliances, turbines, boilers</i>	215	227	402	1,664	592	1,107
<i>Optical-surgical instruments</i>	39	61	60	79	54	86
Mineral fuel, oil	276	169	205	640	469	464
Mineral, metals, mineral products	293	305	357	679	475	824
<i>Precious stones-metals</i>	79	131	102	98	68	150
<i>Iron and steel</i>	13	28	15	63	33	193
<i>Iron-steel products</i>	14	14	34	82	58	106
Transportation equipment	8	21	6	21	11	105
Chemicals	224	102	873	983	801	1,096
<i>Organic chemicals</i>	291	450	594	762	565	728
<i>Inorganic chemicals</i>	58	72	102	133	89	124
<i>Plastics</i>	16	26	49	80	51	96
<i>Fertilizers</i>	8	9	12	4	3	7
Textiles, apparel, footwear	224	362	453	650	444	695
<i>Silk; silk yarn, fabric</i>	132	173	202	264	184	266
Agricultural, horticultural, food, marine products	57	102	87	101	67	88
Paper, paperboard, wood	6	12	17	34	23	41
Other	257	91	301	288	107	167
<i>Furniture and bedding</i>	11	17	23	49	30	53
<i>Toys</i>	18	20	23	33	23	33
Total	1,809	2,586	3,758	6,008	4,167	6,193
Source: World Trade Atlas.						

At the commodity level, the majority of China's merchandise exports to India consisted of penicillin and antibiotics, steel inputs (coke and semi-coke of coal), computers and components, parts of telecommunications equipment, woven fabric, silver and lead, and silk. Exports of radiotelephonic transceivers and coke accounted for 44 percent of the top 20 Chinese merchandise exports to India during 2003-2004 and 48 percent during 2004 (table 17).

Table 17: Leading Chinese merchandise exports to India (\$million)					
HTS No.	Commodity description	2001	2002	2003	2004
2701.19	Other coal w/n pulverized but not agglomerated . . .	115	72	78	136
2704.00	Coke; retort carbon	160	95	127	500
2941.10	Penicillins	28	37	73	101
2941.90	Other antibiotics	14	22	25	37
2942.00	Other organic compounds	53	83	108	147
5002.00	Raw silk (not thrown)	107	126	106	113
5007.20	Other woven fabrics, containing >= 85% by weight of silk or of silk waste	6	16	31	43
5007.90	Other woven fabrics	5	10	32	43
5902.10	Tire cord fabric	5	8	30	46
7106.91	Unwrought silver	56	97	55	41
7106.92	Semi-manufactured silver	10	20	37	47
7801.10	Refined lead	7	7	24	51
8471.30	PDA's, palmtops, and other portable computers	2	3	15	64
8471.60	Printers	8	15	54	111
8471.70	Disc drives	45	51	66	89
8473.30	Parts-accessories for computers	72	76	95	197
5007.20	Woven fabric,> 85% silk	6	16	31	43
5007.90	Other woven fabric of silk	5	10	32	43
8525.20	Cell phones, transceivers	12	197	499	826
8529.90	Other parts of radio-TV equipment	13	29	50	67
	Other	1,080	1,596	2,190	3,263
	Total	1,809	2,586	3,758	6,008

Source: World Trade Atlas.

China's merchandise imports from India: The composition of China's imports from India is almost unchanged, dominated by low-value primary products and industrial raw materials. India's exports to China are dominated by iron, steel, iron ore and concentrates, and inorganic and organic chemicals. In 2004, India became China's second-leading supplier of iron ore behind Australia and ahead of Brazil.⁴⁰ India possesses one of the world's largest concentrations of iron ore, and in 2004 its exports of iron ore grew more than seven-fold, accounting for 82 percent of India's total exports to China (table 18). China's demand for these products is being driven primarily by that country's on industrial expansion and infrastructure construction, and on construction for the upcoming 2008 Beijing Olympics, and on construction for the Shanghai Expo 2010.

⁴⁰ Pallavi Aiyar, "Indo-China trade touches \$12.2 billion this year," *Financial Express*, Oct. 17, 2005.

Table 18: China's merchandise imports from India (\$million)						
Commodity	2001	2002	2003	2004	Jan-Sept 2004	Jan-Sept 2005
Machinery & equipment	40	57	100	158	108	114
<i>Electrical machinery, sound equipment</i>	9	12	24	35	25	28
<i>Other machinery, computers, appliances, turbines, boilers</i>	8	27	52	100	66	69
<i>Optical-surgical instruments</i>	23	18	24	23	19	17
Mineral fuel, oil	1	4	76	16	9	8
Mineral, metals, mineral products	349	659	1,400	2,518	1,629	2,972
<i>Ores, slag, ash</i>	243	343	531	1,817	1,157	2,203
<i>Salt; sulfur; earth, stone</i>	53	68	84	127	86	108
<i>Iron & steel</i>	25	211	711	446	292	524
Transportation equipment	2	10	19	15	13	11
Chemicals	154	442	532	958	659	804
<i>Organic chemicals</i>	100	158	192	311	184	278
<i>Pharmaceutical products</i>	25	28	24	25	14	17
<i>Misc. chemical products</i>	15	12	16	19	13	17
<i>Plastics</i>	0	146	202	300	277	248
Textiles, apparel, footwear	90	79	105	153	127	140
<i>Cotton & yarn, fabric</i>	74	63	74	61	101	110
Agricultural, horticultural, food, marine products	274	216	232	269	153	167
<i>Fish and seafood</i>	91	105	74	119	32	42
Paper, paperboard, wood	0	1	2	1	0	0
Other	7	7	9	17	13	9
Total	916	1,475	2,475	4,105	2,715	4,262

Source: World Trade Atlas.

At the commodity level, the majority of China's merchandise imports from India consisted of steel inputs (iron ore, coke, briquettes, melting scrap), and steel products that accounted for 49 percent of the top 20 Chinese merchandise imports from India during 2003 and 68 percent during 2004 (table 19).

