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Competitive Conditions for Foreign Direct Investment in India

Abstract

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Keywords

India, economic growth, foreign investment, trade

Disciplines

Economics | International Economics | Social and Behavioral Sciences

Comments

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Competitive Conditions for Foreign Direct Investment in India

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The views expressed in this study are those of the Office of Industries, U.S. International Trade Commission. They are not necessarily the views of the U.S. International Trade Commission or any of the Commissioners.

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Abstract

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Executive Summary

India's recent liberalization of its foreign investment regulations has generated strong interest by foreign investors, turning India into one of the fastest growing destinations for global foreign direct investment (FDI) inflows. Foreign firms are setting up joint ventures and wholly owned enterprises in services such as computer software, telecommunications, financial services, and tourism, and manufactured goods including transportation equipment, chemicals, pharmaceuticals, and food processing. This study examines FDI flows into India, by country and by industry, supplemented by a discussion of major foreign acquisitions of Indian companies, and greenfield FDI by foreign firms. The study also examines India's investment environment, special economic zones, investment-related regulations and international agreements. Two chapters present case studies of FDI in India's automotive industry, and the effect of the 2005 Patent Law changes on FDI in the pharmaceutical industry. Principal findings regarding FDI in India include:

- Net FDI in India was valued at \$4.7 billion in the 2005–06 Indian fiscal year, and more than tripled, to \$15.7 billion, in the 2006–07 fiscal year. Almost one-half of all FDI is invested in the Mumbai and New Delhi regions.
- By country, the largest investors in India are Mauritius, the United States, and the United Kingdom. Investors based in many countries have taken advantage of the India-Mauritius bilateral tax treaty to set up holding companies in Mauritius which subsequently invest in India, thus reducing their tax obligations. By industry, the largest destinations for FDI are electrical equipment (including computer software and electronics), services, telecommunications, and transportation.
- India offers both positive and negative incentives for foreign investors. Positives include strong economic growth leading to increased buying power by the middle class, low wages compared to OECD countries, and an educated work force. Negatives include inadequate infrastructure, rising salaries for key jobs, and bureaucratic delays in obtaining necessary permits and licenses.
- India's Special Economic Zones (SEZs) attract foreign investment by providing tax incentives, assistance with bureaucratic and administrative problems, and access to reliable infrastructure. Investment-related regulations outside the SEZs have been increasingly liberalized since 1991, with important improvements in intellectual property regulation.
- U.S., European, and Japanese automakers and auto component manufacturers all have significant investments in India. Most FDI in the automotive industry has been focused on sales to the domestic market, but more foreign investors are now producing autos and components in India for export.
- India's 2005 changes to its Patent Law have motivated substantial new FDI in the pharmaceutical industry, but global pharmaceutical firms are waiting to see how the new law is interpreted before further expanding product patenting and commercialization activities in India.

CHAPTER 1

Introduction

Purpose and Scope

India is the second largest country in the world, with a population of over 1 billion people. As a developing country, India's economy is characterized by wage rates that are significantly lower than those in most developed countries. These two traits combine to make India a natural destination for foreign direct investment (FDI). Until recently, however, India has attracted only a small share of global FDI, primarily due to government restrictions on foreign involvement in the economy. But beginning in 1991 and accelerating rapidly since 2000, India has liberalized its investment regulations and actively encouraged new foreign investment, a sharp reversal from decades of discouraging economic integration with the global economy.

Global investors have responded with enthusiasm. Total net foreign investment inflows were \$17.2 billion in 2005–06, of which net FDI was valued at \$4.7 billion in 2005–06.¹ Net FDI inflows for the 2006–07 fiscal year were more than tripled to \$15.7 billion.² India received cumulative net FDI inflows of \$48.2 billion between August 1991 and December 2006.³

The remainder of this chapter gives an overview of FDI activity in India, particularly in the service sector (the largest target for FDI in India to date), and discusses the data used in the study. The study then closely examines trends related to FDI in India, including the principal country sources and industry destinations of this capital, and the regional destinations of FDI within the country. We also look at major multinational corporations invested in India today, and the role of U.S. investors. The study goes on to examine India's economic climate for FDI, its regulatory environment, the incentives available to foreign investors through Special Economic Zones (SEZs), and the effect of India's international economic agreements on inbound FDI trends. We present two case studies of industries that hold special interest for foreign investors. The first examines FDI in India's passenger vehicle and components industry, illustrating global investors' active involvement in India's manufacturing sector. The second analyzes the effects of India's 2005 Patent Law on FDI in the Indian pharmaceuticals industry.

¹ Most official Indian statistics are presented on a fiscal year basis. India's fiscal year runs from April 1st through March 31st. According to the standard IMF definitions, FDI is defined as investment equal to or greater than a 10 percent equity share in a single firm. By contrast, portfolio investment (the remaining \$12.5 billion) is defined as acquisition of an equity stake of less than 10 percent. FDI data represent inflows net of outflows.

² Government of India, Ministry of Commerce & Industry, *Economic Survey 2006–2007*, 127–28; and *Financial Times*, "FDI in India Expected to Double."

³ Government of India, Ministry of Commerce & Industry, "Fact Sheet on Foreign Direct Investment."

Overview of FDI Activity in India

Country Sources of FDI

Foreign investors have begun to take a more active role in the Indian economy in recent years. By country, the largest direct investor in India is Mauritius, largely because of the India-Mauritius double-taxation treaty.⁴ Firms based in Mauritius invested \$16.0 billion in India between 1991 and 2006, equal to 39 percent of total FDI inflows. The second largest investor in India is the United States, with total capital flows of \$5.6 billion during the 1991–2006 period, followed by the United Kingdom, the Netherlands, and Japan.⁵ Between 1991 and 2005, the United States ranked first in terms of total FDI approvals, which amounted to \$67.8 billion (24 percent of total FDI approvals).⁶ The largest shares of U.S. investment are directed to the fuels, telecommunications, electrical equipment, food processing, and services sectors.⁷

The warming of the political and economic relationship between the United States and India is likely to further encourage U.S. investment there. An important example of the closer relationship is the U.S.-India Civil Nuclear Cooperation Initiative, passed into U.S. law in December 2006.⁸ The United States has also reduced the use of export controls on exports to India. As of February 2007, only 1 percent of U.S. exports to India required a license, down from 24 percent in 1999 and 90 percent in previous years. In recognition of the improved relationship, the U.S. Department of Commerce is in the process of establishing its new “Trusted Customer” program, set to begin in 2007 with India as the first partner country. The program is expected to encourage repeat exports of U.S. goods to India.⁹ This will promote additional FDI by U.S. firms in India, as the Trusted Customer program will make it easier for U.S.-based multinational corporations (MNCs) to ship goods to their affiliates in India for manufacturing or additional processing.

FDI in India’s Service Sector

The service sector has been the primary destination of FDI in India since 1991. As identified by India’s Ministry of Commerce & Industry, the service sector accounted for 17 percent of total FDI inflows to India between August 1991 and December 2006. Another 17 percent of FDI inflows is invested in the telecommunications and transportation industries, which

⁴ Under the treaty, foreign investors are able to invest in holding companies in Mauritius which then sell shares in India, but pay taxes in Mauritius. Since Mauritius has no capital gains tax, the companies have no capital gains tax obligations. EIU, “Country Report India.” (See chapter 6).

⁵ Government of India, Ministry of Commerce & Industry, “Fact Sheet on Foreign Direct Investment from August 1991 to December 2006.”

⁶ FDI approvals data measure the intentions of foreign firms to invest in India. However, many firms never actually proceed with investment projects that have received approval, so approvals data do not indicate actual FDI trends.

⁷ The sectors are defined by India’s Ministry of Commerce & Industry, and do not match U.S. Government statistical classifications. Government of India, Ministry of Commerce & Industry, Department of Commerce, *Annual Report 2005–2006*, 88.

⁸ U.S. Department of State, “Congress Passes U.S.-India Civilian Nuclear Cooperation Bill”; and U.S. Department of State, “President Bush Signs U.S.-India Civil Nuclear Agreement.”

⁹ Gutierrez and Sampson, Remarks at the 5th Summit.

generally involve both equipment and services.¹⁰ From the mid-1990s, India has been an important destination for investment in offshoring services such as software, call centers, and other business process outsourcing (BPO).¹¹ According to one recent estimate, India's information technology (IT) offshoring market will be valued in excess of \$200 billion by 2008, with more than one-fourth of the world IT offshoring market centered in India. Revenue from offshore services is predicted to equal 7 percent of India's GDP by 2008, and account for one-third of foreign exchange flows into the country.¹² This flow of capital relies on India's well-educated, English-speaking, and relatively low-paid workers.¹³ India has offered substantial incentives to attract FDI in IT and BPO-related services offshoring, up to an estimated \$6,000 per full-time equivalent worker (FTE) in the IT services area, and \$2,000 per FTE in the BPO area.¹⁴

According to some reports, however, increasing competition is making it more difficult for Indian firms to attract and keep BPO employees with the necessary skills, leading to increasing wages. IBM, for example, increased its Indian staff by 36 percent in 2006, to 53,000 workers, and has plans to invest a further \$6 billion in India over the next 3 years, for an expected total of 120,000 employees in the country by 2008.¹⁵ Hiring difficulties are among the factors that have encouraged some India-based BPO firms to engage in outbound FDI by establishing facilities outside of India. Infosys Technologies, for instance, reportedly has plans to employ 6,000 workers in China, and Satyam Computer Services has 500 people based in China, with more to come, along with 2,500 workers each in Malaysia, Egypt, and Saudi Arabia.¹⁶

Most Indian industries have been fully opened to FDI, with foreigners permitted to own up to 100 percent of equity in Indian companies. However, India continues to limit FDI in a number of industries by enforcing overall caps on total foreign-owned equity shares, with the caps changing as India's liberalization process continues. Permitted equity limits for foreign investors vary for different industries. The level of FDI activity following each change in regulations testifies to foreign investors' interest in the Indian market, particularly in key service sectors. Equity limits for foreign investment in most types of telecommunications companies were raised from 49 percent to 74 percent in November 2005, resulting in a wave of new FDI primarily focused on India's cellular telecommunications industry. Cumulative FDI inflows in telecommunications from August 1991 to December 2006 were \$3.9 billion, and annual inflows jumped from \$588 million in 2004–05 to \$3.0 billion in 2005–06.¹⁷ The value of reported mergers and acquisitions (M&A) in telecommunications rose from \$105 million in 2003 to \$1.2 billion in 2004, \$4.1 billion in 2006, and \$11.4 billion in just the first 3 months of 2007, primarily on the strength of Vodafone Group's \$11.1 billion acquisition of Hutchison Essar Telecom, which was approved in April 2007.¹⁸

¹⁰ An additional 17 percent of FDI is invested in electrical equipment, including computer software and electronics. It is not clear whether some offshore services FDI is included in the electrical equipment sector. Government of India, Ministry of Commerce & Industry, "Fact Sheet on Foreign Direct Investment."

¹¹ Offshoring refers to the process whereby a company based in one country outsources certain functions to an affiliate or domestic company in another country. BPO includes information technology-enabled services such as insurance claims processing, and other types of back office processing.

¹² McKinsey & Co., McKinsey Global Institute, *New Horizons*, 499.

¹³ See, e.g., PriceWaterhouseCoopers, "Offshoring in the Financial Services Industry."

¹⁴ McKinsey & Co., McKinsey Global Institute, *New Horizons*, 501.

¹⁵ Barnes, Remarks at the 5th Summit; and Bonasia, "Indian Outsourcers Scramble to Meet Need."

¹⁶ Bonasia, "Indian Outsourcers Scramble to Meet Need."

¹⁷ Government of India, Ministry of Commerce & Industry, "Fact Sheet on Foreign Direct Investment."

¹⁸ Bureau van Dijk, *Zephyr Mergers and Acquisitions database*.

India's stock exchanges have also been recently opened to foreign investment, with a 26 percent foreign equity cap, limited to 5 percent for any single foreign investor. Foreign investors reached the 26 percent cap in the National Stock Exchange of India in March 2007. As of the same date, the Singapore Exchange and Deutsche Borse each controlled 5 percent of the Bombay Stock Exchange.¹⁹

Other industries which maintain significant barriers to FDI include the insurance sector and newspaper publishing, where foreign equity is limited to 26 percent, and the retail sector, where foreign firms are permitted to invest up to 51 percent equity, but only in single-brand distribution outlets.²⁰ Foreign investors have also expressed interest in investing in these sectors, as India's government debates whether to lift the limits. In the retail sector, Wal-Mart announced a joint venture with India-based Bharti in November 2006, under which Bharti would invest \$2.5 billion in a new chain of retail stores that would be 100 percent owned by the Indian firm. Wal-Mart would provide logistics and wholesale supply services through a 50:50 joint venture with Bharti. The deal is widely seen as a way for Wal-Mart to enter the growing Indian retail market despite the FDI restrictions.²¹

In the insurance industry, foreign investment was first permitted in 2000, with the lifting of the Indian state-owned insurance company's monopoly, allowing competition from both domestic and foreign-owned private firms. During the 2000–01 fiscal year, 16 privately owned firms entered the Indian market, most as 26 percent joint ventures between globally competitive foreign insurers and Indian firms.²² Amid expectations that the government would raise the foreign equity limit to 49 percent, at least six insurance joint ventures concluded agreements that would allow the foreign partner to raise its share to that level once government regulations have changed, but as of April 2007, the equity limit for foreign insurance investors remains at 26 percent.²³

Data

The data for this study were drawn from a variety of sources. Data for FDI stocks and flows into India come primarily from official Indian government sources, and reflect actual FDI from cross-border equity flows, where available. These data are supplemented by U.S. data where additional detail on U.S.-India FDI flows is required. Official data are compiled on a balance of payments (BOP) basis, and reflects the amount of capital that crosses borders during a given calendar or fiscal year.²⁴ These data are the most comprehensive available, but they specifically exclude details on individual company transactions to safeguard the confidentiality of the reporting companies. Unless otherwise specified, data are presented for the 5 year time period from 2002 through 2006.

¹⁹ *Press Trust of India*, "Morgan Stanley, Citigroup, Actis Pick Up 6 pc Stake in NSE."

²⁰ Government of India, Ministry of Commerce & Industry, *Economic Survey 2006–2007*, 154; and EIU, "Country Commerce India - Main report: November 20, 2006."

²¹ *Business Monitor Food & Drink Insight*, "Bharti Confirms Wal-Mart Plans."

²² Major international insurance firms investing in the Indian market include Chubb, New York Life, AIG, Metlife (all based in the United States); Old Mutual, Standard Life, and Royal & Sun Alliance (United Kingdom); ING (Netherlands); Allianz (Germany); Tokio General and Mitsui Sumitomo (Japan); and AMP (Australia). Indian Insurance Regulatory and Development Authority Web site.

²³ The list includes ICICI Prudential Life, AMP Sanmar Life, Metlife India, IFFCO-Tokio General, Cholmandalam General, and Tata AIG Life. Bureau van Dijk, *Zephyr Mergers and Acquisitions database*.

²⁴ Most countries, including the United States, report FDI data on a calendar year basis. India reports FDI data on a fiscal year basis, with the fiscal year beginning April 1st.

To supplement the official equity flows data, the study uses information from separate commercial databases reflecting M&A and greenfield FDI,²⁵ and occasionally uses Indian government data on FDI approvals. These data lend additional insight into the industry and country sources of FDI into India. The databases are compiled from press reports. Thus, while they cover the majority of M&A or greenfield FDI transactions, it is not possible to be sure that data on all transactions have been included, or that transactions have not been included more than once. In particular, many reported transactions do not include data for the value of the transaction. In addition, data compiled from the databases are not directly comparable to the official FDI data. Reported transaction values in the databases do not account for how much of the capital is transferred in a given calendar year or fiscal year, or for noncash transactions such as equity swaps that may not appear in official BOP statistics. For these reasons, data compiled from these databases should be considered illustrative, rather than comprehensive. Similarly, FDI approvals are only an indicator of companies' intentions. Many approved projects are never realized, or are significantly modified between approval and implementation.

Information is also drawn from publicly available reports from international financial institutions, country governments, commercial sources, press reports, and interviews with industry representatives.

²⁵ The databases are Zephyr, a mergers and acquisitions (M&A) database published by Bureau van Dijk, and LocoMonitor, a greenfield FDI database published by OCO Consulting Ltd.

CHAPTER 2

FDI in India

Overview of FDI Flows

Foreign direct investment (FDI) capital flows into India have increased dramatically since 1991, when India's opened its economy to FDI, and inflows have accelerated since 2000. FDI inflows to India reached \$11.1 billion in calendar year 2006 (figure 2-1), almost double the 2005 figure, and are expected to continue increasing in 2007. The Indian government has announced a target of \$25 billion in new FDI inflows for the 2007–08 fiscal year.¹ Global FDI has experienced a corresponding resurgence since 2004, recording year-on-year increases of 29 percent in 2005 and 27 percent in 2004, after declining for several years in the early 2000s.² Consistent with the global pattern, FDI inflows into India declined between 2001 and 2003, before experiencing a resurgence that surpassed average global growth, with year-on-year increases of 45 and 72 percent, respectively, in fiscal years 2004–05 and 2005–06.³

Preliminary data for inward FDI⁴ for the 2006–07 fiscal year show FDI inflows of \$15.7 billion, representing an increase of 184 percent, in rupee terms, over the preceding fiscal year.⁵ While the percentage increase is large compared to the global average, the value of inward FDI flows to India relative to all developing countries remains small (figure 2-2). However, FDI inflows to India surpassed inflows to South Korea in 2006, making India the fourth largest destination for FDI in Asia, behind China, Hong Kong, and Singapore.⁶

New equity capital flows take one of two forms: M&A and greenfield investment. In a merger or acquisition, one firm acquires an equity stake in an existing foreign firm. Greenfield FDI takes place as the establishment of a new overseas affiliate by a parent company. India does not provide FDI statistics that break out M&A vs. greenfield FDI. For most developing countries, however, the greenfield route is more prominent, as there are fewer existing companies available to acquire, as compared with developed countries. As noted in chapter 1, this study uses private databases to illustrate the trends related to FDI

¹ *The Statesman (India)*, "India attracts \$15b FDI During 2006–07."

² UNCTAD, *World Investment Report 2006*. UNCTAD data are based on official Indian government statistics, but are adjusted to provide calendar year totals and prepared according to international practices, which makes the data comparable to international FDI statistics. The majority of data in this chapter is taken from Government of India statistical publications, which report on a fiscal year basis, and are not prepared according to international practices (see fn. 4). India's fiscal year runs from April 1 to March 31.

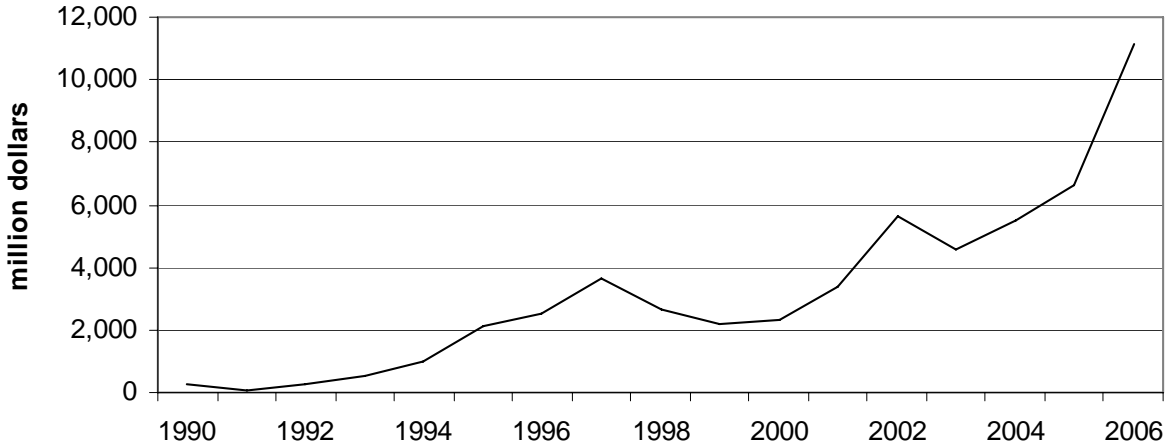
³ Government of India, Ministry of Commerce & Industry, Department of Industrial Policy and Promotion. Fact sheet on Foreign Direct Investment.

⁴ Includes new equity capital flows only. According to international standards, FDI flows include new equity capital flows, reinvested earnings, and intra-company loans. Most Indian FDI statistics reflect equity capital flows only. According to Kamal Nath, India's Minister of Commerce and Industry, FDI inflows including reinvested earnings totaled \$18 billion during the 2006–07 fiscal year. *The Statesman (India)*, "India attracts \$15b FDI During 2006–07."

⁵ Government of India, Fact Sheet on Foreign Direct Investment (FDI) from August 1991 to March 2007.

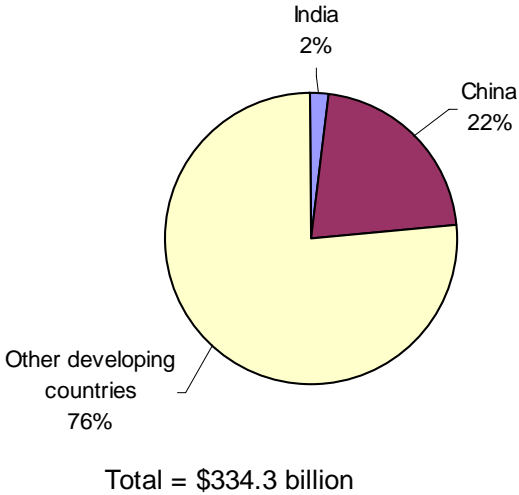
⁶ UNCTAD, "Foreign Direct Investment Rose by 34% in 2006."

Figure 2-1 FDI inflows to India, 1990–2006



Source: UNCTAD, Country Fact Sheet, UNCTAD online database and Government of India, Ministry of Commerce & Industry, Department of Industrial Policy and Promotion, *FDI Statistics* 2006.

Figure 2-2 FDI inflows to developing countries, 2005



Source: UNCTAD, Country Fact Sheet.

through both routes, but data obtained from those databases is not consistent with official FDI inflows data. In fact, the figures reported for total investment through greenfield FDI and M&A investment are considerably larger than the values for total FDI inflows reported by the government of India for FDI through the two routes combined. For greenfield FDI, OCO Consulting reports a total of \$55.5 billion invested in India in 2006, while Bureau van Dijk reports M&A transactions of \$2.8 billion.⁷ Together, these are far above India's total reported FDI inflows of \$11.1 billion.

There are several possible reasons for the disparities in these data. First, the greenfield projects listed are approved or announced by companies, but some of them are never realized. Second, many greenfield and M&A projects take more than one year to complete. Official FDI statistics include only the actual amount of capital invested in each year, rather than the project total. Finally, many of the projects listed in the commercial databases are not fully funded by the overseas investor. For joint ventures between Indian and foreign firms, for example, the databases list the entire value of the project, even if a share of the capital comes from an Indian entity and would thus not be included as FDI inflows. The official FDI figures contain only the amount of capital invested from abroad, while the greenfield and M&A data include the total value of the project.

Mergers and Acquisitions

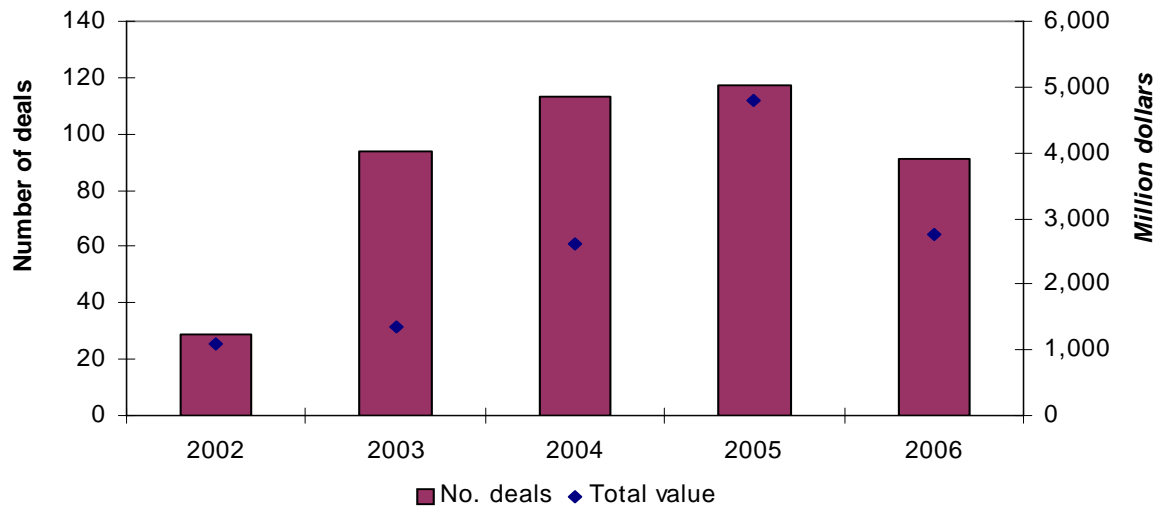
Figure 2-3 shows the trend of known completed M&A deals and their value, between 2002 and 2006. The bars on the figure indicate a sharp increase in the number of acquisitions completed in recent years.⁸ The data illustrate that overall deal value increased through 2005, and fell more sharply than the number of deals in 2006.⁹ The top 15 acquisitions by foreign firms in India during the same time period, by value, are presented in table 2-1. They are split almost evenly between services and manufacturing, with 8 service sector transactions, 6 manufacturing deals, and 1 utility acquisition. U.S. firms were the acquirers in 8 of the deals, with the remainder split among a number of countries.

⁷ OCO Consulting Ltd., *LocoMonitor FDI database*; and Bureau van Dijk, *Zephyr Mergers and Acquisitions database*.

⁸ Excludes deals that have been announced but not completed, or deals that are awaiting regulatory approval as of March 2007.

⁹ Approximately one-half of transactions do not have reported values.

Figure 2-3 M&A in India, by number of projects and value, 2000–06



Source: Bureau van Dijk, *Zephyr Mergers and Acquisitions database*.

TABLE 2-1 Top 15 acquisitions in India, by value, 2002–06

Acquirer	Target	Deal value (million dollars)	Industry of target	Date of completion	Acquirer country
Aegis Group plc	Percept Out Of Home	1000.0	Advertising	1/11/05	United Kingdom
Holcim Ltd	Ambuja Cement India	604.1	Cement manufacturing	4/7/05	Switzerland
CLP Power International Ltd	Gujarat Powergen Energy Corp.	594.0	Utilities	2/21/02	British Virgin Islands
Oracle Corp.	I-Flex Solutions	563.0	Computer software services	11/24/05	United States
Mylan Laboratories	Matrix Laboratories	548.2	Pharmaceuticals	1/8/07	United States
Merrill Lynch	DSP Merrill Lynch	499.3	Investment banking services	3/23/06	United States
Holderind Investments Ltd	Gujarat Ambuja Cements Ltd	476.4	Cement manufacturing	1/30/06	Mauritius
Electronic Data Systems Corp.	Mphasis BFL Ltd	368.9	Business process outsourcing services	6/9/06	United States
ADC Telecommunications	Krone Communications Ltd	350.0	Electronics manufacturing	5/22/04	United States
Hewlett-Packard Co.	Digital GlobalSoft	325.0	Computer software services	4/1/04	United States
Prudential plc	ICICI Prudential Life Insurance Company	280.1	Insurance	11/24/04	United Kingdom
WM Wrigley Jr Co.	Joyco India Pvt Ltd	264.5	Food processing	4/1/04	United States
Flextronics International	Hughes Software (India)	226.5	Computer software services	10/19/04	United States
Holcim Ltd	Ambuja Cement India Ltd	204.7	Cement manufacturing	4/7/2005	Switzerland
P&O Steam Navigation Co.	Mundra International Container Terminal	195.0	Port Services	6/5/03	United Kingdom

Source: Bureau van Dijk, *Zephyr Mergers and Acquisitions database*.

Greenfield FDI in India

India has also become a more attractive destination for greenfield FDI in recent years. Available data show that the number of greenfield FDI projects in India rose from 247 to 980 between 2002 and 2006, increasing at an average annual rate of 41 percent. Although these data do not capture the value of all greenfield projects (numerous projects are reported without the accompanying investment value), reported greenfield project values increased from \$4.2 billion in 2002 to \$55.5 billion in 2006.¹⁰

Between 2002 and 2006, 15 of the 300 projects that reported investment values were worth at least \$1 billion each (table 2-2). These projects were concentrated in heavy industry;¹¹ property, tourism, and leisure;¹² and electronics,¹³ from a diverse range of source countries.¹⁴ All but one of these projects are new facilities. By business function, the projects are spread among manufacturing, construction, resource extraction, and R&D.

The bulk of greenfield FDI in India is destined for new facilities rather than expansions of existing ones. The share of expansion projects has been declining steadily over the period from 22 percent of reported projects in 2002 to 11 percent in 2006. Expansion projects accounted for 16 percent of total greenfield FDI during the period, with almost one-half of projects in the information and communication technology (ICT) sector.¹⁵

Distribution of FDI within India

FDI inflows within India are heavily concentrated around two major cities, Mumbai and New Delhi, with Chennai, Bangalore, Hyderabad and Ahmedabad also drawing significant shares of FDI inflows (figure 2-4). For statistical purposes, India's Department of Industrial Policy and Promotion (DIPP) divides the country into 16 regional offices. As illustrated in table 2-3, the top 6 regions account for two-thirds of all FDI inflows to India between 2000 and 2006, with the Mumbai and New Delhi regions together accounting for just under one-half of the total.¹⁶ This is consistent with greenfield FDI data, which shows that the 5 Indian states that received the largest number of greenfield FDI projects in 2006, based on the total number of projects reported, were Maharashtra (20 percent, includes the city of Mumbai),

¹⁰ OCO Consulting Ltd., *LocoMonitor FDI database*.

¹¹ Industry designations for greenfield FDI data are determined by OCO Consulting, and do not necessarily reflect the industry classifications used either by the U.S. or the Indian governments. Heavy industry includes energy, manufacturing of machinery and industrial goods, metals, and mining.

¹² Includes hotels, restaurants, and real estate.

¹³ Includes business machines and equipment, consumer electronics, electronic components, and semiconductors.

¹⁴ LocoMonitor data by country do not match official Indian government statistics, which show almost 40 percent of incoming FDI originating in Mauritius. Government of India, Ministry of Commerce & Industry, Department of Industrial Policy & Promotion, Foreign Direct Investment Statistics. Although the funding for many FDI projects may come through offshore holding companies in Mauritius in order to maximize tax benefits, an analysis based on the investing company's home office is likely more revealing.

¹⁵ OCO Consulting Ltd., *LocoMonitor FDI database*.

¹⁶ India is divided into 28 states, six union territories (UTs) and 1 national capital territory. States have their own government, whereas UTs are administered by the central government. However, Puducherry, a UT, has its own elected government. The National Capital Territory of Delhi is a special region that has its own elected government and retains a status that is a hybrid between a state and a union territory.

TABLE 2-2 Largest 15 greenfield FDI projects in India, 2002–06

Source country	Investing Company	Destination state	Capital (million dollars)	Technology/Product	Key business function
Canada	Royal Indian Rag International	Karnataka	9,000	Residential development	Construction
Luxembourg	Arcelor-Mittal	Bihar	8,940	Steel Products	Manufacturing
Netherlands	Ispat Industries	Maharashtra	4,458	Steel Cold Rolling/Forming	Manufacturing
Singapore	Flextronics	Andhra Pradesh	3,000	Wafers	Manufacturing
USA	Advanced Micro Devices (AMD)	Andhra Pradesh	3,000	Microprocessor	Manufacturing
South Korea	Pohang Iron & Steel (POSCO)	Orissa	3,000	Steel products	Manufacturing
Netherlands	European Aeronautic Defence and Space	Karnataka	2,600	Aircraft	R & D
UK	Vedanta Resources	Orissa	2,100	Aluminum Products	Manufacturing
Netherlands	Ispat Industries	Karnataka	2,000	Steel products	Manufacturing
Canada	Niko Resources	Andhra Pradesh	2,000	Natural gas exploration	Extraction
Venezuela	Petroleos de Venezuela	Rajasthan	2,000	Petroleum exploration	Extraction
Japan	Nissan	Orissa	1,500	Passenger Cars	Manufacturing
UAE	Emaar Properties	Haryana	1,500	Property developer/management	Construction
USA	AES India	Chattisgarh	1,200	Electricity/gas utilities	Electricity
Germany	SAP	Haryana	1,000	Enterprise application software	R&D

Source: LocoMonitor FDI database; and *The Financial Express*, "EADS to Open Technology Centre in Bangalore."

Figure 2-4 Map of India



Source: Copyright 2006 Map Resources

TABLE 2-3 FDI Equity Inflows, January 2000–December 2006, by region

Rank	RBI - Regional Office	State/UT*	FDI Inflows - millions USD	Share of Total (%)
1	Mumbai	Maharashtra, Dadra & Haveli, Daman & Diu*	7,486.6	24.9
2	New Delhi	Delhi, Uttar Pradesh, Haryana	7,045.0	23.4
3	Chennai	Tamil Nadu, Puducherry	2,295.1	7.6
4	Bangalore	Karnataka	2,052.4	6.8
5	Hyderabad	Andhra Pradesh	1,572.2	3.9
6	Ahmedabad	Gujarat	970.3	3.7
	All Other		8,999.6	30.1
Total			32,152.2	

Source: Government of India, Ministry of Commerce & Industry, Department of Industrial Policy and Promotion, *FDI Statistics 2006*.

Note: Because of rounding, figures may not add up to the totals shown.

Karnataka (15 percent, includes the city of Bangalore), Tamil Nadu (13 percent, includes the city of Chennai), Delhi (9 percent, includes the city of New Delhi), and Andhra Pradesh (8 percent, includes the city of Hyderabad).

The key industries attracting FDI to the Maharashtra region are energy, transportation, services, telecommunications, and electrical equipment.¹⁷ Maharashtra's transportation industry holds a particular concentration of MNC affiliates in auto components manufacturing. Prominent examples include INR Spicer India, owned by U.S.-based Dana Corp.; Kalyani Lemmerz Ltd., owned by U.S.-based Hayes Lemmerz International; Schrader Duncan, an affiliate of British-based Tomkins plc; and Fiat India, an auto parts subsidiary of the Italian auto manufacturer.¹⁸ In the services area, leading firms include Standard Chartered Bank, an affiliate of the British-based bank; I-Flex Solutions, owned by U.S.-based Oracle Corp.; Citicorp Finance and E-Serve International, both affiliates of U.S.-based Citigroup; and South East Asia Marine Engineering and Construction, owned by Technip Offshore International, based in France.¹⁹

The key sectors attracting FDI inflows to Delhi are similar: telecommunications, transportation, electrical equipment (including software), and services.²⁰ Delhi ranks second in total FDI inflows behind Maharashtra. U.S.-owned IBM is not only the largest computer services company in India, but is also the MNC with the largest number of employees in India (approximately 53,000), second only to IBM's work force in the United States.²¹ In addition to Delhi, IBM also has facilities in Bangalore, Chennai, Kolkata, Pune, Gurgaon, and Hyderabad. Goodyear, one of the largest global tire manufacturers, has built two manufacturing facilities near Delhi, entering into a joint venture with Indian company Ceat Ltd. and acquiring India-based South Asia Tyres.²² Goodyear has made an initial investment of \$12.3 million to redesign 300 retail outlets to better adapt to Indian consumer preferences.²³

¹⁷ Indian Brand Equity Foundation (IBEF). Indian States, Business and Economy. *Maharashtra*.

¹⁸ Bureau van Dijk, *Orbis Companies database*.

¹⁹ Ibid.

²⁰ IBEF. Indian States, Business and Economy. *Delhi*.

²¹ Kripalani, "IBM's India Pep Rally."

²² Goodyear India, "History by Year."

²³ *The Hindu Business Line*. "Goodyear India Changes Retailing Strategy."

The states of Uttar Pradesh and Haryana are also contained in the New Delhi region, as identified by India's statistical agencies. The geographic proximity of both states to New Delhi helps them to attract FDI. Due to its abundance of natural resources, Uttar Pradesh attracts FDI in chemicals, pharmaceuticals, and mining and minerals.²⁴ Haryana attracts FDI in the electrical equipment, transportation, and food processing sectors.²⁵ Japan-based Honda Motor Co. has a large presence throughout India, including Honda's joint venture with Hero Cycles, which has grown into the world's largest motorcycle company since its inception in 1984. The company's presence in Haryana includes an R&D center that supports two manufacturing facilities which together produce over 3 million motorcycles annually. U.S.-based Dow Corning and U.K.-based GlaxoSmithKline have invested in the state's chemical and pharmaceutical industries, respectively.

Automotive and auto components are the largest sectors attracting FDI into Tamil Nadu. Ford, Hyundai, and Mitsubishi all have multi-million dollar investments in Tamil Nadu. The state capital, Chennai, is sometimes called the "Detroit of India."²⁶ Other sectors attracting FDI include port infrastructure, ICT, and electronics.²⁷ The bulk of projects in Andhra Pradesh, which includes the city of Hyderabad, are associated with software and, to a lesser extent, hardware for computers and telecommunications. The same is true of projects in Karnataka, where Bangalore is located; Karnataka also has a large number of projects in the automotive sector (34).

India's more rural areas have attracted a smaller number of high-value projects. Large greenfield FDI projects in Orissa include bauxite mining and associated aluminum smelting operations as well as steel and automotive facilities. Pohang Iron and Steel Co.'s (POSCO - Korea) planned steel mill in Orissa is expected to be the largest FDI project in India, and will ultimately involve \$12 billion in total FDI on 4000 acres, with an annual steel making capacity of 12 million tons by 2020.²⁸ As of May 2007, however, the POSCO project was generating intense local opposition by farmers worried about the loss of their land, and its future was uncertain. Luxembourg-based Arcelor-Mittal, the world's largest steel maker, has also signed a memorandum of understanding with the Orissa state government to build an \$8.7 billion steel mill, but faces similar opposition to its plans.²⁹ Other companies investing in greenfield metals production and auto projects in Orissa include Russian Aluminum, Vedanta Resources (United Kingdom), Dubai Aluminum, and Nissan (Japan).³⁰ The state of Orissa accounted for 15 and 30 percent, respectively, of the total value of greenfield FDI reported in 2004 and 2005. As of April 2007, Arcelor-Mittal was also considering investing in a second large steel mill in India, in the state of Jharkhand.³¹

²⁴ IBEF. Indian States, Business and Economy. *Uttar Pradesh*.

²⁵ *Ibid.*, *Haryana*.

²⁶ See chapter 7 for a discussion of FDI in the passenger cars and automotive components industry.

²⁷ IBEF. Indian States, Economy and Business. *Tamil Nadu*.

²⁸ OCO Consulting Ltd., *LocoMonitor FDI database*; and *Agence France-Presse English Wire*, "India's Steel Production Set to Triple by 2015 As Demand Booms."

²⁹ *Press Trust of India*, "Orissa to Pursue POSCO Project with 'Humane' Face"; and *Press Trust of India*, "VP Writes to PM on POSCO Issue."

³⁰ OCO Consulting Ltd., *LocoMonitor FDI database*.

³¹ Representative of Arcelor-Mittal, telephone interview by Commission staff, April 20, 2007.

FDI Flows to India by Source Country

Mauritius is the largest country investor in India, followed by the United States and the United Kingdom. Table 2-4 shows the top 10 country sources of FDI flows to India between 1991 and 2006.

TABLE 2-4 Top Country Investors in India, 2006

Country	FDI Inflows, April–December, 2006-07	FDI Inflows, August 1991–December 2006	Share of FDI inflows, August 1991– December 2006
	(Million dollars)		(percent)
Mauritius	4,215	16,000	33
United States	607	5,645	12
United Kingdom	1,682	3,662	8
Netherlands	488	2,482	5
Japan	52	2,176	5
Singapore	533	1,583	3
Germany	70	1,652	3
France	80	858	2
South Korea	62	814	2
Switzerland	47	683	1
All other	1,434	12,617	26
Total	9,270	48,172	

Source: Government of India, Ministry of Commerce & Industry, Department of Industrial Policy and Promotion, Fact Sheet on Foreign Direct Investment.

Note: Share of total inflows may not sum to 100 due to rounding. Shares are calculated in U.S. dollars and may not match shares calculated in Indian rupees.

The United States and the European Union are the largest acquirers of Indian companies, measured by both value and number of deals (figure 2-5). For the number of M&A deals with a reported value, the U.S. and the EU together accounted for over \$8 billion, or roughly 67 percent of the total value in the Indian M&A market between 2000 and 2006. Indian government statistics do not present information on the industry distribution of FDI inflows from each source country. However, an analysis of M&A and greenfield FDI project data sheds light on the industry destinations for the major countries (table 2-5).

Manufacturing is the leading industry destination, followed by information (including telecommunications services) and professional, scientific, and technical services (including business services such as data processing and telephone call centers). Figure 2-6 shows the leading countries in terms of greenfield FDI from 2002 through 2006.

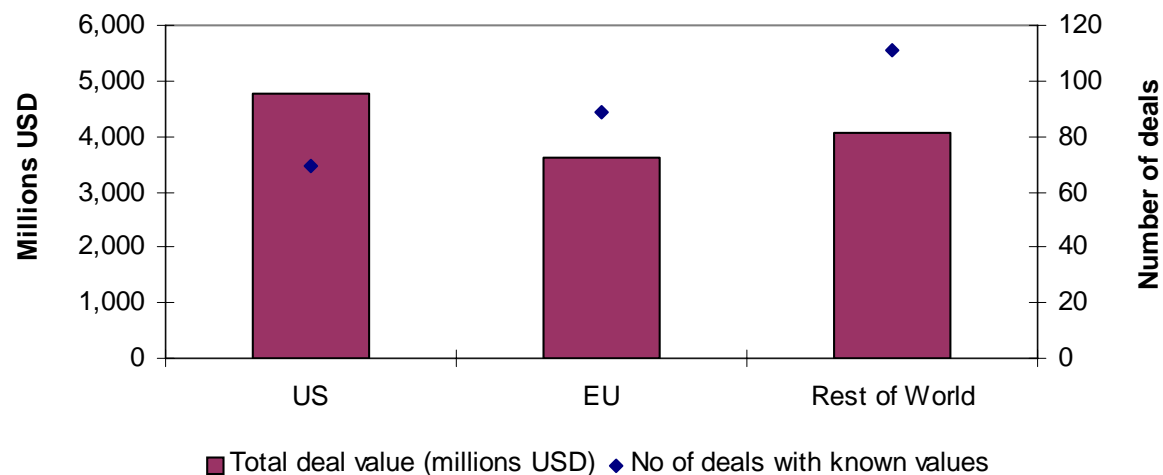
TABLE 2-5 India, M&A deals by acquirer country and industry of the target company, 2000–06

Acquirer Countries	Manufacturing	Information	Financial Services	Professional, Scientific, and Technical Services	Other	Total
United States	39	55	13	56	43	206
European Union	93	22	12	33	18	178
Singapore	11	10	0	11	5	37
Japan	12	2	3	4	6	27
Mauritius	10	1	3	3	5	22
Australia	2	5	1	6	4	18
Switzerland	9	0	0	0	0	9
Korea	4	2	0	2	0	8
Rest of World	35	11	7	14	15	82
Total	215	108	39	129	66	557

Source: Compiled from Bureau van Dijk, *Zephyr Mergers and Acquisitions database*.

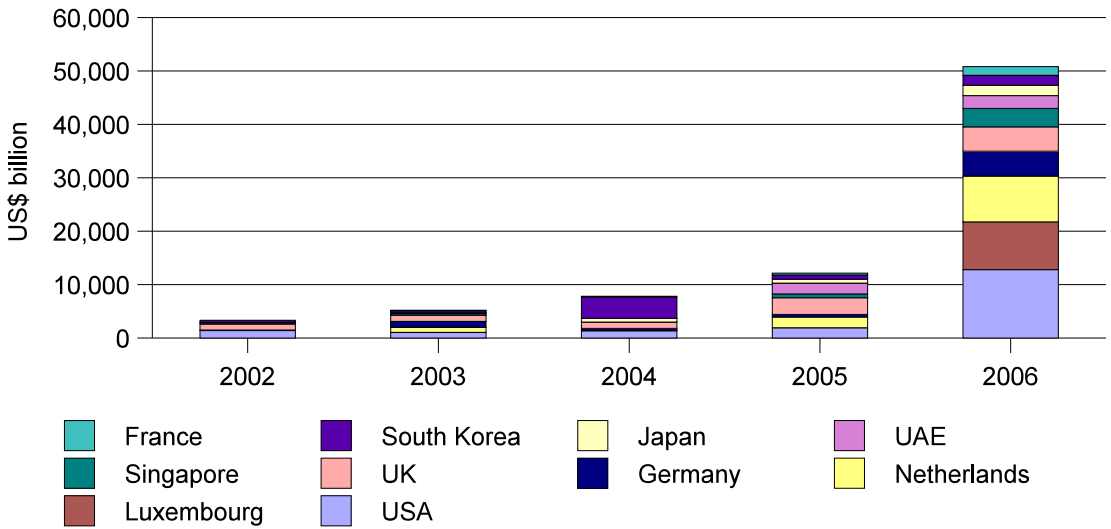
Notes: Due to rounding and multiple target company industry classifications, numbers may not add to total. Industry groups reflect the North American Industry Classification System (NAICS) also used in official U.S. Government statistics.