Table 19: Leading Chinese merchandise imports from India (\$million)					
HTS No.	Commodity description	2001	2002	2003	2004
0303.79	Other frozen fish excluding livers & roes	55	72	35	29
7210.49	Other flat rolled products of iron or steel, width of 600mm or more	0	13	62	94
5201.00	Cotton, not carded or combed	0	0	10	32
2516.11	Granite crude or roughly trimmed	40	51	56	89
2601.11	Iron ores & concentrates non-agglomerated other than roaster iron pyrites	161	274	408	1,544
2601.12	Iron ore & concentrates agglomerated	28	31	73	209
6703.00	Human hair	16	24	32	36
2608.00	Zinc ores & concentrates	0	0	34	31
2607.00	Lead ores and concentrates	0	0	1	12
2818.20	Aluminum oxide other than artificial corundum	2	76	67	165
2905.31	Ethylene glycol	2	1	10	72
2933.71	6-hexanelactam	4	14	5	36
2942.00	Other organic chemicals	19	19	5	36
3901.10	Polyethylene having a specific gravity 0.94/more	4	47	72	183
3902.10	Polypropylene	56	54	93	139
7210.49	Other products of iron/non-alloy steel otherwise pltd/cotd with zinc	0	14	62	94
7219.14	HT-rolled products in coils of thickness < 3mm	3	65	129	131
7225.20	Products of high speed steel	1	32	166	27
7403.11	Cathodes & sections of cathodes of refined copper	3	32	18	34
2919.00	Phosphoric salts and esters	0	0.1	0.1	25
	Other	522	656	1,137	1,087
	Total	916	1,475	2,475	4,105

Source: World Trade Atlas.

Competition for market share

Competition for Indian import market share: India's former import substitution policies significantly restricted imports and encouraged foreign companies to establish manufacturing facilities in India. For example, the Haier Group of China, a player in the international home appliance and consumer electronics markets, established a joint ventures in India to produce cellphones and other telecommunications equipment, televisions, microwave ovens, washing machines, and refrigerators.

Telecommunications equipment: With India's deregulation of its telecommunications market in 1991 and the removal of restrictions on imports of this equipment in 1999, India has become a significant market for imports of high value-added technology equipment, components, and parts.⁴¹ India currently has the world's fifth-largest public sector telecommunications network and Asia's third- largest network,

⁴¹ India's telecommunications sector has undergone a significant transformation during the last decade emerging from a highly regulated, state-owned monopoly to a moderately competitive fairly deregulated sector. Realizing the importance of a modern telecommunications network and a global shift toward knowledge-based economies, the Government of India decided that the provision of a modern, efficient, world class telecommunications infrastructure was central to accelerating the economic development and social growth of the country. William Greene, *The Liberalization of India's Telecommunications Sector: Implications for Trade and Investment*, USITC, Office of Economic Working Paper, Sept. 2004.

only behind China and South Korea in 2004. India possesses the world's fastest growing telecommunications sector market and the number of fixed and wireless telephone connections has more than doubled since 2004 to nearly 150 million in 2005.⁴² The market for mobile phones and allied services has grown tremendously as millions of new subscribers are added to the rolls each month.⁴³

Imports dominate certain segments of the telecommunications equipment market, while India's domestic companies supply virtually all fixed telephone terminals, cables, transmission equipment, and feature phones.⁴⁴ Imports dominate wireless switching and leading U.S., European, Chinese, and South Korean manufacturers have or will establish production facilities in India to serve the Indian market, especially cellphones.⁴⁵

Computers and components: Although, domestic production also accounts for a significant portion of India's computer market, foreign multinationals have a significant presence, especially in the higher-price niches of the market. This highly competitive and price sensitive market is very sensitive to innovation and declining prices. For example, Hewlett-Packard (HP) announced the introduction of the \$50 "gesture keyboard" writing tablet (pen-based interface) that allows for easier entry of pen strokes with characters from two of India's national languages (Hindi and Kannada).⁴⁶

Significant changes are occurring in India's PC market as demand for premium notebook computers is increasing as prices have dropped dramatically.⁴⁷ This growing demand among India's consumers for electronic products (DVD players, cell phones, and other wireless devices), has also generated a growing demand for imported semiconductors, motherboards, CD ROM drives, graphics cards, webcams, power supplies and other parts and components. As shown in tables 21 and 22, imports of computers (including PDAs and other handheld computers) increased almost four fold between 2000 and 2004. By 2004, China dominated this market, accounting for 55 percent of the market in quantity terms. Also, computers imported from the United States had a significantly higher average price, but was lower in value than those imported from China.

India's computer parts and accessories market is dominated as follows: motherboards (United States, S. Korea), CD ROM drives (Korea, China), CD ROM parts (S. Korea, Japan), CD-R (Germany), hard disk drives (Singapore), 3.5 inch floppy disc drives (Philippines), graphic cards (China), microchips (United States, S. Korea), specialist video cards (United States), loudspeakers and zip drives (Malaysia), webcams (China), power supplies (China, Malaysia), ADM processors (United States), liquid crystal displays (Japan, S. Korea), and DRAMS (Korea).

⁴² *Telecommunications*, IBEF.

⁴³ As a consequence, teledensity has grown from 8.8 percent in January 2005 to 11.7 percent by February 2006. The high end of India's cellphone market is dominated by foreign multinationals because of their ability to incorporate new technologies such as Bluetooth and Wi-Fi mobile commuting capabilities.

⁴⁴ India produces a complete range of telecommunications equipment including medium and small size switches, transmission and terminal equipment, radio transmission equipment, satellite systems, high bit rate digital subscriber lines, telecom cable, VSAT terminals, frame relay, optical fiber equipment, asynchronous transfer mode (ATM), wireless-in-local loop equipment. Many of these products are manufactured in collaboration or as part of joint ventures with multinational firms.

⁴⁵ Thomas K. Thomas, "Made in India tag hot among telecom equipment buyers," *Business Line*, March 6, 2005.

⁴⁶ "HP targets India, non-Western markets with new technology," *Business Journal*, Apr. 7, 2006.

⁴⁷ PC's are manufactured domestically by Acer (Taiwan), HCL (India), Zenith (India), LG (S. Korea).

Country	2000	2001	2002	2004
China	823	1,578	2,314	11,339
Singapore	2,024	1,629	1,653	2,797
South Korea	298	758	936	2,065
Malaysia	983	743	335	858
United States	235	138	171	433
World	5,434	5,961	7,020	20,520

Source: World Trade Atlas.

Country	Average price (\$)		Value (\$)	
	2000	2004	2000	2004
China	66	26	54	300
Singapore	117	128	236	359
South Korea	89	31	27	64
Malaysia	97	199	95	171
United States	518	538	122	233
World	127	68	691	1,403

Source: World Trade Atlas.

China-U.S. competition for a share of the Indian import market: In 2005, the Indian market for foreign goods remained small, especially when compared to that of the United States, China, the EU, and Japan. During January-September 2005, the United States was supplanted by China as India's single leading source of imports. Also, during 2001-2004, China became India's third-leading trading partner surpassing the United Kingdom, the United Arab Emirates, Hong Kong, Germany, Belgium, Japan, and Switzerland. China became India's second-largest two-way trading partner during January-September 2005 when it surpassed the UAE.⁴⁸ Chinese exports to India grew more than three-fold during 2001-2004 and by 49 percent during the January-September period of 2005 compared to the corresponding period of 2004. Whereas U.S. exports to India only grew by 87 percent during 2001-2004 and by 28 percent during the January-September period of 2005 compared to the same period of 2004.

Similarly, China's percentage share of India's imports increased from 3.6 percent in 2001 to 6.2 percent in 2004 and from 6.0 percent during the January-September 2004 to 6.4 percent during the corresponding period of 2005. While U.S. exports to India also increased in absolute terms, but they declined as a percentage of India's total merchandise imports from 6.1 percent to 5.9 percent during 2001-2004 and from 5.7 percent during January-September 2004 to 5.3 percent during the corresponding period of 2005.

China enjoys a competitive advantage over the United States in its proximity to the Indian market, its lower labor and production costs for important products (e.g., computers and components,

⁴⁸ In 2005, Switzerland also surpassed the United States as a source of imports for the Indian market. However, India's imports from Switzerland consist almost entirely of gold and rough diamonds for India's jewelry industry, goods which neither the United States or China export in large quantities. Likewise, during 2004, approximately 77 percent of the UAE's exports to India consisted of gold and diamonds and 80 percent during the January-September 2005.

telecommunications equipment).⁴⁹ The United States enjoys a competitive advantage in innovation and higher value-added products incorporating the latest technologies. China and the United States compete in the Indian import market primarily in high value-added technology products such as computers and telecommunications equipment (classified in HTS Chapters 84 and 85).⁵⁰

India's top 15 imports in these two HTS chapters for which the United States and China are both important suppliers are listed in table 23. China's share in the Indian import market for these products grew significantly during 1999-2004 and, in aggregate, China surpassed the United States as a supplier of telecommunications equipment and computers, components, and parts by the end of 2004.

Telecommunications equipment: Traditionally, India's telecommunications equipment market has been dominated by companies from the United States and the EU. Local Indian companies dominate the customer premises equipment and via joint ventures offer some carrier equipment. However, state-of-the-art equipment is generally sourced from outside India. Leading telecommunications equipment suppliers Lucent (U.S.), ITI (India), Ericsson (Finland), Motorola (U.S.), Cisco (U.S.), Siemens (Sweden), and Wipro (India).

China has emerged as the world's leading manufacturer of cellphones and it has been estimated that approximately 70 percent of the world's cellphone were made in China.⁵¹ Chinese companies have entered the Indian market challenging U.S. and EU suppliers in terms of both price and competitive technologies.⁵² Falling profit margins and increasing competition among China's 37 foreign and domestic

⁴⁹ "Dole: China's Undervalued Currency Hurts NC Jobs and Manufacturers," Press Release, May 18, 2006.

⁵⁰ HTS Chapter 84 consists of items such as nuclear reactors, computers, boilers, machinery and mechanical appliances; and parts thereof. HTS Chapter 85 consists of electrical machinery and equipment and parts thereof; sound recorders and reproducers; television image and sound recorders and reproducers; and parts and accessories of such articles.

⁵¹ "Ningbo Bird launches Low-Cost GSM handsets," *EFY Times*, Nov. 28, 2005.

⁵² Christopher Rhodes and Charles Hutzler, "China's Forays Hit Telecom Rivals Hard - - Amid a Shaky Recovery Competitive Pressures Rise for Western Manufacturers," *The Asian Wall Street Journal*, Sept. 9, 2004.

Table 23: Competing exports from the United States and China in the Indian market , 1999,2004, 2005 (\$million)

HS No.	Commodity description	United States			1999	2004
		1999	2004	2005		
8473.30	Parts-accessories for computers	55	84	113	6	
8471.80	Other computer units	54	69	86	1	
8411.91	Parts of turbojets or turbopropellers	56	74	74	(2)	
8471.70	Disc drives	11	47	51	2	
8471.60	Printers	9	25	21	16	
8430.41	Boring & sinking machines	1	87	99	0	
8479.89	Other machines and mechanical appliances	6	26	28	1	
8471.50	Central processing units	28	54	48	0.1	
8411.99	Other parts of turbojets or turbopropellers	61	24	29	(2)	
8431.49	Parts-attachments for derricks, cranes, ect	16	13	31	0.1	
8409.99	Spark-ignition reciprocating engines	26	25	27	0.1	
8447.90	Other textile knit, stitch-bond, lace machines	0.7	2	3	0.1	
8454.90	Parts of converters, ladles	1	2	2	0.4	
8482.10	Ball bearings	0.3	7	11	9	
8415.10	Air conditioners	0.03	0.5	0.2	0.2	
8402.90	Parts of super-heated boilers	2	3	2	(2)	
8525.20	Cell phones, transceivers	23	105	108	5	
8524.31	Laser discs	18	76	76	(2)	
8538.90	Other parts of electrical appliances	13	61	41	0.6	
8542.21	Digital monolithic integrated circuits	(1)	37	34	(1)	
8529.90	Other parts of radio and tv equipment	16	32	26	10	
8517.30	Telephone switching apparatus	7	17	12	(2)	
8517.50	Parts of telephone and telegraph apparatus	11	78	75	0.04	
8517.90	Parts of electrical apparatus	16	91	104	2	
8504.40	Static converters for computers	6	13	23	0.7	
8521.90	Video apparatus w/o tape	0.1	0.5	0.6	1	
8507.20	Other lead-acid storage batteries	0.7	0.6	0.3	3	
8544.20	Insulated coaxial cable	5	7	5	2	

(1) HTS subheading created in 2002. (2) Either no exports to India or trade was less than \$1 million. Source: World Trade Atlas.

manufacturers forced Chinese manufactures to look outside in order to survive.⁵³ Chinese cellphone companies have been able to make inroads in India's urban markets (New Delhi, Chennai, and Kolkatta) with lower priced cellphones that offer more features. Ningbo Bird, China's largest cellphone manufacture and its leading cellphone exporter, introduced a line of low priced cellphones in western India under the brand name of Bird.