Figure 2-5 India M&A number of deals with known value, 2000–06



Source: Compiled from Bureau van Dijk, *Zephyr Mergers and Acquisitions database*.

Figure 2-6 Total reported greenfield FDI by selected countries, 2002–06



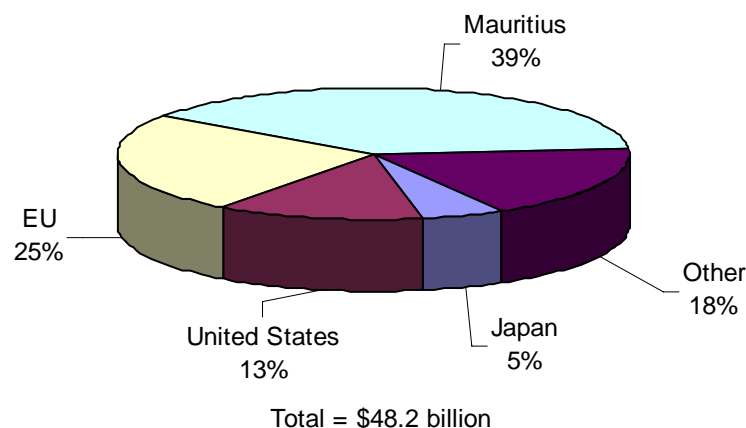
Source: OCO Consulting Ltd., *LocoMonitor FDI database*.

Mauritius

According to Indian government statistics, Mauritius accounts for the largest share of cumulative FDI inflows to India from 1991 to 2006, nearly 40 percent (figure 2-7).³² It is unlikely, given the small size of the Mauritian economy, that much of the capital destined for India originated in Mauritius. According to LocoMonitor data, only four greenfield FDI projects (all from 2002) list Mauritius as the source country.³³ Many companies based outside of India utilize Mauritian holding companies to take advantage of the India-Mauritius Double Taxation Avoidance Agreement (DTAA). The DTAA allows foreign firms to bypass Indian capital gains taxes, and may allow some India-based firms to avoid paying certain taxes through a process known as “round tripping.”³⁴

³² Department of Industrial Policy and Promotion. Fact Sheet on Foreign Direct Investment.
³³ The projects were small, with a combined value of \$31 million. Two of the projects were in software development, one was in financial services, and the last was in gold mining.
³⁴ Round-tripping is a process whereby a company operating in India registers a subsidiary in Mauritius, and then routes profits through the subsidiary in order to avoid paying capital gains taxes on its profits in India.

Figure 2-7 Share of top investing countries, cumulative FDI equity inflows, August 1991–December 2006



Source: Compiled from Department of Industrial Policy and Promotion, Fact Sheet on Foreign Direct Investment.

Note: Shares are calculated in Indian rupees, and may not match shares calculated in U.S.

The extent of round tripping by Indian companies through Mauritius is unknown. However, the Indian government is concerned enough about this problem to have asked the government of Mauritius to set up a joint monitoring mechanism to study these investment flows.³⁵ The potential loss of tax revenue is of particular concern to the Indian government. The existence of the treaty makes it difficult to clearly understand the pattern of FDI flows,³⁶ and likely leads to reduced tax revenues collected by the Indian government. Chapter 5 presents a more complete discussion of the DTAA.

United States

The United States is the second largest source of FDI in India (13 percent of the total), valued at \$5.6 billion in cumulative inflows between August 1991 and December 2006. According to the Indian government, the top sectors attracting FDI from the United States to India during 1991–2004 (latest available) are fuel (36 percent), telecommunications (11 percent), electrical equipment (10 percent), food processing (9 percent), and services (8 percent).³⁷

According to the available M&A data, the two top sectors attracting FDI inflows from the United States are computer systems design and programming and manufacturing. These

³⁵ Sikarwar, “Mauritius Overhauls DTAA Agreement.”

³⁶ FDI inflows are allocated to the countries which have direct transactions with India, not to the ultimate source of the capital. For a corporation based in the Netherlands with a holding company in Mauritius, for example, the direct transaction takes place between Mauritius and India, even though the capital may ultimately have originated in the Netherlands.

³⁷ Fuel includes power and oil refineries; telecommunications includes radio paging, cellular mobile and basic telephone services; electrical equipment includes computer software and electronics; services includes financial and non-financial services. Embassy of India. “U.S. Investments in India.”

data roughly correspond to the overall FDI sectoral breakdown with the exception of fuel (including power generation and oil refineries). Given India's general lack of existing power infrastructure, operations involved with power generation and oil refineries may be better suited to greenfield investments. U.S. companies that are actively pursuing or have recently completed M&A deals in the Indian telecommunications, electrical equipment, and service sectors include Oracle, Intel, IBM, HP, and Electronic Data Systems (EDS). Ford, Parker-Hannifin, Sara Lee, SC Johnson, and Caterpillar have been actively investing in the manufacturing sector.³⁸

According to Indian government statistics, FDI inflows from the United States accounted for 13 percent of total FDI inflows between August 1991 and December 2006. According to LocoMonitor data for 2002–06, U.S. greenfield investment has averaged 44 percent of the total number of projects listed and 18 percent of the total reported value for projects. The industry receiving the largest share of U.S. greenfield FDI has been followed by electronics and business services (figure 2-8). Among the announced ICT projects that have value data reported, Google's \$1 billion investment in internet infrastructure in Andhra Pradesh is the largest. The internet search engine company intends to open a "server farm" (a collection of computer servers) to enhance its internet and data storage services in Asia.³⁹ Most of the other U.S.-funded ICT projects are for software development.⁴⁰

Reported greenfield FDI projects by U.S. companies have been generally smaller by value (about one-third the size, on average) than projects financed by non-U.S. companies. Some of this disparity in size may be explained by the much greater emphasis on R&D activities, including software development, by U.S. firms than by non-U.S. firms investing in India. Over one-half of all listed R&D projects were funded by U.S. companies, and research facilities tend to require considerably less capital than manufacturing facilities. Since 2002, many of the major U.S. software and computer brands, such as Microsoft, Honeywell, Cisco Systems, Adobe Systems, McAfee, and Intel have established R&D operations in India, primarily in Hyderabad or Bangalore.

The majority of U.S. electronics companies that have announced greenfield projects in India are concentrated in the semiconductor sector. By far the largest such project is AMD's chip manufacturing facility in Hyderabad, Andhra Pradesh. This \$3 billion site will produce about 30,000 wafers per month, with each wafer containing between 100 and 1,000 chips. Intel plans to invest close to \$1 billion in India, primarily expanding the company's R&D center in Bangalore, over a multi-year period.⁴¹

Official data on FDI flows and stocks is compiled on a balance of payments (BOP) basis, and reflects the total capital that crosses borders. These data are one indicator of the level of FDI in a given country, and generally the indicator that is most widely available. An alternate indicator of FDI activity is the extent of operations by foreign-owned affiliates in a given economy. These data are not available for all countries. For the United States, however, there is a substantial amount of available information, including data on sales and assets of U.S.-owned affiliates in India, employment by those affiliates, and R&D performed by U.S.-owned firms in India.

³⁸ Bureau van Dijk, *Zephyr Mergers & Acquisitions database*.

³⁹ iTWire, "Google Likely to Set Up \$1 Billion Datacenter in India."

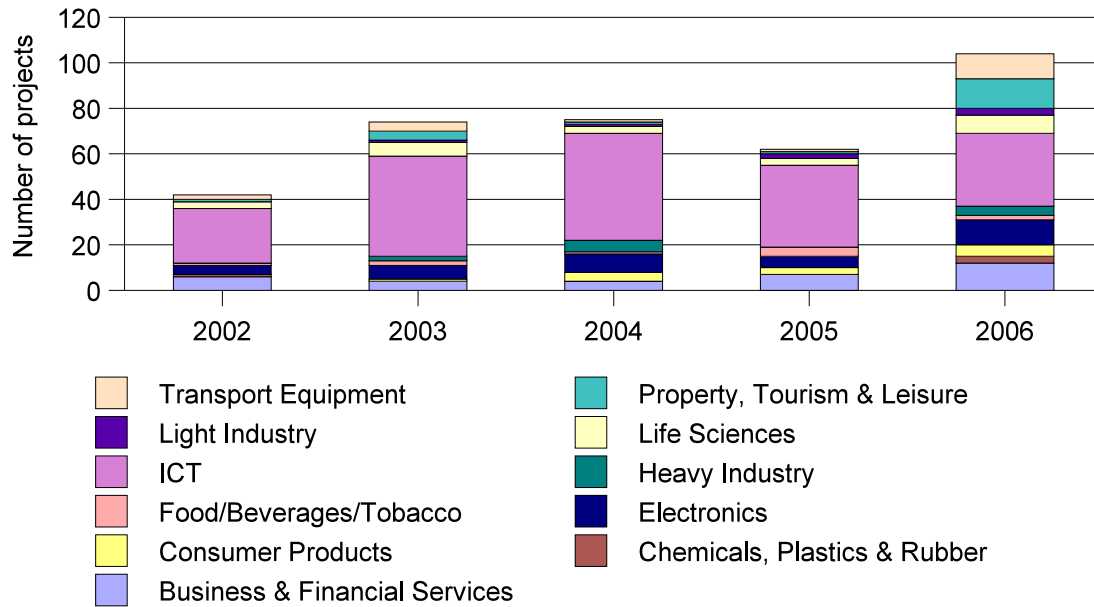
⁴⁰ OCO Consulting Ltd., *LocoMonitor FDI database*.

⁴¹ Intel, "Intel Outlines \$1 Billion Multi-Year Investment Plans."

assets of U.S.-owned affiliates in India, employment by those affiliates, and R&D performed by U.S.-owned firms in India.

In 2004 (latest available), there were 577 affiliates of U.S. firms in India, of which 198 were majority-owned by U.S. firms (table 2-6).⁴² U.S. majority-owned affiliates (MOFAs) employed a total of 165,600 workers in India. The largest share (36 percent) was found in the manufacturing sector, most prominently in the machinery, chemicals, and transportation equipment manufacturing segments. Other important categories of employment are professional, scientific, and technical services; and wholesale trade, with 29 percent and 18 percent of U.S. affiliate employment, respectively. While manufacturing remains the largest sector for U.S. employment, the latter two sectors have accounted for an increasing share of employment by U.S.-owned affiliates in recent years (figure 2-9). U.S.-owned manufacturing affiliates also reported larger assets than affiliates in other sectors in 2004, followed by finance and insurance, and utilities affiliates (figure 2-10).

Figure 2-8 US reported greenfield FDI projects in India, by cluster 2002–06



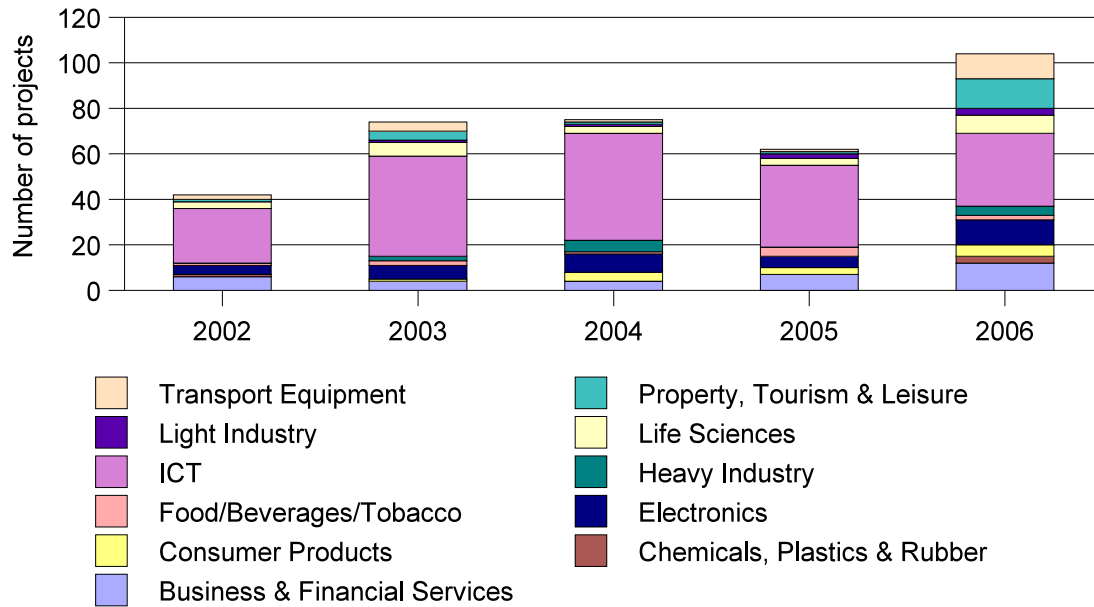
Source: OCO Consulting Ltd., *LocoMonitor FDI database*.

⁴² According to U.S. government statistical standards, consistent with IMF standards, an affiliate is any firm with an equity share of 10-percent or more. The U.S. Department of Commerce compiles statistics on both U.S.-owned affiliates and majority-owned affiliates (MOFAs), with greater detail available for MOFAs. USDOC, BEA. International Economic Accounts, "Operation of Multinational Companies."

assets of U.S.-owned affiliates in India, employment by those affiliates, and R&D performed by U.S.-owned firms in India.

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Figure 2-8 US reported greenfield FDI projects in India, by cluster 2002–06



Source: OCO Consulting Ltd., *LocoMonitor FDI database*.

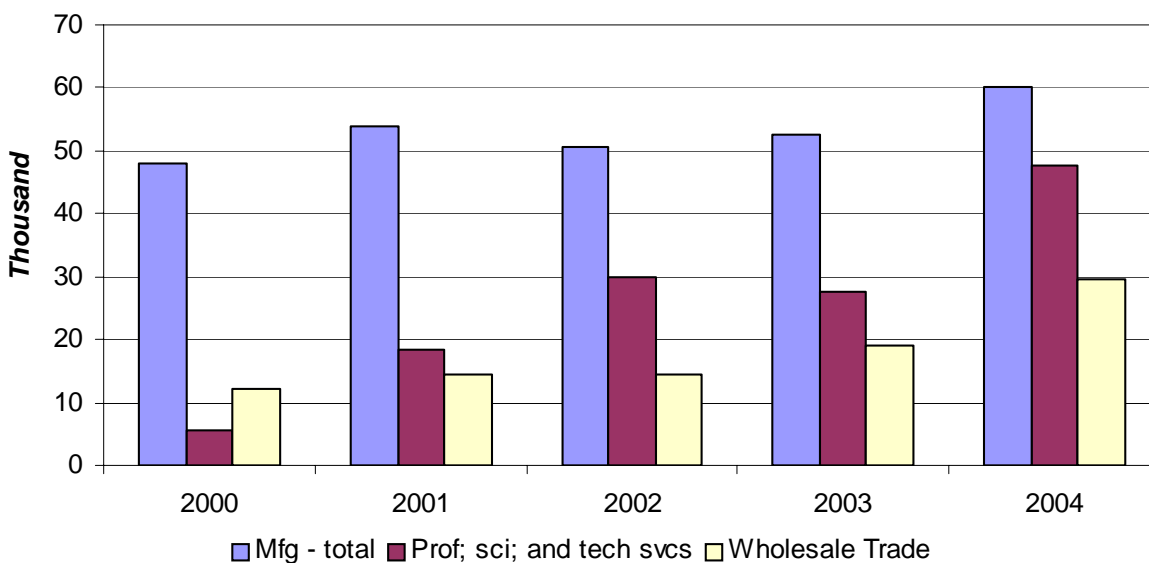
⁴² According to U.S. government statistical standards, consistent with IMF standards, an affiliate is any firm with an equity share of 10-percent or more. The U.S. Department of Commerce compiles statistics on both U.S.-owned affiliates and majority-owned affiliates (MOFAs), with greater detail available for MOFAs. USDOC, BEA. International Economic Accounts, "Operation of Multinational Companies."

TABLE 2-6 Selected data for U.S. majority-owned affiliates in India, 2004

	All industries	Manufacturing	Wholesale trade	Professional, scientific, and technical services	Information	Financial services
Number of affiliates (units)	198	N/A	N/A	N/A	N/A	N/A
Employment (thousands)	166	60	30	48	11	3
	<i>Million dollars</i>					
Assets	20,188	6,453	2,146	1,520	2,277	3,344
Sales	13,100	6,569	3,620	1,293	745	243
Value-added	3,937	1,689	931	812	346	30
Net income	637	235	158	171	89	11

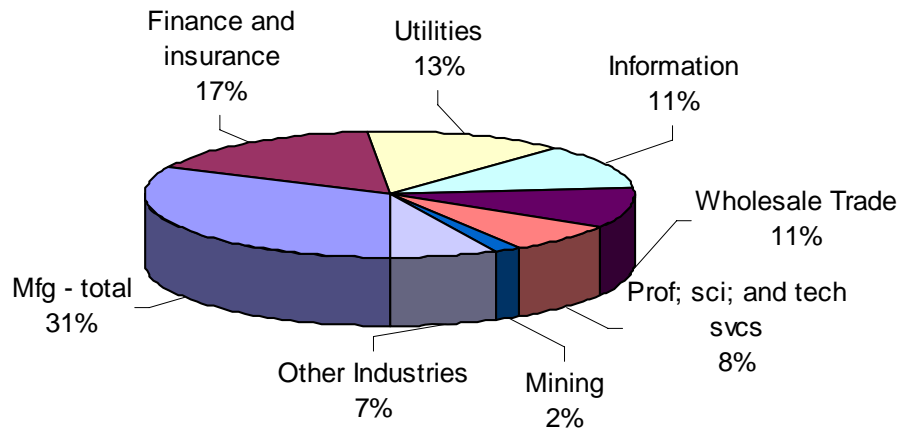
Source: USDOC, BEA International Economic Accounts, "Operations of Multinational Companies".

Figure 2-9 Employment, MOFAs, India, 2000–04



Source: Bureau van Dijk, *Zephyr Mergers and Acquisitions database*.

Figure 2-10 MOFA Assets, 2004



Source: USDOC, BEA, International Economic Accounts, "Operations of Multinational Companies".

The top four sectors in terms of value-added by U.S.-owned affiliates in India were, respectively, manufacturing; wholesale trade; professional, scientific, and technical services; and information services (primarily telecommunications, most likely).⁴³ Within the manufacturing sector, the largest industries were chemicals and machinery manufacturing. In 2003, U.S. MOFAs reported R&D-related expenditures of \$81 million in India. Of this total, 43 percent was in the manufacturing sector, with most of the remainder likely in the area of professional, scientific, and technical services.⁴⁴ Given the sharp increase in overall FDI in India since 2003, and the individual projects noted above, R&D-related expenditures by U.S. MOFAs have also likely increased.

European Union

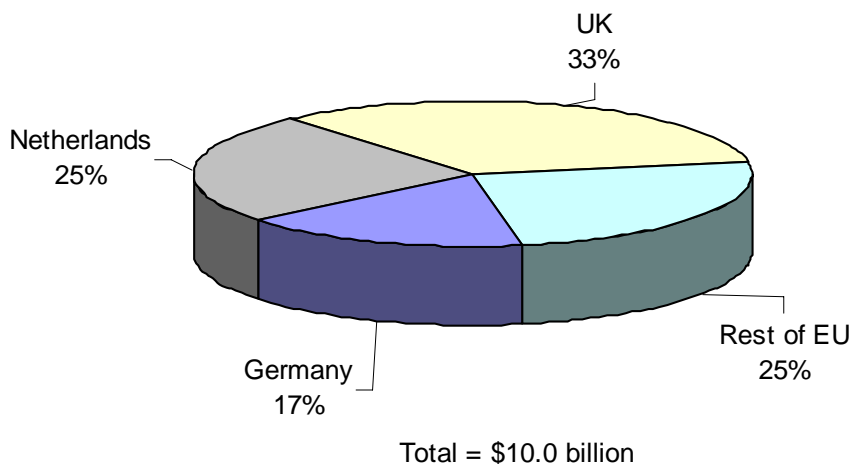
Within the European Union, the largest country investors were the United Kingdom and the Netherlands, with \$3.7 billion and \$2.5 billion, respectively, of cumulative FDI inflows between 1991 and 2006. The United Kingdom, the Netherlands, and Germany together accounted for almost 75 percent of all FDI flows from the EU to India (figure 2-11). All EU countries together accounted for approximately 25 percent of all FDI inflows to India between August 1991 and December 2006. FDI from the EU to India is primarily concentrated in the power/energy, telecommunications, and transportation sectors.⁴⁵

⁴³ The U.S. Department of Commerce does not provide a breakdown of the information category, but there is a significant amount of U.S. FDI in India's telecommunications industry. The information category also includes publishing, motion picture and sound recording, broadcasting, and data processing services.

⁴⁴ The R&D figure for professional, scientific, and technical services was suppressed to avoid disclosing individual company information.

⁴⁵ EC. "Bilateral Trade Relations - India."

Figure 2-11 EU share of FDI stock in India, 1991–2006



Source: Compiled from *Department of Industrial Policy and Promotion, FDI Statistics 2006*.

The available M&A data shows that the top sectors attracting FDI from the European Union are similar to FDI from the United States. Manufacturing; information services; and professional, scientific, and technical services have attracted the largest shares of FDI inflows from the EU to India since 2000. Unilever, Reuters Group, P&O Ports Ltd, Vodafone, and Barclays are examples of EU companies investing in India by means of mergers and acquisitions.