China's two largest telecommunications equipment manufacturers, Zhongxing Telecom (ZTE) and Huawei Technologies, have entered the market and have won contract tenders to supply equipment to India's 2 state-owned telephone operators, BSNL and MTNL.⁵⁴ Both companies market PDAs, CDMA mobile phone handsets, and infrastructure gear (ATM switches, fixed network platforms data cards, modems, fixed wireless terminals, wireless gateway and modules) in the Indian market.

Prominent U.S. and European multinational telecommunications equipment makers active in the India market are shown in the following tabulation.

Company	Country (H.Q.)	Products
Nokia	Finland	Base station controllers, cellphones
Sony-Ericsson	Japan-Sweden	Radio base stations, cellphones
Alcatel	France	Cellphones, transmission equipment (fixed line switches, base stations, modems, fixed and wireless boadband infrastructure)
Hughes Network	U.S.	Satellite broadband equipment, VOIP equipment, broadband wireless radio equipment
Motorola ⁵⁵	U.S.	Cellphones, mobile-fixed radios, infrastructure equipment (modems, data terminals, repeaters)
Microsoft	U.S.	Webcams, digital gaming and entertainment consoles
Cisco	U.S.	Routers, switches, widearea networks, VOIP equipment, broadband wireless radio equipment
Lucent Technologies	U.S.	Digital switching equipment, tower stations, semi conductors
Qualcomm	U.S.	Cellphones, cellphone chips
Elcoteq	Finland	Cellphones, communications network equipment
Siemens	Germany	Cellphones, switch gear, ATM switches

Computers and components: Due to the high cost, ownership of personal computers (PCs) in India remains at one of the lowest levels in Asia. Currently the Indian computer, components, and networking equipment market is dominated by locally branded manufactures, multinationals, and unbranded or "gray market" assemblers.⁵⁶ These companies depend heavily on imports of key components from China, Malaysia, and Taiwan. Lately, multinationals such as HP, LG, and Samsung

⁵³ Ibid.

⁵⁴ Huawei won a contract to supply equipment for 1.05 million CDMA lines. ZTE won a contract tender to construct a national transmission backbone network (wave division multiplexing equipment) and a CDMA network in 9 states for BSNL. "India: Chinese suppliers move in," Global Technology Forum, Apr. 9, 2004.

⁵⁵ Motorola manufactures its cellphones and network equipment in 4 production facilities located in Singapore, Malaysia, and China (2 locations). In 2005-06, it introduced a low-cost cell phone assembled in India. Motorola is currently India's fourth largest cellphone supplier with 4.5 percent of India's cellphone market.

⁵⁶ *ExportIT Report India*, U.S. Department of Commerce, May 2004.

have established local assembly operations to regain market share lost to branded and unbranded Indian producers.

U.S. brands account for approximately 20 percent of the market and HP (U.S.) currently has the largest share of the Indian PC market followed by HCL Infosystems (India) and Lenovo (China), Acer (Taiwan), and Dell (United States).⁵⁷ With the purchase of IBM's PC division in May 2005 by Chinese commercial PC maker Lenovo, China gained a tremendous advantage in the Indian PC market.⁵⁸

To boost market share in India, Lenovo and Microsoft recently announced plans to offer PCs for half retail price in the Indian market if customers pay the balance over time using Lenovo pre-paid cards (FlexGo system).⁵⁹ U.S. computer manufacturer Dell announced plans to build a PC assembly facility in India by the end of 2006 anticipating that the new facility reduce costs and lower delivery time.⁶⁰ Dell and others also serve the Indian market through assembly operations in China, Singapore, and Malaysia.

In 2002, Taiwan began to shift a sizable portion of its computer hardware production to China to compete with multinational vertically integrated firms such as Sony, Gateway, IBM, NEC, Dell, HP, Fujitsu, Toshiba, and Siemens. By 2005, China emerged as the world's leading manufacturer of computer hardware surpassing the United States.⁶¹ Many multinational computer manufacturers rely on third tier suppliers for their components and parts and some employ contract manufacturers for assembly.⁶² Dell, for example, does not manufacture its own parts and components relying instead on outside suppliers for items such as CD- and DVD-ROMs, semiconductors, monitors, keyboards, mice, speakers, and add-on cards.⁶³

Typically China's domestic manufacturers concentrate on the domestic Chinese market, while the multinationals and contract manufacturers (primarily Taiwanese owned and managed) dominate China's computer hardware exports. Recently Chinese companies like Legend and Lenovo have begun to export to the Asia-Pacific region.

U.S.-China competition: Since 1999, China's exports to India have grown tremendously to become the largest single supplier of India's imports. Although Indian imports from the United States continue to grow, China has eclipsed the United States in a number of HTS Chapter 84 and 85 subheadings. Despite a comfortable lead in parts of civil aircraft, material handling machinery, boring and sinking machinery, and laser discs the United States lags behind China in exports of computers and

⁵⁷ HP manufactures sites are located in Australia, China, India, Japan, Malaysia, Singapore, and Thailand. HP uses these locations to produce PCs, notebooks, Pocket PCs, workstations, servers, storage units, networking products, printers, scanners, inkjet cartridges for the world market. It also maintains an assembly and R&D facility in Bangalore. In 2005, India accounted for less than 10 percent of Hewlett-Packard's sales.

⁵⁸ The \$1.23 billion acquisition made Lenovo the world's third-largest PC producer, behind only Dell and HP. Since IBM focused primarily on the PC market, Lenovo inherited 32 percent of the world's PC business to go along with its 4 percent of the Asian small business market. Although Lenovo possesses an India PC manufacturing facility (Pondicherry) and announced plans to increase annual production from 0.9 million units to 1 million units, however most of its PC sales will continue to imports from China. Lenovo officials anticipate that the company's revenues from the Asian PC market will exceed those from North America and Europe. "Lenovo to swamp Indian PC market," *Indiatimes Infotech*, June 13, 2005.

⁵⁹ "Microsoft, Lenovo launch 'pay as you go' computer," *Physorg.com*, May 22, 2006.

⁶⁰ John Riberio, "Dell's India facility to operate this year," *Infoworld*, May 25, 2006.

⁶¹ Yungkai Yang, *The Taiwanese Notebook Computer Production Network in China: Implication for Upgrading of the Chinese Electronics Industry*, University of California, Irvine, Feb. 2006.

⁶² Kenneth Kraemer & Jason Dedrick, *Enter the Dragon: China's Computer Industry*, University of California, Irvine, Feb. 2002.

⁶³ Kenneth Kraemer & Jason Dedrick, *Dell Computer: Organization of a Global Production Network*, University of California, Irvine.

components, ball bearings, transmission apparatus for radio and television, telephone switching equipment, lead-acid storage batteries, and insulated coaxial cable.

Although, the top 20 U.S. exports of products covered in HTS Chapters 84 and 85 grew from \$442.8 million in 1999 to over \$1.1 billion in 2005 and China's exports grew more significantly from \$60 million in 1999 to approximately \$1.9 billion in 2005. While U.S. exports of these products nearly tripled in value during 1999-2005, China's grew nearly 20 times in value reflecting the need to cut costs in a highly price-competitive industry through the globalization of production patterns and the transfer of assembly and production operations from the United States, the EU, Japan, and Taiwan to China and other developing nations..

The United States continued to dominate India's Chapter 84 imports through the January-September period of 2005, but as a percentage the share of the total enjoyed by the United States dropped from 13 percent in 2004 to 11 percent during the January-September period of 2005. The U.S. continued to be a leader in advanced computers (over 85,000 million theoretical operations per second (MTOPs)), routers, switches, semi conductors and semi conductor manufacturing equipment and other high technology value-added product.

China's share, on the other hand, grew from 10 percent in 1999 to 13 percent during the January-September period of 2005. The United States also saw its position in India's imports of goods under HTS Chapter 85 drop from first to third during this period behind China and Germany. As shown in the tables 20 and 25, China is not a significant supplier of optical and medical equipment (HTS Chapter 90) and thereby does not compete with the United States for market share in the Indian market.

Third country import competition: The United States is not the only developed country to experience increasing export values in the India market while experiencing declining market share. As shown in table 24, Japan, Germany, and the United Kingdom, among others, also experienced this trend.⁶⁴ Germany and the United Kingdom are India's two largest EU trading partners with exports increasing by \$2.1 billion, or by 46 percent during 2001-2004. Like the United States, both countries saw their share of the Indian import market drop from 3.8 percent and 5.5 percent, respectively, in 2001 to 3.6 percent and 3.3 percent in 2004.

Country	Exports to India: 1999	Percent of total	Exports to India: 2004	Percent of total
Germany	1,885	3.8	3,525	3.6
United Kingdom	2,733	5.5	3,221	3.3
Switzerland	3,402	6.8	4,421	4.5
Belgium	2,481	5.0	4,306	4.4
France	763	1.5	1,268	1.3
Canada	516	1.0	646	0.7
Argentina	446	0.9	501	0.5
Netherlands	518	1.0	672	0.7
Sweden	604	1.3	921	1.0
Japan	2,091	3.3	2,930	3.0

Source: World Trade Atlas.

⁶⁴ Those EU countries reporting a growing share of India's imports include Finland, Norway, Spain, and Austria. None of these countries are a leading source of imports for the Indian market.

Germany: Germany is India's 7th leading source of imports, and trade between the two countries increased by \$1.6 billion during 1999-2004. Important German exports to India include a wide variety of high value-added technology machines and parts, ships, telecommunications equipment, white goods, and automobile parts and components. During 2004, Germany's top 20 exported items to India accounted for 18 percent of India's total imports from Germany (table 25). Most of these products compete directly with U.S. exports in the Indian market. Nonetheless, because Germany's exports are much more diversified than those of the United States no one product dominates any particular sector.⁶⁵

Japan: Japan also competes with U.S. exports in the Indian machinery and value-added high technology goods sectors. Japan is India 10th leading source of imports and it is a leading source for machinery and transportation equipment, components, and parts; iron and steel; electronic machinery; and organic chemicals. Bilateral trade between the two countries increased by \$839 million during 1999-2004. Japan is India's leading source for weaving machines; parts for motor vehicles engines; automobiles, buses, and vans; machine tools and interchangeable tools for hand or machine tools; self-propelled bulldozers, graders, and scrapers; and machining centers. Japanese giants such as Hitachi, Toshiba, Sony, and others are very active in the Indian market and as seen in the following tabulation they provide India with a wide variety of imported products.

Company	Products
Toshiba	Flash memory chips, air conditioners, refrigerators, washer dryers, microwave ovens, electric pots, vacuum cleaners, air purifiers and cleaners, GSM mobile handsets, Color TVs (LCD projectors), DVD players, laptop-tablet and desktop computers, barcode printers, semi conductors, die casting machines, injection molding machines, PC workstations, and servers.
Hitachi	Semi conductors, air conditioners, refrigerators, washing machines, vacuum cleaners, DVD camcorders and players, LCD and plasma TVs, display components (deflection yokes, inverters for blacklights, projection tv tubes, STN displays, TFT displays), and power tools (hammers, dis grinders, sanders-polishers, drills, screw drivers, wrenches, saws, blowers, nailers-staplers.
Sony ⁶⁶	Plasma display panels, color TVs, DVD player-recorders, home theaters, portable audio devices (MP3 and CD players, ect) , digital cameras, car audio systems, memory sticks, PC notebooks, LCD monitors and projectors, mobile phones.

The United Kingdom: The UK supplies the Indian market with mostly primary products such as diamonds, silver and gold, iron and steel products, non-metallic minerals, and mineral waste and scrap. Although the United Kingdom's exports to India grew by \$487 million during 1999-2004, the bulk of its products do not compete with U.S. exports in the India's import market.

⁶⁵ India's imports from Germany consisted principally of high value-added technology products such as electrical apparatus for line telephony and telegraphy; air and vacuum pumps, compressors, and fans; parts of electric motors and generator sets; laboratory and plant equipment; pumps for liquids and liquid elevators; electric motors and generators; textile machinery; printing machines; ships; derricks and cranes; steam and other vapor turbines; transmission shafts, bearings, and gears; records, tapes and other recorded sound media; electrical machines; turbojets, turbopropellers, gas turbines, and parts; refrigerators and freezers; parts of earth moving machinery; parts of aircraft and helicopters; machines for assembling electric or electronics lamps, tubes, and flashbulbs; medical equipment based on x-ray or alpha, beta, or gamma radiation; oscilloscopes and spectrum analyzers; and automatic regulating or controlling instruments.

⁶⁶ Sony shuttered its India audio manufacturing unit and suspended production of color TVs in 2004. Sony presently sells TVs in the Indian market it imports from its facilities in Thailand. "Sony India suspends CTV production," *Business Line*, June 8, 2004.