European companies accounted for 31 percent of the total number and 43 percent of the total value for all reported greenfield FDI projects. The number of EU greenfield projects was distributed among four major clusters: ICT (17 percent), heavy industry (16 percent), business and financial services (15 percent), and transport (11 percent). However, the heavy industry cluster accounted for the majority (68 percent) of the total value of these projects.⁴⁶

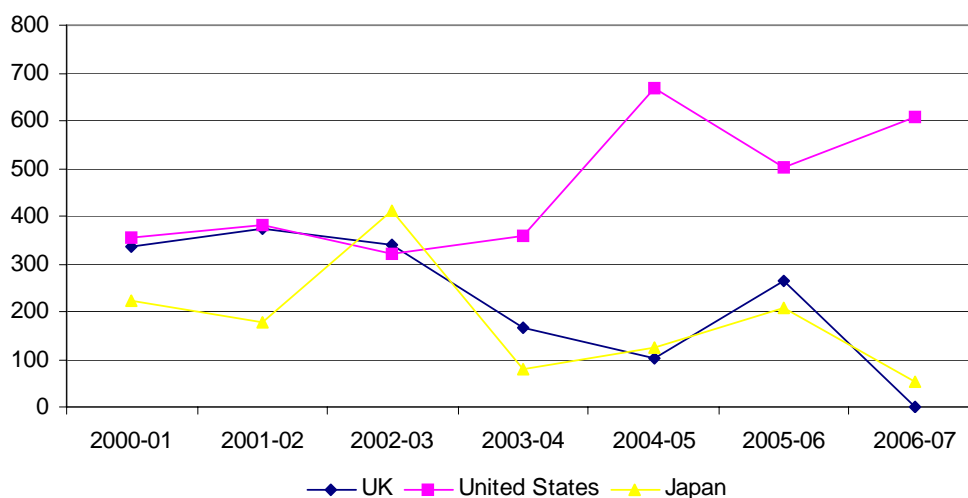
Japan

Japan was the fourth largest source of cumulative FDI inflows in India between 1991 and 2006, but the recent trend of FDI inflows from Japan differs from those of other source countries. FDI inflows to India from most other principal source countries have steadily increased since 2000, but inflows from Japan to India have decreased during this time period (figure 2-12).⁴⁷ There does not appear to be a single factor that explains the recent decline in FDI inflows from Japan to India. India is, however, one of the largest recipients of Japanese Official Development Assistance (ODA), through which Japan has assisted India in building infrastructure, including electricity generation, transportation, and water supply. It is possible that this Japanese government assistance may crowd out some private sector Japanese investment.

⁴⁶ OCO Consulting Ltd., *LocoMonitor FDI database*.

⁴⁷ Government of India, Ministry of Commerce & Industry, Department of Industrial Policy and Promotion. Fact Sheet on Foreign Direct Investment.

Figure 2-12 FDI inflows, selected countries, 2000-06



Source: Compiled from Government of India, Ministry of Commerce & Industry, Department of Industrial Policy and Promotion, *FDI Statistics*.

Note: Data for 2006-07 reflect April through December only.

The top sectors attracting FDI inflows from Japan to India (January 2000 to November 2006) are transportation (54 percent), electrical equipment (7 percent), telecommunications, and services (3 percent).⁴⁸ The available M&A data corresponds with the overall FDI trends in sectors attracting inflows from Japan to India. Companies dealing in the transportation industry, specifically automobiles, and the auto component/peripheral industries dominate M&A activity from Japan to India, including Yamaha Motors, Toyota, Kirloskar Auto Parts Ltd., and Mitsubishi Heavy Industries Ltd. Japanese companies have also invested in an estimated 148 greenfield FDI projects valued at least at \$3.7 billion between 2002 and 2006.⁴⁹

Japanese companies accounted for a relatively small share of greenfield FDI in India: 5 percent of the projects and 4 percent of the value. The transport equipment cluster received the largest share (34 percent) of Japanese greenfield FDI projects and 79 percent of Japanese greenfield FDI value. The largest project in the cluster is Nissan's \$1.5 billion, export-oriented passenger car plant in Manesar, Orissa.⁵⁰ The ICT and electronics clusters each garnered 17 percent of the projects, but only small amounts of value. The only other cluster to receive more than a 10 percent share of Japanese capital was the chemical, plastics, and rubber industry. In one prominent example, Mitsubishi Chemical is investing \$368 million to expand its existing basic organic chemicals production in Haldia, West Bengal.⁵¹ In April 2007, Japanese and Indian officials announced a major new collaboration between the two countries to build a new Delhi-Mumbai industrial corridor, to be funded through a public-private partnership and private-sector FDI, primarily from Japanese companies. The project is expected to begin in January 2008 with initial investment of \$2 billion from the two countries. The corridor will cross 6 states and extend for 1,483 km, in an area inhabited

⁴⁸ Department of Industrial Policy and Promotion. "FDI Synopsis on Japan."

⁴⁹ "Upbeat India Scales Up FDI Projections by 25 Percent," *Khaleej Times*.

⁵⁰ OCO Consulting Ltd., *LocoMonitor FDI database*.

⁵¹ *Ibid.*

by 180 million people. At completion in 2015, the corridor is expected to include total FDI of \$45–50 billion. A large share of that total is destined for infrastructure, including a 4,000 MW power plant, 3 ports, and 6 airports, along with additional connections to existing ports. Private investment is expected to fund 10-12 new industrial zones, upgrade 5–6 existing airports, and set up 10 logistics parks. The Indian government expects that by 2020, the industrial corridor will contribute to employment growth of 15 percent in the region, 28 percent growth in industrial output, and 38 percent growth in exports.⁵²

United Arab Emirates (UAE)

The UAE ranked fourteenth in FDI stock in India in 2006, but the two countries are in the process of signing several economic and political cooperation agreements which will likely lead to increased UAE investment in India. The March 2007 visit to India by officials from Dubai has already produced commitments for cross border investments of over \$30 billion over the next two years.⁵³

Sectors attracting interest from the UAE include ports, infrastructure, and hotel construction. One notable recent agreement involves a 50:50 joint venture between Dubai-based Nakheel and Indian real estate developer DLF. The company plans to develop 40,000 acres for housing with an initial investment of \$10 billion. Greenfield FDI projects in India from UAE-based investors are valued at more than \$2 billion in each of the last two years, many of which are aimed at infrastructure and real estate development.⁵⁴

The three clusters with the largest number of UAE-funded greenfield FDI projects during 2002–06 are light industry; property, tourism, and leisure; and logistics. The light industry projects, concentrated in textiles and building materials, are typically less capital intensive. Conversely, heavy industry had only one UAE-funded greenfield FDI project, but it was valued at \$1.1 billion: Dubai Aluminum is setting up a mine, refinery, and smelter in Orissa.⁵⁵ Dubai Ports World has been the most active UAE investor in India's logistics cluster, with plans to establish container port operations in numerous Indian ports. The extensive network is, in fact, leading to questions about whether the company is gaining too large a share of the market with its control of 50 percent of India's container shipping traffic.⁵⁶

UAE investors claim that one reason for their increased interest in India is related to the U.S. response to the September 11, 2001 terrorist attacks on the United States. The U.S. market is perceived to be less welcoming to foreign ownership, particularly from the Gulf states, so investors are looking for other markets to absorb their investment dollars.⁵⁷

⁵² *BusinessStandard.com*, "Industrial Corridor to Get \$50 Billion Investment"; *Indian Express*, "Work on Delhi-Mumbai Corridor from January"; and *Gulf News.com*, "Japan to Help India Build \$50 Billion Industry Corridor."

⁵³ Jha, "UAE, India to Expand Ties."

⁵⁴ *Khaleej Times*, "Upbeat India Scales Up FDI Projections by 25 Percent."

⁵⁵ OCO Consulting Ltd., *LocoMonitor FDI database*.

⁵⁶ *Khaleej Times*, "DP World's India Foray Runs into Murkier Waters."

⁵⁷ *Ibid.*, "Gulf Arab Investors Target Asia as US Ties Wane."

FDI Flows to India by Industry

The sectors receiving the largest shares of total FDI inflows between August 1991 and December 2006 were the electrical equipment sector and the services sector, each accounting for 17 percent. These were followed by the telecommunications, transportation, fuels, and chemicals sectors (table 2-7).⁵⁸ The top sectors attracting FDI into India via M&A activity were manufacturing; information; and professional, scientific, and technical services.⁵⁹ These sectors correspond closely with the sectors identified by the Indian government as attracting the largest shares of FDI inflows overall.

TABLE 2-7 India, FDI by sector, selected years

Sector	2006–07	Cumulative Inflows	Share of total inflows
	(April–December)	(August 1991–December 2006)	
	(Million dollars)		(percent)
Electrical equipment	1,429	6,923	17.0
Services	3,820	6,911	17.0
Telecommunications	490	3,861	9.3
Transportation	368	3,548	8.4
Fuels (power and oil refinery)	192	2,773	6.7
Chemicals	147	2,290	5.2
Pharmaceuticals	157	1,165	2.8
Food processing	49	1,227	2.8
Cement and gypsum	210	956	2.4
Metallurgical industries	148	803	2.0

Source: Government of India, Ministry of Commerce & Industry, Department of Industrial Policy and Promotion, *FDI Statistics 2006*.

ICT and electronics have been the largest industry recipients of greenfield FDI into India in recent years, but have seen the number of new greenfield projects plateau since 2004. These data do not signify that greenfield investment in these sectors has stagnated. Rather, the size of the projects in these industries has increased substantially. For example, global semiconductor manufacturers Advanced Micro Devices (AMD - United States) and Flextronics (Singapore) have entered into separate joint ventures with SemIndia to build semiconductor manufacturing facilities in Hyderabad. The \$3 billion AMD-SemIndia joint venture will produce semiconductor chips which can then be used to manufacture electronic products in the Flextronics-SemIndia \$3 billion joint venture. The chip fabrication facility will manufacture chips for cell phones, set-top boxes, personal computers, and similar products.⁶⁰ SemIndia is attempting to capitalize on India's domestic demand for semiconductors, predicted to grow from \$3.3 billion in 2006 to \$40 billion in 2016.⁶¹

⁵⁸ Government of India, Ministry of Commerce & Industry, Department of Industrial Policy and Promotion, *FDI Statistics 2006*

⁵⁹ The definition of industry sectors in the Zephyr database follows the North American Industry Classification System (NAICS) followed by U.S. government statistical agencies.

⁶⁰ Flextronics International Ltd., "SemIndia Announces Flextronics as a Strategic Partner."

⁶¹ *The Economic Times*, "Hindustan Semiconductor to Chip In \$4 B for Indian Fabs."

The heavy industry and transport equipment sectors together attracted over \$30 billion in greenfield FDI projects in 2006. The cluster with the highest reported value during 2002–06 is heavy industry. Projects in this sector tend to be highly capital intensive, with single projects frequently requiring upwards of \$6 billion in startup investment costs. The largest recent examples include the POSCO and Arcelor-Mittal Steel projects noted above, and Vedanta Resources’ (United Kingdom) aluminum smelter project, all planned for the state of Orissa.⁶² Reported greenfield FDI in the transport equipment sector exceeded \$11 billion in 2006.⁶³

Another major recipient sector was property, tourism and leisure, with over \$6.1 billion in 2006. This level of investment was well above the annual average for this sector, although still below the high of \$9.2 billion in 2004. The Asian tsunami on December 26, 2004, may have dampened enthusiasm for such investment, as investment plunged to just over \$100 million in 2005 before rebounding to \$6.1 billion in 2006. The industry is expected to continue to attract substantial FDI. At least 50 non-Indian hotel chains planned to enter the market as of April 2007, targeting India’s low level of hotel penetration around the country.⁶⁴ In particular, Royal Indian Raj International Corp. has signed a contract with Choice Hotels to build 15,000 hotel rooms around the country, with an estimated FDI value of \$6 billion.⁶⁵

Figure 2-13 shows that greenfield FDI projects have become more widely distributed across industries over time. In 2002, FDI projects were concentrated in the ICT industry, followed by business and financial services; and electronics. By 2006, the distribution of the projects among the clusters was more uniform, although the ICT cluster still was the largest. Figure 2-14 shows how greenfield FDI capital has been distributed among the various sectors. Note that the two “pies” are not the same size—the total amount invested in 2006 (\$55.5 billion) is more than 13 times the total in 2002 (\$4.2 billion). Even if an industry’s share of the total pie decreased between 2002 and 2006, that industry may still have significantly increased its total greenfield FDI. The ICT sector is a case in point, down 12 percent by relative share from 2002 to 2006, but recording increased FDI of more than \$4.1 billion.

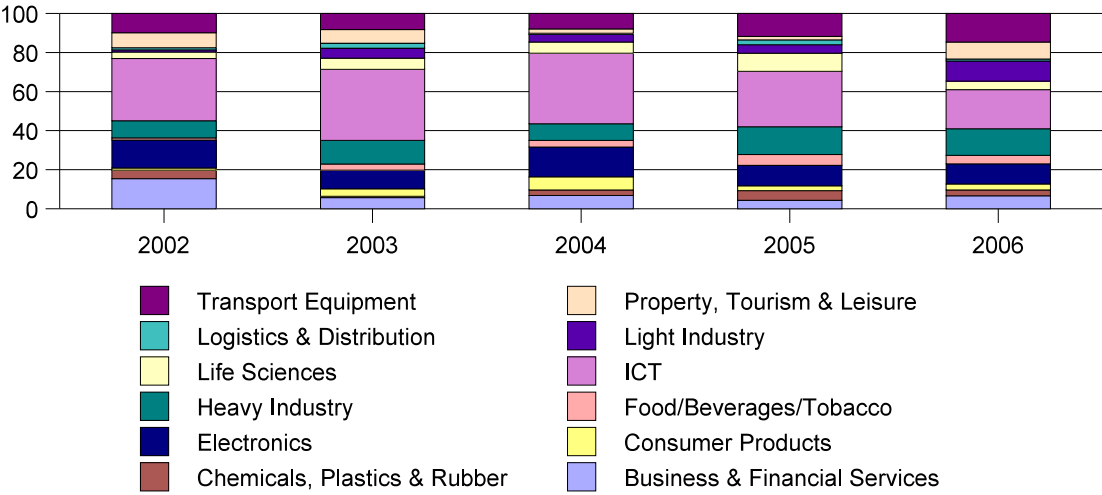
⁶² OCO Consulting Ltd., *LocoMonitor FDI database*.

⁶³ *Ibid.*

⁶⁴ Business India Intelligence, “Hotels.”

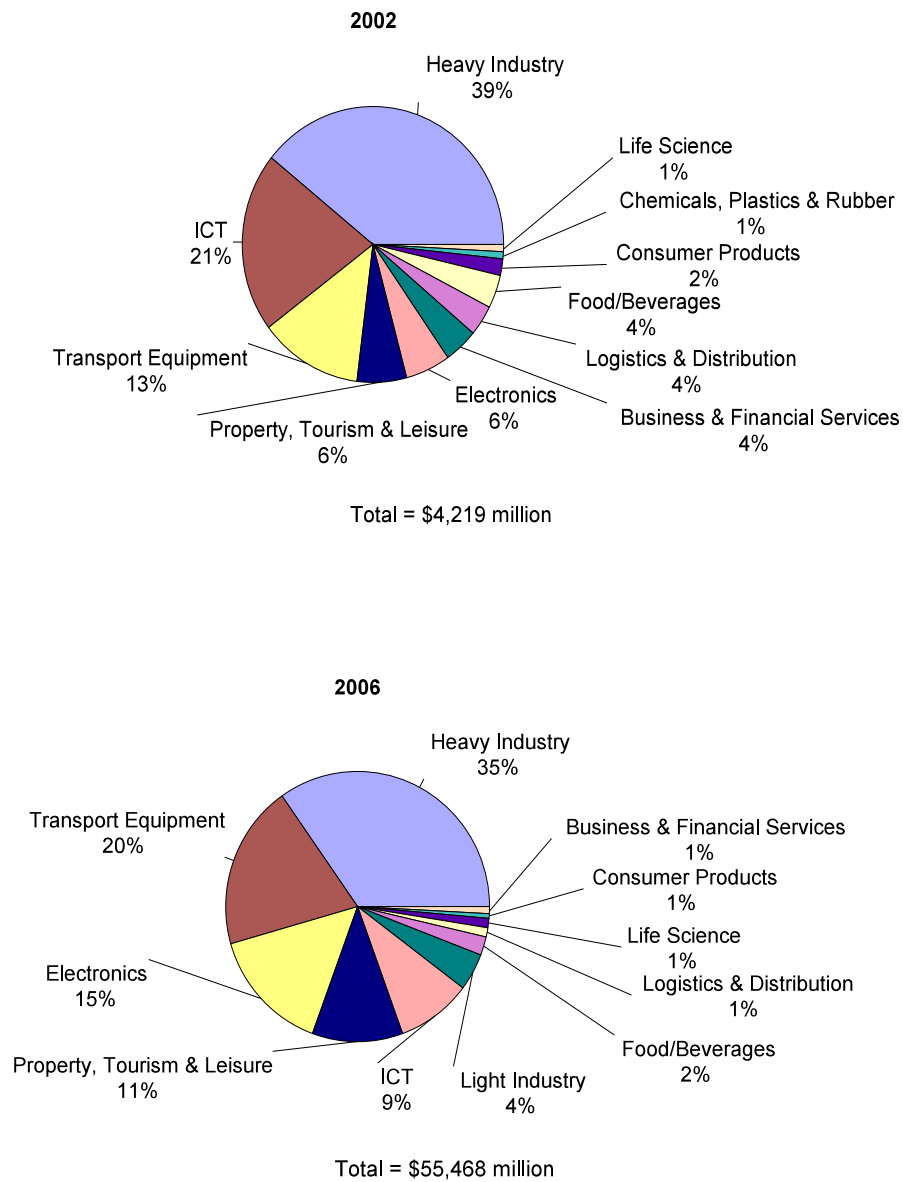
⁶⁵ Royal Indian Raj International Corp., “Royal Indian Raj International Corporation.”

Figure 2-13 Cluster shares of total projects, annually, 2002–06



Source: OCO Consulting Ltd., *LocoMonitor FDI database*.

Figure 2-14 Cluster shares of reported greenfield FDI in India, 2002 and 2006



Source: OCO Consulting Ltd., *LocoMonitor FDI database*.

TABLE 3-1 Inward FDI flows for selected countries, 2002–05, (millions of U.S. dollars)

Country	2002	2003	2004	2005
India	5,627	4,585	5,474	6,598
Brazil	16,590	10,144	18,146	15,066
China	52,743	53,505	60,630	72,406
Hungary	2,994	2,137	4,654	6,699
Malaysia	3,203	2,473	4,624	3,967
Mexico	18,275	14,184	18,674	18,055
Poland	4,131	4,589	12,873	7,724
Russia	3,461	7,958	15,444	14,600

Source: United Nations Conference on Trade and Development, *World Investment Report 2006*.

times that of investment into India. FDI into Brazil and Mexico during the period has been roughly three times that of India. FDI into Poland in the past 2 years surpassed that into India. A closer examination of the factors that influence FDI, such as economic growth, wage levels, infrastructure, and educational level of the work force, suggests that India is a country with vast potential that has yet to be fully realized.⁴

Economy

Strong Economic Growth

Few countries have experienced the economic dynamism that India has enjoyed during the past decade. This positive economic environment has attracted FDI by firms anxious to take advantage of higher Indian living standards and increased demand for goods. The Indian economy has grown, on average, more than 7 percent annually since 1994,⁵ and is forecast to grow at a comparable rate in 2006. By 2004, India had become the tenth largest economy in the world and the fourth largest in purchasing-power parity terms.⁶ With per capita income having more than doubled since the mid-1980s, the Indian middle class has expanded and its purchasing power has increased significantly (box 3-1).⁷ Economic growth has not been accompanied by high inflation—annual inflation in India has remained close to 4 percent since 2000.⁸ Increased FDI has stimulated both imports and exports, contributing to rising levels of international trade. India’s imports almost tripled between 2001 and 2005, from \$50.1 billion to \$138.4 billion, while exports more than doubled, from \$43.3 billion to \$99.7 billion.⁹

⁴ FDI regulations in India, another significant factor in determining a country’s overall FDI attractiveness, are addressed in chap. 5 of this study.

⁵ CIA, “India.”

⁶ Purchasing power parity is the number of foreign currency units required to buy goods and services in a foreign country equivalent to what can be bought with one dollar in the United States. U.S. Department of Labor, *A Chartbook of International Labor Comparisons*.

⁷ U.S. Department of Commerce, U.S. Commercial Service, *Doing Business in India*.

⁸ Inflation as measured by the Indian GDP deflator. World Bank, *World Development Indicators database*.

⁹ GTIS, *World Trade Atlas database*.

Box 3-1 Foreign Investors Attracted by Strong Indian Economy

Foreign investors have noted the favorable conditions in the Indian economy and the importance of India to their global operations. Nokia, a Finnish producer of cell phones, in an announcement concerning its choice of Chennai, India as a new global network solutions center site, noted the robust nature of the Indian market and its importance to the firm's global expansion.^a Samsung Electronics Co., Ltd., a Korean producer of cell phones and telecom systems, in an announcement involving the start-up of a mobile phone plant in Haryana State, India, stated that the Indian economy is growing by more than 7 percent a year and the cell phone market growth potential is unlimited.^b Caterpillar Inc., a large U.S.-based producer of construction and mining equipment, recently increased its investment in India to serve growing Indian demand for its products as well as increased demand from other Asian countries.^c

^aNokia, "Nokia Taps Chennai as New Nokia Global Networks Solutions Center Site."

^bSamsung Electronics Co., Ltd., "Samsung Dedicates a Mobile Phone Plant in India."

^cCaterpillar Inc., "Caterpillar Completes Purchase of Former Joint Venture Engine Business in India."

Poverty

Even with its strong economic growth in recent years, India remains a developing country, with many of its people enjoying little benefit from the country's economic growth. An estimated 25 percent of the population lives below the poverty line,¹⁰ and the GNP per capita was only \$620 in 2004.¹¹ Seventy percent of the Indian population lives in rural areas, which are often difficult to access because of poor roads.¹² This poverty and poor infrastructure make it harder for foreign firms to establish and expand their presence in much of the Indian market (box 3-2).

¹⁰ CIA, "India."

¹¹ World Bank, *World Development Indicators database*.

¹² U.S. Department of Commerce, U.S. Commercial Service, *Doing Business in India*.

Box 3-2 Hindustan Lever Ltd. Succeeds in the Indian Market

Despite the difficulties presented by the Indian market, some foreign companies have succeeded there. Hindustan Lever Ltd. (HLL), a subsidiary of Unilever, is a large Indian producer of consumer products such as foods (primarily tea, coffee, and ice cream) and home and personal care products (soaps, deodorants, detergents, shampoos, and toothpaste). Formed from a merger of three Indian subsidiaries of Unilever in 1956, HLL has successfully penetrated the Indian market by establishing an extensive manufacturing, distribution, and R&D presence in India. HLL manufactures its products in approximately 80 factories located throughout India and has large R&D centers to develop new products for the Indian market. HLL's distribution network consists of about 7,000 redistribution stockists, which cover all major urban areas in India as well as approximately 250 million rural consumers. HLL has developed numerous brand names for its products, which are well recognized by urban and rural Indian consumers.

HLL has expanded its presence in India through a variety of methods. Hindustan Lever Network, the direct selling arm of HLL, consists of 350,000 sales consultants, located in 1,500 towns, selling HLL products out of their homes. These sales consultants cover 80 percent of India's urban population. Hindustan Lever Network plans to increase the number of its sales consultants to 1 million by 2008. To increase brand awareness and sales in rural areas, HLL (1) sells affordable value packs of its products, accompanied by educational brochures and audio-visual demonstrations, to millions of Indians in thousands of villages; (2) advertises via wall paintings and cinema vans; (3) advertises and gives product demonstrations at weekly markets and festivals, which draw large numbers of Indians from many isolated areas; (4) utilizes a vast distribution network (involving trucks, autos, cycles, scooters, and bullock carts) developed over the years encompassing 50,000 villages and 250 million people; and (5) is developing a home-based selling program for its products in rural areas, similar to that in urban areas, which provides poor women in small villages an opportunity to increase their income. Currently, the program involves thousands of women in 50,000 villages in 12 states.^a

^aHindustan Lever Limited Web site.

Labor Issues

Low Wages

Foreign investors have been drawn to India not only by economic growth but also by low labor costs. Indian salaries are considerably lower than those in the United States and other industrialized countries. The average annual salary for all Indian employees in the manufacturing sector was approximately \$1,080 in 2000–01; by 2003–04 (latest data available), the average annual salary had risen to approximately \$1,270.¹³ Annual salaries for skilled workers in India are much higher than these averages, but still substantially below salaries in the United States and other developed countries. Starting salaries offered by large Indian firms for new engineering graduates range from \$4,300 to \$8,000 a year. Annual salaries for managers range from \$30,000 to \$51,000 and division heads earn up to \$76,000.¹⁴ Annual salaries for other occupations in India include human resource managers (\$15,100), project managers (\$10,000), financial analysts (\$8,400), and customer service assistants (\$1,600).¹⁵

¹³ Government of India, Labour Bureau, *Annual Survey of Industries Scheme*. Average wages per day, reported by the Labour Bureau, converted to annual salaries by multiplying daily wages by 250 (5 days per week, 50 weeks in a work year).

¹⁴ Kanellos, "India's Tech Renaissance—U.S.-Style Labor Pains."

¹⁵ Kaushik and Sasi, "Indian Wages Cheaper Than Chinese."

Rigidity in the Labor Market

India's labor market is immense. The labor force totaled 427 million in 2004, an increase of 31 million since 2000, with women accounting for 28 percent of the labor force.¹⁶ The organized, or formal, sector of the work force, however, accounts for less than 10 percent of the total.¹⁷ Despite India's strong economic growth in recent years, the increase in employment in the organized sector of the economy has not kept pace with the growth of the labor force. This has generated national concern that the benefits of India's economic development have not been spread widely enough.

The inability of the Indian economy to generate sufficient jobs in the organized sector is due, at least in part, to cumbersome and bureaucratic labor policies at the federal and state levels.¹⁸ Both the Indian federal and state governments have the authority to make and enforce labor laws. There are numerous federal and state laws covering labor issues, leading to administrative overlap and excessive bureaucracy. Federal and state labor agencies also generally focus their enforcement activities on the organized sector, even though this sector accounts for only a small percentage of the total Indian work force.

One of the biggest difficulties for employers in India is their inability to lay off workers. The Industrial Disputes Act of 1947 and subsequent amendments govern the layoffs of workers and the closure of plants. Firms with 100 or more employees must obtain approval from the government to shut down plants and lay off workers. Approval is typically difficult to obtain, although firms on occasion are able to reduce the number of employees by offering voluntary severance and retirement packages. Nonetheless, in the past few years, as the Indian economy has experienced greater trade liberalization, the Indian federal and state governments appear to have reduced their enforcement of the Industrial Disputes Act with respect to layoffs and plant closures, apparently in an attempt to increase the flexibility and competitiveness of Indian firms.¹⁹ For example, one leading Indian executive has noted his firm's ability to lay off workers as long as proper procedures are followed.²⁰

Rising Salaries and High Turnover in Some Industries

Strong demand for skilled workers in India has led to rising salaries and high turnover. To expand their operations in India, large multinational computer firms, automotive firms, and electronics firms have offered to double or triple the salaries of workers employed by Indian firms and have aggressively recruited graduates from top Indian universities and technical schools.²¹ Scientists and engineers in Indian government research laboratories have left to pursue opportunities and higher salaries in the private sector. Indian companies have also experienced rapid turnover as their skilled workers leave and go to work for other employers. In the software services industry, one of the cornerstones of FDI in India, turnover recently

¹⁶ World Bank, *World Development Indicators database*.

¹⁷ The formal sector consists of establishments using electric power and employing 10 or more workers, and establishments not using electric power and employing 20 or more workers. This sector accounts for about 40 percent of Indian output. Two-thirds of the employees in the formal sector work in the public sector. Asian Development Bank, "Key Indicators 2005: Labor Markets in Asia," 46.

¹⁸ In a recent survey, 17 percent of Indian managers stated that labor regulations were a major business constraint. World Bank, *World Development Indicators database*.

¹⁹ Asian Development Bank, "Key Indicators 2005: Labor Markets in Asia," 46–51; and Basu, "Why India's Labour Laws Are a Problem."

²⁰ Wakhlu, Remarks.

²¹ Kanellos, "India's Tech Renaissance—U.S.-Style Labor Pains."

has been between 15 and 30 percent annually.²² Nevertheless, a recent survey of salaries of skilled workers in 42 occupations in India and China found that salaries in India remain below those in China. The salary differentials tended to be greater in those occupations paying higher salaries.²³

Infrastructure

Antiquated Infrastructure

The poor condition of India's infrastructure reduces both enthusiasm for FDI on the part of foreign investors and India's overall economic growth. Insufficient power, rudimentary roads, antiquated ports, and an overburdened rail system make it difficult for many firms to produce and deliver goods and services in a timely and efficient fashion. India's national and state governments have achieved some success in expanding and modernizing infrastructure but a significantly higher level of investment will be necessary to maintain an infrastructure commensurate with the size of the Indian economy. The Indian government estimates that the infrastructure sector will need approximately \$320 billion in investment during the next 5 years.²⁴

India's capacity to produce electricity has fallen behind demand in recent years,²⁵ and electricity demand currently exceeds supply by 30 percent, causing frequent shortages and blackouts.²⁶ Numerous surveys of companies in India attest to the difficulties and added costs to production caused by an unreliable power sector. In one survey of Indian firms, respondents noted that it took 68 days to obtain an electrical connection and indicated that electrical outages caused production downtime equivalent to 8 percent of their annual sales.²⁷ In another survey of Indian firms, 29 percent of the managers ranked electricity as a major business constraint.²⁸ In a survey of private investors in India, respondents indicated that the average business in India experiences a power outage almost every other day. In response, most businesses have purchased generators to supply emergency electrical power.²⁹

India's transport system has also lagged behind the country's rapid growth. Most Indian roads are narrow, congested, and poorly maintained. Only 41 percent of them are paved, and of these, only 34 percent are 2-lane roads and 1 percent are 4-lane roads. Forty percent of the rural population does not have access to all-weather roads and thus is isolated during periods of bad weather, particularly the monsoon season. Urban areas suffer from severe congestion, with rapid growth in automobile ownership compounding the problem of inadequate roads. Insufficient funds for road maintenance leads to further deterioration of the roads.³⁰

²² Kanellos, "India's Tech Renaissance—U.S.-Style Labor Pains."

²³ Kaushik and Sasi, "Indian Wages Cheaper Than Chinese."

²⁴ *Indo-Asian News Service*, "India Woos Foreign Equity in Infrastructure."

²⁵ Power generation in India is principally a central government and state government function, although private energy producers play an increasingly important role.

²⁶ U.S. Department of Commerce, U.S. Commercial Service, *Doing Business in India*.

²⁷ World Bank, "Enterprise Surveys, What Businesses Say."

²⁸ World Bank, *World Development Indicators database*.

²⁹ World Bank, "India, Inclusive Growth and Service Delivery."

³⁰ World Bank, "India Transport Sector."

The capacity of the railway system, particularly in the highly-traveled urban areas, has also lagged the growth in demand for its services. Indian seaports have experienced dramatic increases in container cargo but have not expanded cargo handling capacity commensurately. A similar situation has occurred at Indian airports, particularly at the major international airports, where annual growth in air traffic of more than 15 percent in recent years has led to congestion and delays.³¹

Insufficient infrastructure may continue to plague the Indian economy in the years ahead. It has been estimated that India needs to invest at least 8 percent of its gross domestic product annually (approximately \$62 billion) in infrastructure to maintain its high rate of economic growth. Actual investment in infrastructure, though, probably has been only 3–4 percent of gross domestic product during the past decade. In addition, infrastructure projects are frequently plagued by long delays and large cost overruns. Projects are often started but not completed, or completed and not sufficiently maintained in the ensuing years. As infrastructure lags the economy, the effects are felt throughout the country, particularly in the manufacturing sector, where flexibility in production, low costs, and speed to market are particularly hampered by clogged roads and ports and power outages.³²

Increased Opportunities for Private Sector Participation in Infrastructure Projects

To help alleviate the strains on the infrastructure, large government projects have been initiated, including (1) a National Highway Development Program to modernize roads connecting India's four largest cities, Delhi, Mumbai, Chennai, and Kolkata (the Golden Quadrilateral); (2) a rural roads program to better integrate rural areas into India's transportation network; (3) a National Railway Development Program to expand rail capacity between major cities and provide better connectivity to Indian seaports; (4) a National Maritime Development Program to expand freight handling capacity in India's large seaports; and (5) a program to increase capacity at the New Delhi and Mumbai airports, which handle about 50 percent of the country's air traffic.³³ Indian federal and state governments have also allowed more private sector participation in infrastructure projects, which has provided opportunities for foreign firms to benefit from Indian economic activity.

Traditionally, Indian federal and state governments have financed and built most infrastructure projects in India. In recent years, however, the Indian government has turned to the private sector, both domestic and foreign, for funding, expertise, and faster completion of projects in management, design, and construction. To attract FDI in the construction, maintenance, and operation of roads, the government has provided a number of incentives to private firms, including (1) government financing of project feasibility studies, land purchases, movement of utilities, and clearing of the land; (2) government approval of up to 100 percent foreign investment in a project; (3) government subsidies of up to 40 percent of the cost; (4) 100 percent tax exemption for 10 years out of 20 years after the start of the project; and (5) duty-free importation of road construction equipment. Private firms can recoup their investment in these road projects by charging tolls or by receiving an annual annuity from the government. Numerous foreign engineering and construction firms (and private Indian firms) have taken advantage of these road project opportunities. To date, 34

³¹ Ibid.

³² World Bank, "India, Inclusive Growth and Service Delivery."

³³ World Bank, "India Transport Sector."

road projects have been completed by private firms, and another 34 projects are ongoing.³⁴ Indian state governments have also invited foreign engineering and construction firms to participate in road projects, patterning such private sector involvement after that of the national government.³⁵

Opportunities for FDI in other areas of Indian infrastructure, including seaports and airports, have also increased. The Indian Ministry of Surface Transport, which operates India's seaports, would like to attract private investment of \$1.9 billion to increase port capacity. India's Ministry of Civil Aviation, which operates India's airports, would like to attract \$164 million in private sector investment to expand airport capacity.³⁶ Investment in airports is accorded favorable tax treatment—profits are exempt from taxation for the first 5 years after the start of the project; for the next 5 years, 30 percent of profits are exempt from taxation.³⁷ With respect to the power sector, the government of India is working with Indian state governments to reform their utilities by moving away from direct operational control, reducing subsidies, pushing for greater financial viability, and allowing greater private sector involvement in power distribution.³⁸

Education

Educated Work Force

India's educational system is vast, educates millions, and turns out thousands of well-trained and skilled workers. India has an extensive system of schools, including primary and upper primary schools, high schools, colleges for general education, colleges for professional education (engineering, technology, medical, and teacher education), and universities/institutes.³⁹ In 2003–04, there were approximately 9,400 colleges for general education, 2,750 colleges for professional education, and 300 universities/institutes.⁴⁰ India has the third largest number of students in higher education in the world, trailing only the United States and China. English is the primary language of instruction in these schools, which means that most educated Indian workers speak at least some English.⁴¹ In India, there are more than 200,000 engineering graduates annually, more than 300,000 post graduates from non-engineering colleges, 2.1 million other graduates, and about 9,000 PhDs.

Many foreign investors have established R&D centers in India and have made it an important location for software development. Indeed, 20 percent of the Fortune 500 companies have

³⁴ Government of India, Ministry of Shipping, Road Transport and Highways, Department of Road Transport and Highways, "Opportunities for Private Sector Participation," and "Status of BOT Projects Awarded."

³⁵ Government of Goa Web site.

³⁶ U.S. Department of Commerce, U.S. Commercial Service, *India: Architecture/Construction/Engineering Services*.

³⁷ Government of India, Ministry of Civil Aviation, "Policy on Airport Infrastructure."

³⁸ U.S. Department of Commerce, U.S. Commercial Service, *India: Electric Power Equipment*.

³⁹ Colleges generally fall under the purview of state governments; universities/institutes generally fall under the purview of the central government.

⁴⁰ Government of India, Ministry of Human Resource Development.

⁴¹ Altbach, "Higher Education in India."

R&D facilities in India, drawn in large part by this vast pool of scientific and technical expertise (box 3-3).⁴²

Box 3-3 Large U.S. Firms Tap Educated Indian Work Force

Three major U.S. companies are among the many to set up R&D facilities in India. Motorola, a U.S. provider of mobile telecommunications devices, has rapidly expanded its presence in India in recent years to take advantage of Indian engineers and software writers. In 1991, Motorola established its first R&D center in India. The firm now has six R&D centers engaged in research involving telecom switching technologies, embedded computing, converged networks, autonomic networking, and enterprise applications. India has also become a major source for software development and software solutions for Motorola, including much of the software used in Motorola cell phones sold worldwide. The firm's investment in technology and R&D in India increased from \$50 million in 2002 to \$85 million in 2005. Investment is projected to grow by 10-15 percent each year into the future. Employing over 2,800 Indian engineers, Motorola considers India to be an important hub for R&D and software development, as well as a center for designing and manufacturing products for regional markets.^a

Microsoft has also turned to India for its technical expertise. Begun in 1998 with 20 employees, the Microsoft India Development Center has expanded to more than 900 employees and become the second largest Microsoft Development Center outside of corporate headquarters in Richmond, Washington. The Center works on software development for more than 35 products.^b

Attracted by India's engineering knowledge and skills, General Electric opened the John F. Welch Technology Centre in Bangalore, India, in September 2000. This center, along with GE's three other R&D facilities in Schenectady, New York, Munich, Germany, and Shanghai, China, comprises GE's Global Research team, which conducts R&D and engineering activities for all GE businesses. The center in Bangalore conducts R&D in a number of areas, including mechanical engineering, electronic and electrical system technology, ceramics and metallurgy, chemical engineering, and polymer science and synthetic materials.^c

^aMotorola.

^bMicrosoft.

^cGeneral Electric.

Weaknesses in the Educational System

For all the strengths of the Indian educational system, it is also plagued by a number of problems. Only 60 percent of the adult population is literate, so a large portion of the population lacks the skills increasingly necessary to prosper in the Indian economy. The percentage of young Indians in higher education (10 percent) is much less than that of industrialized countries (more than 50 percent) and of China (15 percent). India has many colleges and universities, but only a few are world class in terms of research and quality of teacher instruction. For the most part, funding for classrooms, libraries, laboratories, and information technology in Indian colleges and universities is inadequate. There are severe faculty shortages, teacher morale is low, bureaucracy hampers teacher accountability, and decision making is often influenced by politics. In addition, many Indian technology graduates pursue graduate study abroad and generally do not return to India. The majority of those who travel abroad for undergraduate study do not return to India after graduation. All of these deficiencies raise real questions as to the ability of the Indian educational system

⁴² Government of India, Ministry of Commerce & Industry, Department of Industrial Policy and Promotion, Secretariat for Industrial Assistance, "Destination India."

to continue to turn out sufficient numbers of well-trained graduates to enable India to maintain its competitiveness in the global economy.⁴³

Access to Capital

The Indian financial sector has experienced significant reforms in recent years. Government control and regulation have been reduced, interest rates have been allowed to fluctuate with the market, restrictions on capital inflows have been loosened, and private firms have been encouraged to participate.⁴⁴ Although the Indian government is still the dominant actor in the financial sector, foreign firms in India can access capital through bank loans, equity markets, and international financial institutions.

India has a large banking system comprised of state-owned banks, private (Indian-owned) banks, and foreign-owned banks. The state-owned banks account for more than 70 percent of all deposits and loans. The respective percentages for private and foreign banks are 17 percent and 13 percent. The presence of foreign banks and private (Indian-owned) banks has led to increased competition in the banking sector. By providing better customer service through more bank branches, ATM machines, electronic and telephone banking, and longer hours, these banks have taken market share from the state-owned banks and forced them to become more responsive to customer needs. Some of the state-owned banks have restructured and government ownership has been reduced.⁴⁵

State-owned banks and private (Indian-owned) banks concentrate on lending to the rural and agricultural sectors of the Indian economy and to Indian-owned companies.⁴⁶ Several dozen large foreign banks have established operations in India in recent years, including Citibank, HSBC, Deutsche Bank, Mizuho Financial Group, Abu Dhabi Commercial Bank Ltd., and American Express Bank Ltd. Among other activities, the foreign banks typically offer a full range of banking services, including loans, to the Indian operations of foreign firms.⁴⁷

India has 23 stock exchanges with approximately 9,000 listed companies. Only two of these stock exchanges, however, the National Stock Exchange and the Bombay Stock Exchange, are true national exchanges, and they account for virtually all of the stock trading that occurs in the country. Foreign firms doing substantial business in India can raise equity capital in the Indian capital markets through the issuance of Indian Depository Receipts. A number of foreign firms are listed on the National Stock Exchange and/or the Bombay Stock Exchange, including Gillette Ind., Glaxosmith, Nestle Ltd., Novartis Ind., Siemens Ltd., and SKF India. Unlike the active equity markets, the Indian debt market is small, with very little trading of notes and bonds, effectively precluding debt instruments as a way to raise capital.⁴⁸

The lending activities of non-Indian government agencies and international financial institutions provide another source of capital for foreign firms in the Indian market. The U.S.

⁴³ Altbach, "Higher Education in India"; and Kapur, Remarks.

⁴⁴ World Bank, "India, Inclusive Growth and Service Delivery."

⁴⁵ U.S. Department of Commerce, U.S. Commercial Service, *Doing Business in India*.

⁴⁶ Ibid.

⁴⁷ Chakrabarti, *The Financial Sector in India Emerging Issues*, 176; Deutsche Bank Web site; HSBC Web site; and Iloveindia Web site.

⁴⁸ Government of India, Ministry of Commerce & Industry, Department of Industrial Policy and Promotion, Secretariat for Industrial Assistance, "Destination India"; U.S. Department of Commerce, U.S. Commercial Service, *Doing Business in India*; Bombay Stock Exchange Web site; and National Stock Exchange Web site.

Overseas Private Investment Corporation (OPIC) assists U.S. companies investing in developing countries by providing loans, guarantees, and political risk insurance. OPIC chooses projects that can strengthen a country's economy and enhance its long-term economic growth. In the past several years, OPIC has been involved in three projects in India. In 2004, it provided \$360,000 in political risk insurance for modular home manufacturing; in 2005, OPIC provided \$4.8 million in financing to expand a food manufacturing plant in India; and in 2006, OPIC provided \$2.8 million in financing for the purchase of equipment and for marketing and distribution activities.⁴⁹

The Asian Development Bank (ADB) assists developing countries by providing loans, technical assistance, grants, guarantees, and equity investments. In a typical year, the ADB lends about \$6 billion to countries in the Asia-Pacific region and gives \$180 million in technical assistance. India is one of the largest recipients of ADB assistance. In 2005, the ADB approved more than \$1 billion in loans for India, \$106 million in grants and technical assistance, and \$21 million in equity investments and guarantees. ADB assistance for India has been concentrated in infrastructure, with loans and technical assistance for projects involving water supply, sanitation, waste management, roads, agriculture and natural resources, energy, and finance.⁵⁰ Such assistance from the ADB has generated opportunities for foreign investment by private firms. For example, many of the road projects involved both foreign and Indian engineering and construction firms.⁵¹

Two of the World Bank's agencies, the International Bank for Reconstruction and Development (IBRD) and the International Development Association (IDA), assist economic development in developing countries by providing low interest loans, interest free loans, and grants for projects involving infrastructure, education, health, energy, and other related purposes. India is the largest recipient of assistance from the World Bank. A sizeable part of this assistance involves the transport sector in India. The World Bank has made a number of loans totaling nearly \$5 billion to expand the capacity of the rail system, assist in the construction and maintenance of national and state highways and rural roads, and to improve the system of public transportation in Mumbai.⁵² These loans have provided opportunities for investment; foreign engineering and construction firms are participating in many of the road projects.⁵³

The International Finance Corporation (IFC), another World Bank agency, promotes economic growth in developing countries by assisting private companies through loans, equity investments, guarantees, and technical and financial advice. The IFC has been active in India since 1956. India is the third largest recipient of IFC assistance; as of July 2006, the IFC's current assistance totaled \$1.3 billion. IFC activities in India are focused on helping manufacturing firms improve their international competitiveness, increasing private sector

⁴⁹ OPIC, *Annual Reports for 2004, 2005, and 2006*.