Table 25: Competing exports to India from Germany, the United Kingdom, and Japan, 2004 (\$million)

Germany			United Kingdom			Japan		
HTS No.	Commodity description	value	HTS No.	Commodity description	Value	HTS No.	Commodity description	
8524.91	Other recorded media	45	7102.31	Diamonds	1,499	8905.90	Floating docks, other vessels .	107
8503.00	Parts of electric motors-generators . . .	89	7106.91	Silver, unwrought	100	8905.20	Drilling-production platforms	46
9018.90	Other medical-surgical instruments . .	52	7108.13	Gold, semifinished	50	2942.00	Drugs, organic compounds . . .	33
8483.40	Gears, ball-roller screws	34	7204.49	Other ferrous	78	8708.99	Other parts of motor vehicles .	88
8479.89	Semiconductor processors	39	7204.21	Stainless steel waste-scrap . . .	32	8703.23	Other motor vehicles	46
8477.80	Rubber-plastic working machines . . .	35	4901.99	Other printed books, ect.	24	7326.90	Other articles of iron & steel .	28
8906.90	Ships	60	8803.30	Other parts aircraft-helicopter	27	2704.00	Coke, retort carbon	80
8538.90	Parts of electrical app	40	8524.91	Other recorded media	24	8479.89	Electrotechnical appliances . .	32
8413.90	Parts of pumps for liquids	24	2941.10	Penicillin	16	8429.59	Other construction machines .	26
8708.99	Parts of motor vehicles	43	4802.57	Paperboard	18	8407.34	Piston engines, > 1,000cc . . .	24
7225.19	Flat rolled steel products	32	4707.90	Unsorted waste-scrap paper . .	29	8483.40	Gears and gearing	24
8483.90	Toothed wheels, chain sprockets	18	7106.92	Silver, semi-manufactured . . .	30	8408.20	Engines for motor vehicles . . .	22
8445.40	Textile winding, reeling machines . . .	28	7108.12	Gold, unwrought	29	8457.10	Machining centers	21
8481.80	Other taps, cocks, valves	26	7102.39	Other nonindustrial diamonds	16	8414.90	Parts of air & vacuum pumps .	21
8411.91	Parts of turbojets-turbopropellers	25	8529.90	Parts of radio-TV apparatus . .	17	8415.90	Parts of air conditioners	20
8445.20	Textile spinning machines	24	8525.20	Cell phones, transceivers. . . .	12	8481.80	Other taps, cocks, valves	20
8443.19	Other offset printing machines	23	8519.00	Turntables, cassette players. . .	11	8525.20	Pit-head winding gears	26
8803.30	Other parts of airplanes-helicopters . .	47	3824.90	Binders for foundry molds . . .	11	9010.10	Photo developing apparatus . .	29
9031.80	Other measuring-checking instruments	26	7602.00	Aluminum wastes and scrap . .	14	9018.90	Other medical/surgical appara .	22
7208.90	Ft rolled iron-non alloy steel products	25	7404.00	Copper waste	12	7208.38	Ft-rolled, coils	21

Source: World Trade Atlas.

Other competitors: As a part of India’s “Look East” policy, imports from India to developing countries, especially those in East Asia and the Middle East, increased both in value terms and as a percentage of total imports during 1999-2004 (table 26). Singapore, Malaysia, and South Korea also compete with U.S. exports in India’s value-added import market.

Country	Exports to India 1999	Percent of total	Exports to India 2004	Percent of total
China	1,809	3.6	6,008	6.2
Singapore . .	1,324	3.3	2,930	3.0
Australia . . .	1,321	2.3	3,486	2.6
Malaysia . . .	1,255	2.2	2,203	2.3
S. Korea . . .	1,219	2.2	3,044	3.1
Thailand . . .	364	0.6	749	0.8
Taiwan	576	1.0	973	1.0
UAE	910	1.8	3,766	3.9
Israel	391	0.8	828	0.9
Saudi Arabia	496	1.0	1,147	1.2
Qatar	83	0.2	529	0.5
Kuwait	88	0.2	249	0.3
Oman	8	0.02	19	0.2

Source: World Trade Atlas.

Like China, Singapore, South Korea, and Malaysia enjoy a competitive advantage relative to the United States in terms of proximity to Indian and suppliers; lower labor, logistics, and production costs; the availability of subsidies and tax holidays; as well as export processing zones that allow duty-free entry of imported components. They also enjoy a slightly lower compensation rate for manufacturing workers than China. Each of these countries offers potential investors with a well educated workforce, and well-developed seaports and customs infrastructure. Additionally, South Korea and Malaysia have evolved into assembly and manufacturing platforms for major U.S. suppliers of telecommunications equipment, computers and components, and video monitors.

Singapore: Singapore is India’s 11th leading source of imports and its leading trading partner in ASEAN. In 2004, Singapore’s exports to India consisted primarily of electronic goods; organic chemicals; and transportation equipment, components, and parts (tables 27 and 28). At the commodity level, Singapore exported a wide variety of products.⁶⁷ Multinational telecommunications equipment and computer makers Motorola, Apple, Compaq and contract manufacture Flextronics are active in Singapore’s computer industry. These companies manufacture cell phones and network equipment, and PC components and parts. Also a major component of Singapore’s exports are re-exports of electronic components and parts and in 2004 re-exports accounted for approximately 54 percent of its trade with India.⁶⁸ In 2005, Singapore was India’s leading source of electronic integrated circuits and micro subassemblies.

⁶⁷ Including computers, accessories, and peripherals; integrated circuits; cellular phones and parts; chemicals (styrene, p-xylene, polypropylene, vinyl acetate, photographic chemicals); crude oil and other petroleum products; minerals and metallic ores (tin, aluminum, zinc, waste and scrap, iron and steel); sewing machines; ball and roller bearings; parts of airplanes and helicopters; parts of video recorders; medical instruments and devices; parts of motor vehicles. It also dominates world production of disc drives accounting for approximately 45 percent of total global production.

⁶⁸ *Singapore External Trade - May 2006*, International Enterprise Singapore.

In June 2005, India and Singapore signed a Comprehensive Economic Cooperation Agreement that took effect in August 2005. Under the agreement, India would immediately eliminate import duties on nearly 80 percent of its imports from Singapore, while Singapore would eliminate duties on virtually all imports from India. Under this FTA, import duties were to be phased out in 5 stages by April 1, 2009. As a result of this agreement, trade groups predict that bilateral trade will grow from \$7.2 billion in 2004 to \$50 billion by 2010.⁶⁹ This FTA has the potential to give Singapore a slight competitive advantage over both China and the United States in the Indian market.