⁵⁰ Asian Development Bank Web site.

⁵¹ As part of India's National Highway Development Program, 29 road projects are currently being funded by the ADB. Nineteen of these projects involve Indian and foreign firms, eight projects involve only foreign firms, and two projects involve only Indian firms. Foreign firms include firms from South Korea, China, Denmark, Switzerland, Malaysia, and the United States. Government of India, Ministry of Shipping, Road Transport and Highways, Department of Road Transport and Highways, "Externally Aided Projects."

⁵² World Bank Web site.

⁵³ As part of India's National Highway Development Program, 27 road projects are currently being funded by the World Bank. Seventeen of these projects involve Indian and foreign firms, one project involves only foreign firms, and nine projects involve only Indian firms. Foreign firms from France, the United Kingdom, Malaysia, Russia, Singapore, Canada and Thailand are represented. Government of India, Department of Road Transport and Highways, "Externally Aided Projects."

involvement in infrastructure development, and supporting private firms in the areas of financial services, information technology, and oil and gas exploration and production. Although IFC's assistance in many instances has been directed toward Indian companies, foreign firms with operations in India have also benefitted from IFC financial aid.⁵⁴

Bureaucracy and Corruption

Excessive bureaucracy and corruption discourage FDI by distorting the efficient allocation of resources, increasing the cost of doing business, and breeding mistrust of government officials. Although India has taken steps in recent years to open up more sectors of its economy to FDI and to streamline the investment process, FDI into the country remains hindered by government bureaucracy and corruption. Foreign businesses report instances where investment decisions and approval by Indian government ministries drag on for lengthy periods of time for no apparent reason.⁵⁵ The Indian government procurement system for certain areas of business has been plagued by instances of corruption; a number of government officials have been convicted under Indian anti-corruption laws in the past several years.⁵⁶ Recently, the World Bank suspended funding for some health care projects in India due to allegations of fraud and corruption in the procurement of medicines.⁵⁷

In a survey of business executives, respondents indicated that inefficient government bureaucracy and corruption were the second and fourth most problematic factors, respectively, for doing business in India.⁵⁸ See chapter 5 for a discussion of bureaucratic concerns related to the Indian court system.

⁵⁴ IFC financial support was provided to a United Kingdom oil and gas company to expand its production capacity in India, a U.S. engineering and environmental consulting firm to construct small hydroelectric generation facilities in India, and a Chinese carbon black producer to upgrade and expand the capacity of its carbon black plant in India. International Finance Corporation Web site.

⁵⁵ U.S. Department of Commerce, U.S. Commercial Service, *India: Architecture/Construction/Engineering Services*.

⁵⁶ U.S. Department of Commerce, U.S. Commercial Service, *Doing Business in India*.

⁵⁷ Reuters, "World Bank Halts India Health Funds on Fraud Claim."

⁵⁸ Inadequate supply of infrastructure and restrictive labor regulations were the first and third most problematic factors, respectively, for doing business in India, as reported by the survey respondents. For purposes of the survey, respondents were asked to choose the five most problematic factors for doing business in India from a list of 14 factors. Some of the other factors included tax regulations, tax rates, crime and theft, government instability/coups, inadequately educated workforce, and policy instability. This survey of business executives, assessing the business climate in 125 countries, is conducted annually by the World Economic Forum. Lopez-Claros, et al., *The Global Competitiveness Report*, 140, 242.

CHAPTER 4

Special Economic Zones

Introduction

India, like many countries, offers incentives to attract foreign investors, many of which are concentrated into special economic zones (SEZs). These zones allow the Indian government to package a number of incentives in a simplified manner and in a centralized location. SEZs offer privileged trading terms and other inducements to foreign investment. As of November 2006, 41 SEZs were operational in India, and approvals for more than 237 had been granted.¹ SEZs are growing in number, size, and production output and as a result are becoming more vital to the success of the Indian economy. Indian exports from SEZs increased by 114 percent between the 2000 and 2004 fiscal years and are expected to grow at an even faster rate in coming years. Exports from SEZs were valued at \$5.1 billion for the 2005 fiscal year and are projected to reach \$15 billion in the 2007 fiscal year, a 195 percent increase.² Electronics (half of which is software development) and gems and jewelry made up more than 75 percent of the exports from SEZs during 2002 (latest available data). Total investment in India's SEZs increased by almost 75 percent between 1998 and 2003, with the proportion of foreign investment rising 7 percent, to 25 percent of total.³

Incentives to Invest in SEZs

SEZs provide three types of incentives for enterprises to locate their business operations in India. First, the SEZs provide tax, tariff, and financial incentives, by defining SEZs as free trade enclaves. Second, the zones improve on the general bureaucratic and administrative situation that many businesses face when establishing in India. Third, SEZs provide reliable infrastructure that is not always available elsewhere in India. All of these incentives are applied equally to both Indian and foreign firms.

Tax and financial incentives for potential investors include substantial income tax deductions for the first 10 years of operations. For the first five years after operations begin, firms pay no income tax at all. For the next two years they receive a tax reduction of 50 percent. During years 8-10, the firm can debit up to 50 percent of its profits from the previous year to a "Special Economic Zone Re-investment Allowance Reserve Account." This value can then be used within three years of when the account was established for future reinvestments in the business, such as machinery and plant improvements. Outside

¹ Government of India, Ministry of Commerce & Industry, "SEZs Future Vehicle of Economic Activity."

² Government of India, Ministry of Commerce & Industry, "Special Economic Zones in India—About."

³ Confederation of Indian Industry, Northern Region, "Special Economic Zones—Engines for Growth," 4.

of the SEZs, India's average tariff rates are still among the highest in the world.⁴ This makes India a much less attractive destination for export-oriented firms that depend on imported inputs. However, tariff incentives exempt firms in SEZs from all customs duties on imported goods, so long as they are re-exported, which creates a beneficial environment for export oriented firms who need inexpensive and easy access to manufacturing inputs. Other financial incentives include the reimbursement of duties paid on furnace oil and exemptions from state and central sales taxes paid on domestic purchases. SEZ units can also borrow up to \$500 million per year through recognized banking channels without maturity restrictions. Profits are allowed to be freely repatriated.⁵

SEZs allow investors to avoid many bureaucratic and administrative barriers as well. First, the limits on foreign equity ownership that apply to certain sectors in India are eliminated in SEZs. Second, all investments in SEZs are administered through the automatic route, which empowers the Reserve Bank of India (RBI) to automatically approve the investment within a period of two weeks.⁶ Third, firms operating in SEZs do not need a license to import goods. Unlike in India's previous generation of Export Processing Zones (EPZs), customs inspections are kept to a minimum in order to eliminate delays in product availability. These factors provide incentives for investment by improving manufacturer's ability to access production inputs. Other administrative barriers have been eliminated as well. In general, separate documentation is no longer required for customs and the administration of the Export-Import Policy. Firms in SEZs also have an exemption from industrial licensing requirements that is normally only provided to small scale industries and sectors.⁷ The clarification of these administrative procedures makes the investment process much simpler in SEZs compared to other areas of India.⁸

One of the most important incentives that SEZs provide is reliable infrastructure. The US-India CEO Forum, composed of 20 chief executives representing a broad spectrum of industrial sectors from both countries, has identified India's poor infrastructure as a key area of needed economic cooperation and a major impediment to new U.S. investment. The Forum recognized that "India's infrastructure needs exceed its domestic funding capacity" and one of its recommendations was to continue setting up large scale SEZs that comprise world-class infrastructure with integrated real estate, power, and transportation facilities.⁹ Outside of the SEZs, with a population of just over 1 billion, India spends just \$35 billion a year on infrastructure,¹⁰ and investors frequently encounter difficulties related to infrastructure.¹¹

Adequate infrastructure is a prerequisite for an area to be approved as an SEZ. All of India's SEZs have uninterrupted water and power supplies, guaranteed by state governments; power is distributed through sub-stations that are dedicated to distributing power only to a specific SEZ. Additional infrastructure facilities include developed plots, built-up space, and

⁴ Fraser, et al. European Policy Centre, "EU-India Relations."

⁵ Government of India, Ministry of Commerce & Industry, "Special Economic Zones in India—Facilities and Incentives."

⁶ The Foreign Investment Promotion Board oversees cases which are approved outside this "automatic route," a process which takes approximately 6 weeks.

⁷ Government of India, Ministry of Commerce & Industry, "Special Economic Zones in India—Facilities and Incentives."

⁸ Confederation of Indian Industry, Northern Region, "Special Economic Zones—Engines for Growth," 1.

⁹ U.S. India 2006 CEO Forum, "U.S. India Strategic Economic Partnership."

¹⁰ By comparison, China reportedly spends \$260 billion on infrastructure annually. Bindra, "India Battles Infrastructure Woes."

¹¹ World Bank, "Enterprise Surveys, India 2006."

telecommunication lines, as well as supportive services, such as in-house customs facilities, post offices, banks, canteens, courier services, travel agents, medical services, shopping, food services, and worker housing. Most importantly, however, the SEZs provide reliable access to trade opportunities through well integrated transportation facilities. The majority of the zones are within 25 km of a major metropolitan area that provide ports and airports, and other transportation services essential to international merchandise trade. Even though ports and airport facilities are often not available within or directly adjacent to the zone, each SEZ provides access to these facilities through both railways and highways. Many Indian highways are narrow and congested, with poor surface quality and the rail system also faces severe capacity constraints with very high rail freight costs.¹² By contrast, most SEZs have newly built, high quality rail and highway systems that reduce congestion and transportation costs.¹³ See chapter 3 for additional information on India's infrastructure concerns outside of the SEZs.

Establishment and Licensing of SEZs

In India, an SEZ is a specifically delineated, duty-free enclave that is deemed to be foreign territory for the purposes of trade operations, including tariff treatments.¹⁴ Goods transiting into the SEZ areas from the rest of India are considered Indian exports. Goods coming from the SEZ areas into the Indian economy are treated as Indian imports. The laws, regulations, and incentives that apply to these zones are separate from those that apply to the rest of the country.¹⁵

In March 2000, India's new Special Economic Zone Policy modified the country's existing policy on EPZs to establish SEZs that would provide an environment to facilitate the production of goods intended for export. SEZs can be set up by the public sector, by private firms, or as joint cooperative efforts between the two sectors.¹⁶

The change to SEZs was meant to solve several problems with the existing EPZ policy. One significant issue was the lack of a single window application facility,¹⁷ both within the zone and at the national level. Without such a "single window," establishing both EPZs and the individual firm units within them, required a firm to acquire individual clearances from several separate departments within the government and the EPZ administrative body. Within the EPZ, separate departments were in charge of approving and allocating land allotments, water and power supplies, and building and environmental clearances. The establishment process has been greatly simplified in the current SEZs. In addition, conditions for approval have been relaxed, customs rules have been simplified, and additional oversight responsibilities have been given directly to the Development Commissioners Office in order to maintain consistency.¹⁸

¹² World Bank, "India Transport Sector."

¹³ This information was acquired from the various Web sites of operational SEZs. These sites include <http://www.sez2.com>, <http://www.leandlasez.com>, <http://www.csez.com>, <http://www.surssez.com>, and <http://www.nap2.com>.

¹⁴ Government of India, Ministry of Commerce & Industry, "Special Economic Zones in India—Home Page."

¹⁵ Government of India, Ministry of Commerce & Industry, "Special Economic Zones—About."

¹⁶ Ibid.

¹⁷ A single window facility is a streamlined system that allows all applications to be directed to one single point for review.

¹⁸ Industries Commissionerate, Government of Gujarat, *New Initiatives, Special Economic Zones*.

In the SEZ Act of 2005, the Indian government clarified and simplified the procedures for establishing an SEZ. The Act established specific minimum size requirements for different types of SEZs. There are exceptions to some regulations in order to promote certain industries or in regions of the country that are considered to be land restricted (table 4-1). Other criteria for approval reinforce that the units within the SEZ must abide by local laws and regulations as well as develop necessary infrastructure. For example, SEZs must abide by local laws in regard to area planning, sewage disposal, pollution control, as well as all other industrial and labor laws. Also, at least 35 percent of the land area must be used for the core manufacturing processes, and directly associated storage and distribution facilities. The remaining land area can be used for non-core production facilities such as hospitals, housing developments, shopping, and other commercial development.¹⁹

The approval process for the development of a new SEZ is shared by the federal and state governments. Proposals for establishing an SEZ are first routed through the concerned state government, which has 45 days from the date of receipt to render a decision. The state forwards the application, along with its recommendation, to the Board of Approval, part of India's federal Department of Commerce.²⁰

An individual firm's proposal to set up a new business unit within an SEZ must be approved by the Approval Committee for each Zone (figure 4-1). The Committee consists of the Development Commissioner, the Customs Authorities, and representatives of the relevant state government. The Development Commissioner is the de facto chairman of the Approval Committee and head of the SEZ. All clearances for importer-exporter code number, change in the name of the company or implementing agency, land allotments, and development plans are given through a single window facility by the Development Commissioner, generally within 15 days.²¹ If approved, firms receive a letter of permission from the Commissioner, which specifies the items of manufacture or service activity, annual capacity, projected annual exports for the first years in dollar terms, net foreign exchange earnings, and any limitations regarding the sale of finished goods and their by-products in the domestic tariff area.²²

¹⁹ Government of India, "SEZ Rules 2006, Chapter 2, Procedure for Establishment of Special Economic Zone."

²⁰ Government of India, Ministry of Commerce & Industry, "Special Economic Zones in India—About."

²¹ Government of India, Ministry of Commerce & Industry, Department of Commerce, *Annual Report 2005–2006*, 59.

²² Government of India, Ministry of Commerce & Industry, "Special Economic Zones in India—How to Apply."

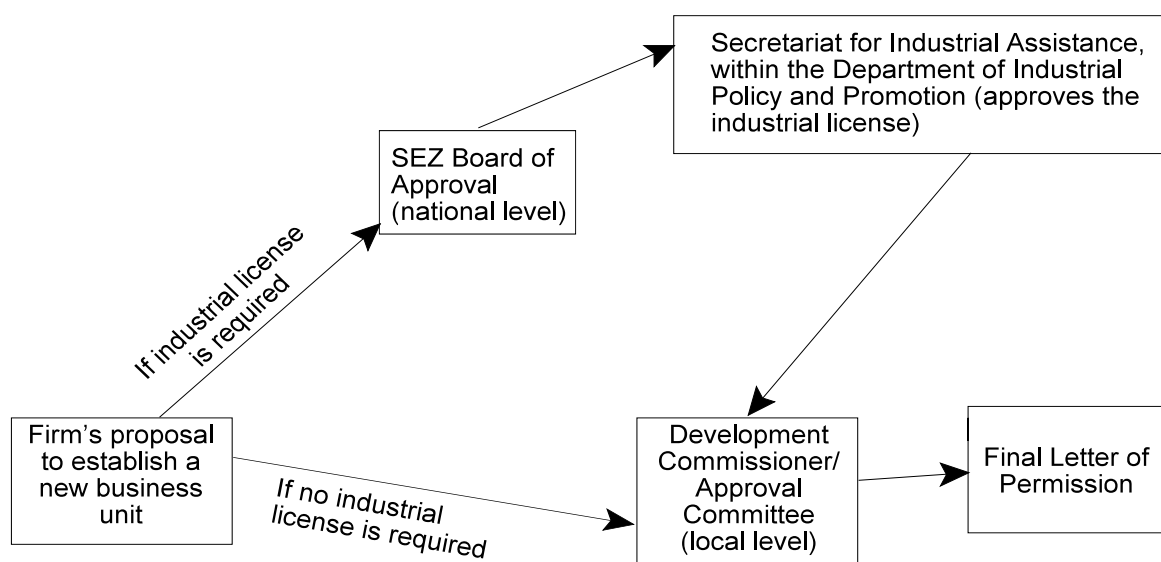
TABLE 4-1 India: Types of special economic zones

Type of SEZ	Description	Minimum size requirements	Other
		Hectares	
New multi-product SEZs	Zones with general production in a wide variety of product types and industries	1,000	
Sector specific SEZs	Zones for use on production in specific industries	100	Approved on a case by case basis
Service sector SEZs	Zones that provide only services without manufacturing capability	100	
Converted Export Processing zones	Converted from a previous EPZ	None	
Port-based SEZs	Zones based at ports or airports	None	Approved on a case by case basis
Sector specific SEZs in areas of Indian competitive advantage	Specifically applies to gems and jewelry, information technology, and bio-technology	10	Approved on a case by case basis
Multi-product SEZs in land restricted states	Land restricted in particular states ^a	200	
Sector specific SEZs in land restricted states	Land restricted in particular states ^a	50	

Source: Government of India, Ministry of Commerce & Industry, "Special Economic Zones in India," <http://www.sezindia.nic.in/> (accessed November 2006).

^aLand restricted states include Assam, Arunachal Pradesh, Nagaland, Manipur, Mizoram, Tripura, Sikkim, Goa, Meghalaya, Himachal Pradesh, Jammu, Kashmir, Uttaranchal, and the Union Territories.

Figure 4-1 Application process for firms establishing a business unit within an SEZ



Source: Government of India, Ministry of Commerce & Industry, *Special Economic Zones in India—How to Apply*.

An industrial license is required for business unit proposals involving industries retained under compulsory licensing, manufacturing of items reserved for small scale sectors, and situations in which the proposed location is restricted.²³ These proposals are first considered at the national level by the SEZ Board of Approval, and then by the Secretariat for Industrial Assistance at the Department of Industrial Policy and Promotion, who grants the actual license. If the SEZ approval and the industrial license are granted, then the application is forwarded to the local Development Commissioner, who can then issue a letter of permission. The SEZ Act also specifies that the units must be net foreign exchange earners, but that they will not be subject to any predetermined minimum export performance requirements.²⁴

While the Indian government continues to restrict FDI in industries that are considered sensitive outside of SEZs, such as agriculture and retailing, 100 percent investment is allowed through the automatic route for all activities in Special Economic Zones (SEZs), except for the manufacturing of weapons and defense equipment, hazardous chemicals, narcotics, alcohol, and tobacco products.²⁵

Other FDI Incentives

India provides investment incentives outside of SEZs as well. These are generally designed to channel FDI to specific industries, promote development of economically impoverished regions, and encourage exports. The lack of reliable infrastructure outside of the SEZs is a significant factor preventing India from reaching its full growth potential. With this in mind, the Indian government has begun to remove restrictions on foreign investors in infrastructure. Beginning in March 2005, the government has allowed 100 percent FDI in infrastructure and construction development projects, as well as townships and housing projects, subject to minimum capitalization requirements.²⁶

In addition to liberalizing ownership equity caps, there are a number of tax incentives for foreign firms to invest in infrastructure, including 10-year tax holidays that can be used anytime during the first 20 years of operation for enterprises that build, maintain, or operate infrastructure facilities. Other incentives include exemptions from income tax on interest and from long-term capital gains tax on infrastructure investments, and the ability to deduct 50 percent of profits for five years for setting up and operating large, specific types of infrastructure.²⁷

Additional FDI incentives in India include accelerated depreciation and permitting tax deductions for R&D expenses. The specifics vary slightly depending on the region and

²³ Embassy of India, “FDI Policy and Procedure.” Industries which require an industrial license include alcoholic drinks; cigarettes and tobacco products; electronic aerospace and defense equipment; explosives; hazardous chemicals such as hydrocyanic acid, phosgene, isocyanates and di-isocyanates of hydrocarbons and their derivatives.

²⁴ Government of India, Ministry of Commerce & Industry, “Special Economic Zones in India—How to Apply.”

²⁵ Government of India, Ministry of Commerce & Industry, “Special Economic Zones in India—Criteria for Automatic Approval.”

²⁶ EIU, *India Country Commerce Main Report*.

²⁷ *Ibid.*

industry. The FDI approval process has also been shortened and simplified through the implementation of the automatic route for approval in more and more industries. These incentives, along with the continued liberalization of caps on foreign firms' ownership equity in most industries, have contributed to the recent steep increases of FDI in India.²⁸

²⁸ Ibid.

CHAPTER 5

FDI Regulation and Dispute Settlement

FDI Procedures

Foreign investment policy in India has been significantly liberalized since comprehensive macroeconomic reforms began in July 1991.¹ As of April 2007, 100 percent foreign equity is permitted in most sectors via automatic approval, with a handful of sectors subject to industrial licensing restrictions,² and only a few industries are entirely closed to foreign participation due to political or national security sensitivities (appendix A).³ This chapter will review India's regulatory environment for FDI, including the approval process for new investments; regulation related to labor and intellectual property concerns; and legal alternatives for dispute settlement.

Foreign investment in India is approved through two routes: automatic and case-by-case government approval. Under the automatic route, foreign investment in an Indian entity does not require prior government approval. To qualify for the automatic route, companies investing in approved industries must notify the Reserve Bank of India (RBI) within 30 days of receipt of funds and issuance of shares to the foreign investor. In other cases, government approval by the Foreign Investment Promotion Board (FIPB) is required.⁴ These cases include sectors that require industrial licenses, foreign investments exceeding 24 percent of equity in small-scale industries,⁵ foreign investments where the foreign interest has an existing venture in the same field in India, and all proposals falling outside the predetermined sectoral caps or in sectors where FDI is usually not permitted, but authorized in certain cases at the discretion of the Indian government.⁶ Foreign investments in existing companies and foreign technology collaboration agreements are also subject to case-by-case approval requirements.⁷ There appear to be few or no limitations on forms of establishment.⁸

¹ Prior to 1991, all FDI proposals were approved on a case-by-case basis with a 40 percent total foreign equity participation cap. IMF, *India: Selected Issues*, 21.

² Industrial licenses are regulated under the Industries (Development and Regulation) Act of 1951, and are used to regulate the scale, technology, and location of certain investment projects that may present environmental, safety, or strategic concerns to the government of India. Government of India, Ministry of Commerce & Industry, Department of Industrial Policy and Promotion, *Investing In India: Foreign Direct Investment Policy & Procedures*, 8. Industrial licenses are granted by the Secretariat for Industrial Assistance (SIA) within the Department of Industrial Policy and Promotion, Ministry of Commerce & Industry. Decisions are usually rendered within 4 to 6 weeks of filing. Government of India, Ministry of Commerce & Industry, Department of Industrial Policy and Promotion, *Investing In India: Foreign Direct Investment Policy & Procedures*, 8.

³ *Ibid.*, 34.

⁴ The FIPB is part of India's Ministry of Finance.

⁵ Investments below Rs 10 million (approximately \$234,000) in plant and machinery.

⁶ Government of India, Ministry of Commerce & Industry, Department of Industrial Policy and Promotion, *Investing In India: Foreign Direct Investment Policy & Procedures*, 1–6.

⁷ EIU, *India: Country Commerce 2006*, 22.

⁸ Foreign firms may establish as an incorporated or unincorporated entity, an incorporated company, a liaison or representative office, a project or branch office, or a "stand alone" branch office in a special economic zone. Government of India, Ministry of Commerce & Industry, Department of Industrial Policy and Promotion, *Investing In India: Foreign Direct Investment Policy & Procedures*, 14–15.

In addition to approving particular investment proposals, the FIPB is also the primary contact for large multinational companies planning extensive investment projects.⁹ The Department of Industrial Policy and Promotion (DIPP), under the Ministry of Industry and Commerce, is responsible for all other foreign investment activity in India.¹⁰ Within DIPP, the Secretariat for Industrial Assistance (SIA) provides a one-stop shop (or “single window facility”) for entrepreneurial assistance, investor facilitation, project setup and monitoring, and application processing.¹¹ Further, the Foreign Investment Implementation Authority (FIIA), which is chaired by the SIA, provides proactive investor services for projects that have already received central government approval.¹² The FIIA helps investors obtain state-level clearances, assists with any operational problems, and liaises between various government agencies on behalf of investors to speed approval of FDI inflows.¹³ Chapter 3 discusses the approval process for FDI in India’s special economic zones (SEZs).

FDI Regulation

Although Indian business regulation principally falls under the jurisdiction of federal law, state governments are empowered to design and regulate their own FDI policies.¹⁴ Consequently, the regulatory burden on foreign investors tends to be higher at the state level where application and approval procedures can vary widely across states. Moreover, FDI projects already approved at the central government level tend to bottleneck as they proceed since nearly 70 percent of the approvals and applications needed for eventual FDI implementation are obtained from state governments.¹⁵ State-level impediments to FDI can be severe, to the point that companies have been known to abandon FDI projects mid-way through implementation due to issues such as onerous zoning, land-use, and environmental regulations.¹⁶ In addition to difficult compliance procedures, such as the example mentioned, regulatory burden can take other forms in India. These can include long delays in getting new connections from public sector utilities, frequent visits by government inspectors, and the payment of bribes to avoid bureaucratic red tape.¹⁷ As a result, the federal government has made efforts to establish independent regulators in sectors such as telecommunications, securities, and insurance in order to streamline supervision below the federal level.¹⁸ Since it is impossible to comprehensively address all of the state FDI regulations here, appendix B provides website links to the investment promotion agencies for each of India’s states and territories.

⁹ EIU, *India: Country Commerce 2006*, 21.

¹⁰ Planning Commission, Government of India, *Foreign Investment, India*, 32–33.

¹¹ Government of India, Ministry of Commerce & Industry, Department of Industrial Policy and Promotion, *Investing In India: Foreign Direct Investment Policy & Procedures*, 21.

¹² Government of India, Planning Commission, *Foreign Investment, India*, 71.

¹³ Sahoo, “Foreign Direct Investment in South Asia,” 10.

¹⁴ World Bank, *The Investment Climate in Brazil, India, and South Africa*, 23–24.

¹⁵ Bhati, *Foreign Direct Investment*, 91.

¹⁶ U.S. Department of Commerce, U.S. Commercial Service, *Doing Business in India*, 113.

¹⁷ Due to the unregulated discretionary power of state and local regulators, corruption has been identified as an additional obstacle to FDI in India. World Bank, *Sustaining India’s Services Revolution*, 30.

¹⁸ U.S. Department of Commerce, U.S. Commercial Service, *Doing Business in India*, 113.

Labor Regulation

As described in chapter 4, the state of the labor market and related regulations are also an important factors for foreign investors to evaluate when making an FDI commitment. Similar to FDI policy, labor regulations are enacted at both the central and state government levels.¹⁹ As of 2006, India maintains 47 national laws and 157 state regulations that directly or indirectly address labor markets (table 5-1).²⁰ India has a number of labor laws addressing issues such as the resolution of industrial disputes, the regulation of working conditions, labor compensation, insurance, child labor, and equal pay. Generally viewed as more protective of workers' rights, Indian laws such as the Minimum Wages Act, the Payment of Wages Act, and the Employees Provident Fund and Miscellaneous Provisions Act guarantee employee salaries regardless of whether companies are profitable, allow central or state governments to set worker wages in any type of business establishment, prohibit any unauthorized wage deductions or reductions, and ensure retirement savings and benefits for all permanent company employees.²¹

Many of these labor laws are viewed as overlapping, potentially inconsistent, and cumbersome.²² In particular, the Industrial Disputes Act (IDA) requires companies with more than 100 employees to secure state government permission to dismiss workers. Such permission can be difficult to obtain, but application of the IDA tends to vary across states.²³ According to recent research, Indian states with more restrictive labor laws tended to have fewer factories, with estimates suggesting that almost 3 million formal manufacturing jobs were lost due to the general application of IDA provisions.²⁴ Furthermore, businesses that hire contract workers to fill production gaps are subject to the Contract Labor Act, which gives state governments the right to abolish contract labor at any time, in any industry, in favor of permanent workers.²⁵ In states where contract labor is more restricted, keeping employment below the 100 employee threshold is the only way companies can maintain flexibility in the allocation of manpower. Consequently, Indian labor laws tend to reinforce exit barriers for investors and dampen overall FDI in labor-intensive industries.²⁶

¹⁹ Sahoo, "Foreign Direct Investment in South Asia," 11.

²⁰ IBRD/World Bank, *Doing Business in South Asia 2007*, 31.

²¹ EIU, *India: Country Commerce 2006*, 81.

²² Ibid.

²³ World Bank, *The Investment Climate in Brazil, India, and South Africa*, 19.

²⁴ IBRD/World Bank, *Doing Business in South Asia 2007*, 31.

²⁵ World Bank/IFC, *India: Investment Climate and Manufacturing Industry*, 28–29.

²⁶ Deloitte, *China and India: The Reality Beyond the Hype*, 5.

TABLE 5-1 Selected Indian Labor Laws

Law	Description
Employees Provident Fund and Miscellaneous Provisions Act of 1952	This Act ensures the financial security of employees by providing a compulsory savings system. It establishes a contributory Provident Fund where employees' contributions shall be at least equal to that made by the employer. The savings is payable to the employee after retirement or can be withdrawn partly for specified purposes.
Industrial Employment (Standing orders) Act of 1946	This Act requires employers in industrial establishments to clearly define the conditions of employment by issuing duly certified standing orders. Standing orders issued under this Act deal with the classification of workers, holidays, shifts, payment of wages, leave, termination, etc.
Industrial Disputes Act of 1947	Provides for the investigation and settlement of industrial disputes such as lockouts, layoffs, retrenchment, etc. The Act specifies the conditions that must be met before an employee is terminated. Terminations falling outside of these guidelines must receive government approval.
Minimum Wages Act of 1948	Prescribes minimum wages for all employees in any type of establishment. Central and state governments can revise specified wage levels.
Payment of Bonus Act of 1965	The Act provides for the payment of bonuses to persons employed in certain establishments on the basis of profit or productivity. This Act is applicable to establishments employing 20 or more people. A minimum bonus is required, even if the employer suffers a loss during the fiscal year.
Payment of Gratuity Act of 1972	Provides for the payment of gratuity to all employees in all establishments employing 10 or more people (regardless of the type of work). Gratuity is payable to an employee on his retirement or resignation at a rate of 15 days salary for each completed year of service, subject to a maximum of about \$7,800.
Payment of Wages Act of 1936	Regulates the time limits within which wages shall be distributed to employees and that no unauthorized deductions are made by employers.
Workmen's Compensation Act of 1923	Provides that compensation will be given to any worker suffering an injury during the course of employment, or to his dependents in the case of death. The Act specifies the rate at which compensation shall be paid to the employee.

Source: Government of India, Ministry of Labor Web site.

Intellectual Property Rights Regulation

Important improvements have been made in India's intellectual property rights (IPR) regime in recent years. India has substantially revised its laws to bring them into compliance with the requirements of the WTO's Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), which requires protections for various forms of intellectual property. However, according to the United States Trade Representative (USTR) and U.S. Department of Commerce (DOC), substantial concerns remain because of inadequate IPR protection and enforcement.²⁷ India's legal framework, and particular enforcement issues, in the predominant intellectual property areas of trademarks, copyrights, and patents are described below. The laws governing the protection of pharmaceutical products are explored in greater detail in the case study in chapter 8.

Trademark Protection

The legal framework of India's trademark laws is generally considered consistent with international standards.²⁸ India revised its law with passage of the Trademarks Act of 1999, which came into effect in 2003, to comply with the requirements of TRIPS. The Act broadens the definition of a trademark and simplifies the procedural requirements for registration. It also provides civil and criminal remedies for trademark infringement.²⁹

The actual level of protection afforded trademarks under the law is more problematic. According to a survey of business executives conducted by the International Chamber of Commerce, India is ranked as having the third worst IPR protection environment, following China and Russia, because of its disproportionate share of counterfeiting and piracy.³⁰ In the area of pharmaceuticals, the Pharmaceutical Research and Manufacturers of America (PhRMA) reports that while civil remedies for counterfeiting are generally available, the volume of litigation is substantial and judicial delays hinder the process of obtaining relief.³¹ Although criminal remedies for counterfeiting hold the promise of a speedier resolution and a greater deterrent power, inadequate resources and low rates of conviction hamper their availability. Better results may be available in cases involving pharmaceutical counterfeiters whom criminal courts are more likely to convict because of health and safety risks.³²

India exports a large amount of counterfeit products, although the situation may be improving.³³ In 2005, U.S. Customs and Border Protection reported that it seized counterfeit goods valued at about \$2 billion from India. India was the fourth largest source of all counterfeits in the United States (behind China, Hong Kong, and the United Arab Emirates). Despite being fourth overall, India was the number one source of counterfeit pharmaceuticals

²⁷ USTR, *2007 Special 301 Report*, 26; and U.S. Department of Commerce, U.S. Commercial Service, *India Country Commercial Guide*.

²⁸ U.S. Department of Commerce, U.S. Commercial Service, *India Country Commercial Guide*.

²⁹ EIU, *Country Commerce 2006*, 45.

³⁰ ICC, *Global Survey on Counterfeiting and Piracy*, 10.

³¹ PhRMA, *PhRMA Survey of Pharmaceutical Counterfeiting Laws and Remedies*, 8.

³² *Ibid.*, 8–9, 64–65.

³³ Seizure data has inherent limitations; for example, due to resource limitations, the percentage of imports that is inspected is reportedly small. Seizure data thus may not fully and accurately reflect the extent or product and country of origin structure of trade in counterfeits. OECD, *Counterfeiting and Piracy: Measurement Issues*, 9.

in 2005, accounting for 61 percent of pharmaceutical seizures from all sources.³⁴ More positively, seizures of counterfeits from India were down in 2006; India fell to the eighth largest source of counterfeit products and pharmaceutical seizures in particular were substantially lower.³⁵

Copyright Protection

At the time India's amended Copyright Act went into effect in 1995, it was considered "one of the most modern copyright laws in any country," particularly because of its rigorous criminal enforcement provisions.³⁶ Today, the challenges of copyright protection in the digital environment reportedly require India to update its laws, for example, by joining and implementing the two World Intellectual Property Organization (WIPO) Internet Treaties.³⁷ Both treaties seek to ensure that traditional means for copyright protection apply to digital works and those transmitted on the Internet. The government of India recently released draft amendments to implement the provisions of the internet treaties; however, USTR has opined that the draft amendments are deficient.³⁸

Problems with enforcement of the copyright laws are significant. According to the International Intellectual Property Alliance (IIPA), a coalition representing the U.S. copyright based industries, the principal challenge in India is "to make the criminal system work despite corruption, inefficient court procedures, lack of training, massively long delays, and few convictions." Piracy—the unauthorized distribution and use of copyrighted materials—remains a substantial problem for both U.S. and Indian producers. Piracy of software, film, popular fiction works, and television cable signals has been labeled "rampant."³⁹ Pirated movies and other content are available in the informal markets of major cities long before their domestic release in theaters. According to the IIPA, music file sharing and the online infringement of business and entertainment software, as well as deficiencies in the enforcement environment, substantially burden both foreign and local investors in copyright-based industries.⁴⁰

Patent Protection

India inherited its patent laws from the British and, until 1970, provided product and process protection for all inventions.⁴¹ In 1970, India introduced the Patents Act which prohibited patents on products useful as medicines or foods, shortened the term of chemical process patents, and expanded the availability of compulsory licensing of patented inventions.⁴² Effective January 1, 2005, India was required, pursuant to its WTO TRIPS commitments,

³⁴ USCBP, *FY 2005 Top IPR Commodities Seized*. Similarly, India was the source of 75 percent of all counterfeit medicines seized by European authorities in 2005. EC, *EU 25 Breakdown of Number of Cases Registered*.

³⁵ U.S. government official, e-mail communication to Commission staff, February 21, 2007.

³⁶ IIPA, *2003 Special 301 Report: India*, 122.

³⁷ USTR, *2007 Special 301 Report*, 26. WIPO is a specialized agency of the United Nations responsible for promoting the development and harmonization of international IP laws.

³⁸ USTR, *2007 National Trade Estimate Report*, "India."

³⁹ USTR, *2007 Special 301 Report*, 26.

⁴⁰ IIPA, *2007 Special 301 Report*, 54.

⁴¹ A product patent grants patent rights—that is the exclusive right to control production and distribution—relating to the product. A process patent grants exclusive rights with respect only to a particular means or process used to make the product.

⁴² A compulsory license is one issued by the government that allows the use of a patented invention without consent of the owner, upon payment of a royalty.

to provide product protection for pharmaceuticals and agricultural chemicals. It did so through an interim measure adopted in December 2004 and a new patent law enacted in April 2005. This new law, including its impact on pharmaceutical FDI, is discussed in detail in the case study in chapter 8.

India and the United States entered into a Memorandum of Understanding (MOU) in December 2006. The purpose of the MOU is to further cooperation in the IPR field and to better promote innovation. The MOU provides for the training of patent personnel and the sharing of procedures and best practices.⁴³ It responds to the concern of U.S. industry, and particularly pharmaceutical firms, that Indian patent examiners are not trained or experienced in the review of pharmaceutical products and other complex technologies, and that there is a substantial backlog of patent applications awaiting review.⁴⁴ Moreover, the government of India reports that 25,000 new patent applications were filed in 2006; the amount of work and resources that will be required to handle these applications is substantial.⁴⁵ Patent infringement cases, like those involving trademarks and copyrights, are subject to lengthy judicial proceedings and delays. Industries that rely on IPR protections are severely hampered by the practical difficulties of enforcing these rights.

Other Regulatory Issues

Closing down a business in India involves a cumbersome regulatory process that poses expensive exit costs. Depending on the state, it takes an average of 10 years to complete bankruptcy procedures in India, with variations between 8 and 20 years. This compares to an average of about 4 years in South Asia, 2 years in East Asia, and 1 year in OECD countries.⁴⁶ Liquidations in India are governed by the Companies Act, which assigns official liquidators (OLs) to carry out the bankruptcy proceedings. Industry surveys report that OLs tend to follow cumbersome procedures and cause undue delays. Moreover, when a case is finally ready to be heard, courts and tribunals are often already overburdened with large caseloads, creating even longer delays⁴⁷

Some regulatory impediments have been eliminated. Performance requirements, such as local sourcing, no longer exist in most sectors and requirements to hire Indian nationals have largely been eliminated.⁴⁸ FDI in the retail housing sector is restricted in most cases, but non-residents of Indian origin and foreign companies are permitted to acquire or hold real estate in India, except for farmland, farmhouses, and plantations.⁴⁹

⁴³ USPTO, "U.S. and India Sign Historic Memorandum of Understanding."

⁴⁴ PhRMA, *PhRMA Special 301 Submission: India*, 135.

⁴⁵ Government of India, Ministry of Commerce & Industry, "2006 Year of Record FDI Inflows."

⁴⁶ IBRD/World Bank, *Doing Business in South Asia 2007*, 36.

⁴⁷ *Ibid.*, 36.

⁴⁸ U.S. Department of Commerce, U.S. Commercial Service, *Doing Business in India*, 111.

⁴⁹ EIU, *India: Country Commerce 2006*, 28.

Implications of Recent FDI Policy Changes

Semiconductors

In February 2007, the government of India announced the establishment of the Special Incentive Package Scheme, which focuses on attracting greater investment in semiconductor manufacturing and other high technology industries in India. Broadly, the package provides subsidies in the form of tax breaks and interest-free loans to foreign companies interested in investing in Indian semiconductor plants with a minimum investment of \$550 million. Loans are available for up to 20 percent of capital expenditures for projects in SEZs and up to 25 percent elsewhere.⁵⁰ This policy, which will extend through 2010, is expected to generate between \$6 billion and \$9 billion in new investments over the next three years.⁵¹ The Special Incentive Package Scheme also covers LCD and plasma screens, storage devices, solar cells, photovoltaics, and nanotechnology products.⁵² Following the announcement, Indian government officials were planning to reopen negotiations with Intel, which established a chip plant in Vietnam while waiting for India to formulate its long-delayed national semiconductor policy.⁵³ As noted in chapter 2, SemIndia, an Indian company setting up a \$3-billion chip fabrication plant in Hyderabad, has received informal commitments from global semiconductor producers such as AMD, SanDisk, Flextronics, and Broadcom since the announcement.⁵⁴ However, as of April 2007, further details on these proposed ventures have not been disclosed.

Telecommunications

In late 2006, the Indian government announced plans to lower the price of bandwidth by up to 25 percent and allow for its resale to new operators, giving foreign firms greater access to the largely private-sector telecommunications infrastructure.⁵⁵ As a result, international firms such as BT and Cable & Wireless, which are both based in the United Kingdom, are reportedly interested in entering the Indian telecom market to provide broader advanced networking services, such as network integration and security. Additionally, current operators in India, such as AT&T,⁵⁶ which competes with Indian telecom companies in both domestic and international long distance services, believe that these changes will also improve overall service quality and reliability since end-to-end control of transmission systems are now possible. Moreover, broadband internet service, which has grown over 600 percent since 2005 to 1.5 million Indian subscribers, is seen as the primary driver of the

⁵⁰ David, "India Sets Semi Subsidy Policy."

⁵¹ Ibid.

⁵² Incentives are similar to semiconductor loan rules, except that the minimum investment threshold is \$220 million. *BusinessStandard.com*, "Semiconductor Policy Notified."

⁵³ As of April 2007, no official updates on Intel's investment plans in India have been released. Intel currently operates a product development center in Bangalore. David, "India Sets Semi Subsidy Policy."

⁵⁴ AMD is noted to be the most interested in taking an actual investment stake. Singapore-based Flextronics operates a regional manufacturing operation in Bangalore and is currently building an 8 million square foot industrial park in Chennai. Singh, "Analysts Skeptical of Chip Fab in India."

⁵⁵ The government of India will allow carriers to share cable-landing station infrastructure. As of February 2007, VSNL/Tata owned the majority of Tippi, "India's Coming Bandwidth Boom."

⁵⁶ In 2006, AT&T became the first foreign telecom operator to take advantage of India's FDI revision in 2005, which allows up to 74 percent foreign equity ownership (up from 49 percent) in Indian telecom firms. AT&T has been in partnership with Tata group-owned VSNL since 2000. VSNL, an Indian telecom company, provides international voice services and is a VoIP provider. Tippi, "India's Coming Bandwidth Boom"; and *VoIP Now*, "VoIP in India."

bandwidth market in India.⁵⁷ Expansion in services such as Internet telephony (VoIP), which reached 1 billion minutes in India during the first quarter of 2006, reflecting six-fold growth from 160 million minutes in 2005,⁵⁸ will also likely provide greater investment opportunities in the Indian telecom sector as bandwidth prices continue to fall.

Retailing

Due to lingering political and social sensitivities within the retail sector, foreign investors in India's retailing industry remain limited to single-brand retail outlets. With a total of 12 million retailers in India (97 percent of which are small mom-and-pop style businesses), there is strong opposition to foreign involvement.⁵⁹ However, the Indian government is actively considering whether to allow greater foreign investments in specific products, namely, sporting goods, stationery, construction materials, and electronics.⁶⁰ As of March 2007, foreign investors were allowed to control a maximum of 51 percent equity in Indian retail ventures that sell products under a single international brand. In 2004, Arvind Brands, the second largest domestic apparel company in India, created a joint venture with Tommy Hilfiger licensor, Ganesh,⁶¹ to establish Hilfiger-branded clothing and apparel stores throughout India.⁶² In November 2006, Bharti Enterprises and Wal-Mart announced a joint-venture agreement where Wal-Mart would provide its goods wholesale to the Indian retailer and provide logistics and distribution services to the joint venture.⁶³ Specifically, Bharti, a major Indian telecom operator, is planning to invest \$2.5 billion to create a national supermarket chain creating 10 million square feet of retail space and employ 60,000 people by 2015.⁶⁴ Industry sources estimate that retail sales in India will grow from \$300 billion in 2006 to an estimated \$427 billion by 2010 and \$637 billion by 2015.⁶⁵ Overall, industry reports suggest that the biggest challenge for international retailers entering India will not be overcoming FDI restrictions, but rather, how quickly they will be able to adapt to local consumer buying habits and to the logistics infrastructure.⁶⁶

Litigation and Alternative Dispute Resolution

Litigation in India

The Indian court system is severely backlogged and suffering from infrastructural difficulties. The Law Commission of India, a branch of India's Ministry of Law & Justice, reported that over 2 million cases in 13,000 district courts were pending in 2004. The Indian court system as a whole has an estimated backlog of 25 million cases which would take

⁵⁷ Tippu, "India's Coming Bandwidth Boom."

⁵⁸ *Ibid.*; and *VoIP Now*, "VoIP in India."

⁵⁹ Gupta, "India Gears Up For Retail," 28.

⁶⁰ These products are seen not to affect small domestic traders or the rural economy. Maddox, "From Single Brand to Open Season."

⁶¹ Ganesh is owned by Mohan Murjani, a non-resident Indian. Bellman, "As Economy Grows, India Goes for Designer Goods."