South Korea: India's leading imports from South Korea consist principally of electronics, machinery, and transportation equipment.⁷⁰ Two-way trade increased by \$1.8 billion during 1999-2004 with South Korea's exports to India including mobile telecommunications equipment, auto parts, maritime vessels and rescue operations equipment, airplanes and parts, sound recorders and reproducers, television image and sound recorders, and minerals. LG and Samsung currently dominate the Indian market for CDMA based cell phones. India is also a significant customer of Korea's ship building industry, since it is one of the world's largest buyer of oil tankers and LNG ships needed for the transportation of India's imported crude oil and natural gas.

South Korea was also India's leading source for transmission apparatus for radio and television, parts and accessories of motor vehicles, parts of railway or tramway locomotive or rolling stock, molding boxes for metal foundry, and mold bases. Korean's electronic giants LG Electronics and Samsung are very active in the Indian market. As shown in the following tabulation, LG and Samsung manufacture a wide variety of computer, consumer electronic, and household appliances in India.⁷¹

Company (location)	Products
LG Electronics (Pune, Ranjangaon, Noida) ⁷²	Color TVs, washing machines, air conditioners, microwave ovens, refrigerator, PC monitors and flat panel displays, vacuum cleaners, digital audio-video systems, cellphones, optical disc drives, DVD writer units, DVD players, notebook and desktop PCs, optical storage units (CD-rom, CD-R/RW, DVD-rom combo drives).
Samsung (Noida) ⁷³	Refrigerators, air conditioners, washing machines, color TVs, microwave ovens, DVD players, LCD projection and flat color TVs, PC monitors, disc drives, laser printers, fax machines, storage media devices (floppies, CDs, DVDs), MP3 players, digital still cameras and camcorders, cellphones.

India's imports from Korea are also influenced by Korean private sector investment in India's subway construction projects (Samsung), transportation industry, major road repair projects (Hyundai), fuels (power and oil refineries), electrical equipment industry, chemicals and petrochemicals, and in its

⁶⁹ "India, Singapore Sign Trade Deal," World Trade/Interactive, June 30, 2005.

⁷⁰ In March 2006, South Korea and India began discussion on the implementation of a Free Trade Agreement. The FTA is expected to be signed sometime during 2007 and is expected to increase trade by \$3.3 billion, or by 60 percent. "S. Korea, India aim to sign free trade deal by end of 2007," bilateral.org, Aug. 2, 2005.

⁷¹ Samsung commands 27 percent of India's storage media devices market and 33 percent of the liquid crystal display market and also offers digital still cameras and camcorders "LG starts India's first optical drive plant," *Business Standard*, June 21, 2006, 2006. "Samsung India eyes 50 pct domestic LCD market share," *iTnews*, May 30, 2006. "Samsung introduces India-specific packs for storage media devices," *Business Line*, July 17, 2004.

⁷² LG-India also exports its consumer durables and home appliances to South Asia, the Middle East, and Africa.

⁷³ Samsung-India exports color TVs, monitors, refrigerators to the Middle East and to the CIS and SAARC countries.

commercial office and household equipment sector.⁷⁴

Malaysia: Malaysia is a leading producer of micro capacitors and accounts for nearly 30 percent of all micro capacitors sold globally (manufactured primarily by Intel in Penang). Malaysia's imports and exports to India are concentrated among a narrow range of products. Malaysia is India's principal supplier of palm oil, and bilateral trade reached an all time record in 2005 at \$2.2 billion. In 2005, India's imports from Malaysia consisted principally of product and commodity groups including vegetable oils (mainly palm oil), machinery and transport equipment, manufactured goods, and other food items. Dell Computer, Gateway, and Packard Bell have computer manufacturing plants in Malaysia. Malaysia is also the home of contract computer manufacturers Solectron and Flextronics.

Dell Computers serves the Indian market from its product facility located in Penang, Malaysia that assembles 95 percent of Dell's laptops. Parts and components for Dell's computers are manufactured elsewhere in Asia and then shipped to Malaysia for assembly. The government of Malaysia granted Dell Computer a waiver on taxes for 70 percent of its income and it granted Dell a 5 year tax holiday. Hewlett-Packard and IBM also has production-assembly facilities in Malaysia.

⁷⁴ *Indo-South Korea Economic Relations*, Economy Watch.

Table 27: Competing exports in the Indian market from Singapore, Malaysia, and South Korea (2005), (\$million)

Singapore			Malaysia			South Korea		
HTS No.	Commodity description	value	HTS No.	Commodity description	Value	HTS No.	Commodity description	
8473.30	Parts-components for computers	196	1511.90	Palm oil	286	8525.20	Cell phones, transceivers . . .	1,090
8471.70	Disc drives	112	1511.10	Crude not modified	123	8529.90	Parts of tv apparatus	64
8471.60	Printers	92	8473.30	Computer parts-components . .	204	8528.12	Color tv reception app	62
8471.50	Central processing units	55	8471.50	Other digital processing units	29	8540.11	Cathode-ray tv tubes	57
8471.80	Other computer units	24	8471.30	Portable computers	29	8540.60	Other cathode-ray tubes	30
8542.29	Other monolithic integrated circuits . .	61	8471.41	Other computers	25	8479.89	Other mechanical app	53
8525.20	Cell phones, transceivers	46	8471.60	Printers	23	8414.30	Refrigeration compressors . .	47
8517.50	Modems, other apparatus	33	8471.70	Disc drives	21	8471.70	Disc drives	36
8524.91	Other recorded sound media	30	8471.49	Computer systems	15	8708.99	Other motor vehicle parts . . .	400
2902.50	Styrene	86	8471.80	Other computer units	13	7209.17	FT rolled products, 0.5mm . .	97
2902.43	Para-xylene	72	4401.29	Other rubber	22	7208.36	FT rolled, coils, >10mm . . .	80
8905.20	Floating-submersible platforms	56	5402.43	yarn of polyesters	21	7216.50	Other angles, shapes, sections	43
8901.90	Other ships and vessels	53	4403.99	Wood, nonconiferous	177	8471.70	Disc drives	36
8904.00	Tugs & pusher craft	47	4403.49	Wood, tropical, not treated . . .	145	3904.10	PVC, not mixed	71
8905.90	Light vessels, floating docks	44	8525.20	Cell phones, transceivers	80	3907.99	Polyesters, other	46
4907.00	Unused postage, checks	110	8540.40	Data/display cathode tubes . . .	45	2710.19	Oil (not crude)	224
4911.99	Other printed matter	40	8540.11	Cathode-ray tubes	42	8901.20	Tankers	176
7204.49	Other ferrous waste & scrap	26	2902.43	Para-xylene	154	8479.90	Parts of mechanical app.	33
7102.39	Diamonds, unworked	22	2711.13	Butanes, liquified	76	4801.00	News print	66
8803.30	Other parts of aircraft-helicopters	42	3823.19	Other fatty acids	39	7901.11	Unwrought zinc, 99.9% pure	47

Source: World Trade Atlas.

Table 28: Indian imports under HTS Chapters 84, 85, 90, by major trading partner, 1999-2004, (\$million)

HTS No.	Commodity description	United States		Japan		Germany		China		Singapore		South Korea		Malaysia	
		1999	2004	1999	2004	1999	2004	1999	2004	1999	2004	1999	2004	1999	2004
8418	Refrigerators & freezers	8	19	2	3	3	3	0.9	12	0.3	0.9	17	13	3	6
8419	Plant & laboratory equipment	10	18	5	13	16	19	1	14	5	0.6	1	4	0.1	0.3
8422	Dishwashing machines	4	9	2	2	11	44	0.3	1	0.5	2	0.6	2	0.01	0.2
8428	Material handling equipment	2	6	11	1	8	9	0.3	8	0.6	0.5	1	5	0.5	0.9
8451	Textile washing & cleaning machines . .	4	10	7	3	16	13	4	7	0.9	1	1	4	0.9	0.02
8455	Converters, ingot molds	13	16	30	0.9	6	4	0.2	2	0	0	5	4	0.01	0
8471	Computers & components	111	233	22	20	8	16	40	299	192	359	20	64	0.03	171
8473	Office machine parts	78	125	16	21	5	11	32	201	81	200	4	28	55	204
8479	Other machines	19	43	30	44	24	67	5	12	4	8	7	23	53	3
8430	Earth moving and grading machines . . .	1	11	4	1	4	4	0	2	0.004	11	0.3	85	1	0
8431	Parts of material handling machines	22	107	11	23	7	20	0.5	10	3	26	5	6	0	3
8483	Transmission shafts, bearings, gears . . .	15	32	25	44	32	73	1	7	2	2	6	8	0.01	0.2
8482	Ball & roller bearings	12	27	31	41	26	61	3	16	9	14	0.8	8	0	0.6
8504	Elec transformers/ static converters	11	23	9	14	9	34	4	78	4	12	7	9	0.4	3
8525	Switches, base stations, repeaters, ect . .	35	63	7	42	5	22	1	842	5	49	3	808	2	80
8536	Elec. app for switching electrical circuits	16	31	11	19	18	38	5	20	18	13	5	21	2	3
8532	Electrical capacitors	4	11	9	8	4	4	2	15	9	15		16	3	3
8517	Elec. app. for Telephony-telegraphy . . .	138	255	9	8	18	33	7	107	6	76	2	6	1	
8501	Electric motors & generators	8	9	3	9	10	33	3	20	1	2	2	18		0.5
8524	Records, tapes, & other recorded media	74	179	7	9	25	91	1	45	42	57	1	5	0.1	3
8544	Insulated wire and cable	13	30	7	17	6	19	3	62	11	17	3	23	1	8
8542	Integrated circuits & microassemblies . .	31	45	19	31	10	15	8	33	49	118	12	42	2	34
8529	Parts of radio-tv apparatus	23	103	9	7	3	27	17	80	15	9	11	40	2	9
8540	Cold cathode/photocathode tubes	7	8	17	9	1	2	4	34	15	10	22	58	19	89
8541	Diodes, transistors, ect.	16	17	11	30	6	15	5	22	14	30	8	9	8	4
8523	Magnetic sound tape	4	3	6	10	0.2	0.1	1	12	4	7	2	4	3	2
9022	App. based on x-ray & other radiation . .	5	54	9	9	13	20	0.3	7	2	3	0.1	0.6	0.4	3
9030	Oscilloscopes, spectrum analyzers	15	32	3	4	7	11	0.6	3	1	9	0.5	1	0.06	5
9032	Regulating/controlling instruments	22	27	5	13	5	17	0.6	3	6	13	7	21	0.4	0.9

Source: World Trade Atlas.

Conclusion

India potentially represents one of the world's largest untapped markets for major international producers. From a relatively low base, India is experiencing a tremendous expansion and modernization of its economy and now poses a growing middle class between 200 million and 350 million. India's domestic economy is expected to double by 2007 as Indians embrace a Western style consumer culture.

Despite these gains, India remains a relatively closed and small import market, especially compared with the United States, the EU, and Japan. The United States has been India's leading trading partner and its largest single market for exports. Although the value of U.S. exports continues to increase, the percentage of the Indian market enjoyed by the United States is declining as China and India's Asian neighbors command a larger piece of the import market.

China benefits from a competitive advantage relative to the United States in its proximity to the Indian market, its lower labor and production costs, and its undervalued Yuan relative to the U.S. dollar. China also benefits from globalization and changing production patterns where production and assembly of higher valued-added products was moved from the United States and other developed countries to China. Whereas China has made tremendous strides in gaining market share in India's import market in commoditized -mass produced products, the United States continues to command a presence in those areas demanding innovation and those incorporating the newest features or the latest technologies.

Although the United States and China compete head-to-head in a variety of industry segments, competition is most intense in high value-added technology market that includes including machinery, electrical machinery, computers, and telecommunications equipment. China leapfrogged the United States in a number of product areas particularly computers and components and various telecommunications equipment segments. By the end of 2004 China surpassed the United States as India most important single import source and in its importance in the India computer and telecommunications equipment markets. Nonetheless, the United States continued to be a dominant supplier of material handling equipment and telephones, and enjoyed a superior position in optical and medical instruments and equipment.

Likewise Singapore, South Korea, and Malaysia have also made tremendous strides in gaining a presence in the Indian market. Like China, these nations also enjoy a competitive advantage compared with the United States in geographic proximity and lower labor and production costs. Also, Singapore and Malaysia are used by U.S. telecommunications equipment and computer manufacturers as assembly export platforms for Asia and the rest of the world. Today, the Asia-Pacific region is the world's leading producer of computers, components, and peripherals and telecommunications equipment as U.S., Japanese, and European companies serve the world through regional subsidiaries and assembly operations.

For other types of machinery and electrical-electronic products, however, the United States continues to supply higher technology products to the Indian market while China dominates the low to intermediate markets like household consumer goods and consumer electronics, and the United States will continue to have a significant presence in India's import market.