⁶² *Ibid.*

⁶³ The joint-venture agreement was approved by the Indian government in January 2007. *Economist.com*, "Indian Retailing: Getting Cheaper and Better."

⁶⁴ *Grocer*, "Bharti to Invest \$2.5 Billion in Chain."

⁶⁵ Gupta, "India Gears Up For Retail," 28.

⁶⁶ *Ibid.*, 29.

approximately 324 years to clear if the court system proceeds at its present rate.⁶⁷ Civil and criminal cases are reported to take between 10 and 20 years to be determined by a court.⁶⁸ Such long delays lead to further problems once the case finally reaches the court. Witnesses frequently lose recollection when they are called to give testimony so long after witnessing an event.⁶⁹ Similarly, evidence often becomes tainted or disappears over the many years prior to trial.⁷⁰ Such problems often lead to the adjournment of cases and further delays once the case finally reaches the court.

In an effort to address the longstanding problems with India's court system, the Indian national government issued a series of amendments to its Code of Civil Procedure. The two most pertinent amendments are the Code of Civil Procedure Amendment Act of 1999 (1999 Amendment) and the Code of Civil Procedure Amendment Act of 2002 (2002 Amendment). Both the 1999 Amendment and the 2002 Amendment came into force on July 1, 2002.⁷¹

The 1999 Amendment was designed to lessen the number of cases reaching the Indian courts by making Alternative Dispute Resolution (ADR) compulsory for certain civil disputes in India, and to lessen the time a judicial proceeding takes by limiting the allowable number of adjournments in a each litigation.⁷² Moreover, the 1999 Amendment prevents further appeal for certain cases to lessen the burden on the court system.⁷³ The 1999 Amendment requires certain civil cases to attempt a resolution through ADR, and only if a case is not resolvable through ADR will it be allowed to proceed to the Indian courts for litigation.⁷⁴

Similarly, the 2002 Amendment's objective is to shorten the length of judicial proceedings by placing limitations on a number of procedures, changing other procedures, and limiting certain appeals. The 2002 Amendment allows the service of summons by means of e-mail, fax, or private courier.⁷⁵ It also specifies that there shall be no second appeal from any decree "when the subject-matter of the original suit is for the recovery of an amount not exceeding Rs. 25,000."⁷⁶ Additionally, the 2002 Amendment specifies a series of strict time limitations for the submission of the commission report to the Court, the pronouncement of the judgment, and provides that the judge has the discretion to put time limitations on oral arguments.⁷⁷ Despite these efforts to expedite judicial proceedings, many foreign investors choose to resolve disputes arising in India through ADR mechanisms.

⁶⁷ Law Commission of India, *On Revision of Court Fees Structure* (189th Report); Human Rights Features, *Legal Reform and Investment Prospects in India*; Economic and Social Council, Commission on Human Rights, *Civil and Political Rights, Including the Questions of the Judiciary, Administration of Justice, Impunity*. The Indian court system includes the Indian District Courts, Appellate Courts, and the Supreme Court as well as local or specialized courts.

⁶⁸ Human Rights Features, *Legal Reform and Investment Prospects in India*; and Economic and Social Council, *Civil and Political Rights, Including the Questions of the Judiciary, Administration of Justice, Impunity*.

⁶⁹ Economic and Social Council, *Civil and Political Rights, Including the Questions of the Judiciary, Administration of Justice, Impunity*.

⁷⁰ *Ibid.*

⁷¹ Government of India, Ministry of Law and Justice, "Civil Procedure Code As Amended Enforced as of Today."

⁷² *Ibid.*

⁷³ Government of India, Ministry of Law and Justice, "Landmark Legal Reforms in the Social Sector."

⁷⁴ Abdullah, Inaugural Address.

⁷⁵ Venkatesan, "Trial and Execution."

⁷⁶ Rs. 25,000 equals \$614.33 at the exchange rate of 40.7 rupees/dollar on May 21, 2007. Venkatesan, "Trial and Execution."

⁷⁷ *Ibid.*

Alternative Dispute Resolution (ADR) in India

Foreign investors frequently choose to enter arbitration agreements when engaging in business in India, to avoid the problems of the judicial system. The terms of a potential arbitration are generally stipulated in a contract⁷⁸ by investors before any legal problems arise, although parties may also agree to arbitrate after a legal dispute occurs. Investors often contractually stipulate that arbitration will take place outside of India, opting instead for the more established arbitration venues of the United States or United Kingdom. In one recent example, a dispute between two private airline companies was brought to arbitration in London, rather than in New Delhi or Mumbai.⁷⁹

The Indian government actively promotes alternative dispute resolution (ADR) mechanisms as an alternative to litigation. The Indian Arbitration and Conciliation Act of 1996 (IACA) creates a coherent system of arbitration of both domestic and international disputes. The IACA applies to both domestic arbitration between Indian parties and international arbitration, defined as arbitration occurring when one party is a non-resident of India, incorporated outside India, a foreign government, or a company whose central management is controlled outside of India.⁸⁰ The Act governs all major aspects of international commercial arbitration taking place in India.⁸¹ The IACA also statutorily incorporated the New York Convention, the Geneva Convention, and the Geneva Protocol into the domestic laws of India, which gives investors recourse under both domestic and international law for violations of these conventions.⁸²

Furthermore, in 2003, the Indian government set forth proposals to incorporate mediation and conciliation, two additional forms of ADR, more integrally into its legal regime (box 5-1).⁸³

Additionally, India is a party to three international, multilateral treaties pertaining to arbitration. All three purport to recognize and/or enforce the arbitral awards of other countries signatory to each Convention. The conventions make it easier to enforce, and illegal not to enforce, arbitral awards issued in India within other nations that are parties to the conventions, as long as the requirements of the conventions are met.

⁷⁸ The potential arbitration stipulations are commonly referred to as “arbitration agreements” or “arbitration clauses.”

⁷⁹ Human Rights Features, *Legal Reform and Investment Prospects in India*.

⁸⁰ IACA Part I, Chapter I(1)(f).

⁸¹ Particularly: the requirements and validity of the arbitration agreement, the composition of the arbitral tribunal; the jurisdiction of arbitral tribunals; the conduct of arbitral proceedings; the making of arbitral awards and termination of proceedings; recourse against arbitral awards; finality and enforcement of arbitral awards; and appeals. IACA Chapters II-X.

⁸² These three conventions are: (1)The New York Convention of 1958 on the Recognition and Enforcement of Foreign Arbitral Awards (New York Convention); (2)The Geneva Convention on the Execution of Foreign Arbitral Awards of 1927 (Geneva Convention); and (3)The Geneva Protocol on Arbitration Clauses of 1923 (Geneva Protocol). India is not presently signatory to any bilateral conventions regarding arbitration.

⁸³ Law Commission of India Web site.

The New York Convention, the largest multilateral convention governing the recognition and enforcement of foreign arbitral awards, presently has 142 parties, including the United States and India, and is the applicable law between the United States and India.⁸⁴ The New York Convention obliges its parties to recognize and enforce arbitral awards made in the territory of another party, subject to certain provisos.⁸⁵ The Geneva Protocol and the Geneva Convention were both ratified by India on October 23, 1937. The United States has not ratified either convention, but the two treaties are in force between India and other countries that have ratified the Convention or Protocol, but are not parties to the New York Convention.⁸⁶

Box 5-1. Forms of ADR: Mediation, Arbitration, and Conciliation

Mediation is distinguished from arbitration in many ways, including:

- Under arbitration, an arbitrator or arbitration panel makes a binding decision, whereas decisions in mediation are made by the parties and the mediator acts as a catalyst;
- Under arbitration, the only settlement option is an arbitral award, whereas mediation has numerous settlement options;
- An arbitral award is generally rendered in favor of one party or the other whereas mediation generally reflects a compromise between the parties;
- The parties have less control over the arbitral process than the mediation process.

The conciliation process is closer to mediation than to arbitration, although the differences between conciliation and mediation vary among jurisdictions and venues.

In an effort to promote ADR in India, the Indian national and state governments founded the International Center for Alternative Dispute Resolution (ICADR) in 1995. The ICADR is an autonomous agency that works under the aegis of the Indian Ministry of Law & Justice, to encourage the use of ADR mechanisms for both international and domestic disputes, and to provide support services and a venue for these disputes.⁸⁷ The ICADR provides an optional forum for parties desiring to settle disputes via ADR mechanisms in India, rather than New York or London. The center is headquartered in New Delhi and has regional branches in Hyderabad and Bangalore.⁸⁸ Parties to a contract may contractually stipulate in their arbitration agreements that the ICADR will be the forum for dispute settlement. Additionally, parties may subsequently agree to settle an existing dispute in the ICADR. It was reported in November 2002 that the center has been receiving an average of only two to three cases per month.⁸⁹ According to the Indian government, the infrequent use of the ICADR can be attributed to “limited knowledge and awareness about this mechanism.”⁹⁰ The report further suggests that all national and state governments should promote the use of the ICADR to investors, and tell investors to contractually stipulate its use as a forum in their

⁸⁴ United Nations Web site.

⁸⁵ Article V of the New York Convention presents a list of defenses to the enforcement of the arbitral award.

⁸⁶ See: Article VII(2) of the New York Convention.

⁸⁷ ICADR Web site.

⁸⁸ The Center offers dispute resolution for almost any kind of dispute ranging from commercial to family law disputes as well as ADR guidelines. The panel of arbitrators and conciliators range from retired Indian Supreme Court judges to ICADR-trained arbitrators and conciliators. ICADR offers numerous forms of alternative dispute resolution, including: arbitration, mediation, conciliation, mini-trials, mediation-arbitration, and negotiations.

⁸⁹ Committee Report on Reforming Investment Approval & Implementation Procedures, 52, Para. 4.84.

⁹⁰ Ibid.

arbitration agreements.⁹¹ The ICADR, the Indian government suggests, offers a forum within which investors can settle their disputes in an expeditious manner.

ADR in Action: The Enron Dispute and the Dabhol Power Plant

The Dabhol dispute is the largest, most complicated investment dispute in recent Indian history, and has affected subsequent FDI dispute settlement procedures. The Dabhol project began as a joint venture to build a 2,200 megawatt power plant in the western Indian state of Maharashtra.⁹² Enron was the majority investor with a 65 percent equity share in the Dabhol power project; General Electric (GE) and Bechtel Enterprise Holdings, Inc. (Bechtel) each maintained 10 percent equity; and the Maharashtra State Electricity Board (MESB) held the remaining equity share of 15 percent.⁹³ The \$3 billion Dabhol power plant had nearly completed construction when the government of Maharashtra stopped paying its agreed amount under the power purchase agreement with U.S. investors, allegedly because the cost of power produced by the plant was too high.⁹⁴ Following these events, numerous lawsuits were initiated between the investors and the Indian government, and at least six international arbitral proceedings were initiated relating to the Dabhol breakdown.⁹⁵

The Indian government placed anti-arbitration injunctions on Dabhol-related arbitration proceedings which were subject to jurisdiction in India, thus delaying arbitration indefinitely.⁹⁶ Nonetheless, GE and Bechtel were awarded \$57.1 million from the U.S. Overseas Private Investment Corporation (OPIC) via arbitration, that side-stepped the Indian injunctions because none of the parties to this arbitral proceeding were subject to Indian jurisdiction.⁹⁷ Bechtel and GE brought the proceedings against OPIC in order to recover claims under a political risk insurance policy that was taken out to cover the Dabhol project. The OPIC-GE/Bechtel proceeding illustrates how arbitration can aid in the expedient resolution of disputes arising in India.

India and the United States entered into an Investment Incentive Agreement in 1997 in order to encourage OPIC to support U. S. investment in India, and to encourage investors to use OPIC when investing in India.⁹⁸ Under this agreement, if the national government of India is found in breach of its obligations under the agreement, it will be obliged to pay the insurer (OPIC) the amount OPIC has to pay the insured (in this case, GE and Bechtel). The \$57.1 million award to GE and Bechtel in the present case, creates an obligation for the Indian government to pay OPIC that sum, free from the interference caused by the injunction on arbitrations issued by the Indian courts.⁹⁹

The MESB was found in violation of a multitude of its obligations under the power purchase agreement in the OPIC arbitration. These obligations were counter-guaranteed by the Indian government, making the Indian national government responsible for reimbursement to GE

⁹¹ Ibid.

⁹² Anderson, "Legal and Practical Protection of U.S. Foreign Investment," 136.

⁹³ Ibid.

⁹⁴ Prasad, and Balan, "Strategies for U.S. Companies to Mitigate Legal Risks," 14–16.

⁹⁵ Kantor, "Arbitration Award May Alter Dabhol Debate," 1; and Anderson, "Legal and Practical Protection of U.S. Foreign Investment," 136.

⁹⁶ Kantor, "Arbitration Award May Alter Dabhol Debate," 1.

⁹⁷ Ibid.

⁹⁸ Ibid., 2.

⁹⁹ Ibid., 1.

and Bechtel.¹⁰⁰ The MESB was found responsible, in this arbitral proceeding, for over ten breaches of its obligations, including its failure to pay under the power purchase agreements and the rescission (denunciation) of the power purchase agreement.¹⁰¹ The arbitral tribunal, chaired by a former U.S. federal judge, determined that because of the breaches by the MESB, OPIC must pay GE and Bechtel the \$57.1 million under the political risk insurance policies that were issued by OPIC to the two companies in 1995.¹⁰² Thus, GE and Bechtel recovered their costs from OPIC under their political risk insurance policy because MESB had breached its obligations under the power purchase agreement. The government of India is obliged under the Investment Incentive Agreement to reimburse OPIC for the money awarded to GE and Bechtel.

The OPIC-GE/Bechtel proceeding is one example of how arbitration agreements with a non-Indian venue can allow damaged parties to recover their losses from disputes arising in India in an expeditious manner. Recovery was granted to GE and Bechtel, even in face of a proceeding that would have been delayed indefinitely if it were brought in the Indian court system.

¹⁰⁰ Ibid.

¹⁰¹ Ibid., 2.

¹⁰² American Arbitration Association, International Centre for Dispute Resolution, “Bechtel Enterprises International (Bermuda) Ltd.”

CHAPTER 6

India's Investment-Related International Agreements

India is a founding member of both the General Agreement on Tariffs and Trade (GATT) and the World Trade Organization (WTO). India also is a signatory to the South Asia Free Trade Agreement (SAFTA), which promotes mutual trade, economic cooperation, and greater investment-related activities among its members.¹ India has entered into 57 bilateral investment treaties² (BITs) but does not have a BIT with the United States. India also maintains Double Tax Avoidance Agreements³ (tax treaties) with 70 countries, including major trading and FDI partners China, Germany, Japan, Mauritius, the United Kingdom, and the United States (appendix C).

World Trade Organization

India's membership in the WTO benefits foreign investors primarily through two agreements: the Agreement on Trade Related Investment Measures (TRIMs), and the General Agreement on Trade in Services (GATS). In addition, WTO membership imposes the general obligations of most favored nation (MFN) treatment, market access (MA), and national treatment (NT) with regard to trade policy.⁴ These also affect foreign investment, as India's obligations under these principles may affect investors' evaluation of India's investment environment. WTO rules allow certain exemptions from these principles for the benefit of developing country members, which make up approximately 75 percent of all WTO members, including India.⁵ India's status as a developing country provides it with flexibility as to its obligations under both the TRIMs and the GATS.

Agreement on Trade Related Investment Measures

The TRIMs Agreement is the WTO agreement that most directly addresses investment, although only certain trade-related investment measures are covered by the agreement. It

¹ SAFTA members are Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka. EIU, *India: Country Commerce 2006*, 51.

² BITs are bilateral agreements aimed at protecting and promoting foreign investment through legally-binding rights and obligations. OECD, Directorate for Financial and Enterprise Affairs, Investment Committee, "Salient Features of India's Investment Agreements," 3.

³ Tax treaties serve to prevent the double taxation of income earned in one country by a resident of another country. India Mart, *Taxation - Tax Treaties*.

⁴ The most favored nation principle requires that no member country give preferential trade treatment to one WTO member or non-member without giving the same preferential trade treatment to all WTO members. The market access principle requires member countries to open their markets to other members within the limits of the agreement. The national treatment principle requires that no member country give preferential trade treatment to domestic-made products that it does not give to like products from other member countries.

⁵ Van den Bossche, *The Law and Policy of the World Trade Organization*, 106. The special status of "developing country" is primarily a matter of self-declaration, that is, a member will declare itself a developing country in order to gain the special treatment afforded developing countries within the WTO.

prohibits quantitative restrictions (quotas) and violations of the NT principle for investment measures related to trade in goods.⁶ Moreover, the TRIMs includes an illustrative list of TRIMs that violate the NT principle and the prohibition on quantitative restrictions, including local content requirements⁷ and trade balancing requirements.⁸ In one significant WTO case, *Indonesia-Autos*, a dispute settlement panel defined such prohibited “trade-related investment measures” to include all measures posited on the TRIMs illustrative list, and thus these measures are open to action in the WTO.⁹ If a measure is found to be in violation of the NT principle or the prohibition on quantitative restrictions, then the measure will have to be withdrawn by the nonconforming state.

The TRIMs agreement requires members to eliminate all non-conforming TRIMs, and contingent on the member’s status within the WTO, the members were given variable amounts of time to eliminate all TRIMs. Developed country members were given two years, developing country members were given five years, and least developed countries were given seven years. Soon after the entry into force of the TRIMs Agreement, India notified the Committee of its three inconsistent TRIMs.¹⁰ India, as a developing country member, was given the five year transition period for these TRIMs, which ended on December 31, 1999. None of these non-conforming TRIMs are presently in force in India.¹¹ The TRIMs Agreement allows developing countries to temporarily deviate from their national treatment obligations and the prohibition on quantitative restrictions in accord with certain exceptions, but to date, India has not pursued that option.¹²

General Agreement on Trade in Services

The GATS is the second area of the WTO agreements to directly address investment. The GATS, which applies to all WTO members, outlines four modes through which member countries can trade services.¹³ The third mode of trade in services applies to investment, and is defined as “the supply of a service. . . by a service supplier of one Member through commercial presence in the territory of any other Member.”¹⁴ This “commercial presence” mode brings foreign investment into the scope of the GATS.

The GATS is a “positive list” agreement. WTO members are only bound to MA and NT provisions for the service sectors that they choose to include in each country’s Schedule of Commitments. Each WTO member develops a list of service sectors to be included in its commitments. For each sector, the schedule lists the sectors for which it has agreed to accept WTO obligations, and the limits to its MA and NT commitments for each sector. Table 6-1

⁶ TRIMs Agreement, Articles 1–2.

⁷ Measures that requires certain levels of local procurement by an entity. *See*: Annex to TRIMs Agreement.

⁸ Measures that restrict the value or volume of imports a foreign investor can use to produce goods for export. *See*: Annex to TRIMs Agreement.

⁹ WTO, *Indonesia—Certain Measures Affecting the Automobile Industry*, 337–42.

¹⁰ Local content...requirements in the production of News Print... Rifampicin and Penicillin-G, and [d]ividend balancing requirements in the case of investment in 22 categories [of] consumer goods.” U.S. Department of Commerce, *The Agreement on Trade Related Investment Measures*.

¹¹ U.S. Department of Commerce, *The Agreement on Trade Related Investment Measures*.

¹² TRIMs Article 4.

¹³ GATS Article 1(2)(a-d).

¹⁴ *Ibid*. The other modes are cross-border supply of services, consumption abroad, and the presence of natural persons. For additional information, see WTO, “Understanding the WTO, Services: Rules for Growth and Investment.”

TABLE 6-1 India, GATS Schedule of Commitments, Mode 3: Covered Service Sectors

Service Sector	Type of Restriction	Description
All industries on schedule	National Treatment	In case of collaboration with public sector enterprises or government undertakings as joint venture partners, preference in access will be given to foreign service suppliers/entities which offer the best terms for transfer of technology.
Business services	Market Access	Commitments apply to engineering, computer and related, R&D, and technical testing and analysis services. Foreign firms may establish only through incorporation, with a foreign equity limit of 51 per cent. ¹
	National Treatment	No restrictions.
Telecommunication services	Market Access	Commitments apply to local/long distance services, wire-based, circuit switched data transmission, facsimile, private leased circuit, and cellular mobile telephone services. GATS schedules lists licensing requirements, restrictions on new licenses, and subsector specific variant requirements. Foreign equity is limited to 25 percent for most subsectors. ¹
	National Treatment	Unbound for all subsectors.
Audiovisual services	Market Access	Commitments apply to motion picture or video tape distribution services. Commercial establishment permitted only through representative offices, which may function as branches of foreign companies, but may import no more than 100 titles per year.
	National Treatment	NT commitments subject to certification that the motion picture in question has won an award or otherwise been recognized by good reviews in prestigious journals or at an international film festival.
Construction services	Market Access	Commitments apply to construction of roads and bridges only. Foreign firms may establish only through incorporation, with a foreign equity limit of 51 per cent. ¹
	National Treatment	No restrictions.
Financial services: Insurance	Market Access	Unbound except for commitments on overseas brokers, which may establish representative offices in India to procure reinsurance business from Indian insurance companies, and place reinsurance business abroad.
	National Treatment	Unbound
Financial services: Banking & securities	Market Access	Commitments apply to 7 specified banking and securities subsectors, including deposit taking, lending, and securities underwriting and placement. The commitments specify limits on new banking licenses, limits on foreign equity of 51 percent for certain subsectors, and other restrictions. ¹
	National Treatment	Unbound except for entities established in accordance with the limits specified in India's market access commitments.
Tourism & travel related services	Market Access	Commitments apply to hotels and lodging; and travel agency and tour operator services. Foreign firms may establish only through incorporation, with a foreign equity limit of 51 per cent. ^a
	National Treatment	No restrictions.

Source: WTO, *India, Schedule of Specific Commitments, GATS/SC/42*, as revised by Supplements 1-4 (Suppl.1-Suppl.4).

^aThe actual permitted foreign equity cap under current Indian law may be higher. For instance, India has raised the permitted foreign equity to 74 percent in telecommunications companies.

outlines India's commercial presence (Mode 3) commitments included in its GATS Schedule.¹⁵

As a positive list system, the GATS is quite transparent regarding each member's commitments. For each sector that is included in India's Schedule of Commitments, the MA and NT limits are the maximum restrictions. So, for example, in business services, the only restriction listed on India's Schedule is that foreign firms can supply such services only through incorporation in India, with a maximum foreign equity limit of 51 percent. The Indian government is not then permitted to impose additional regulations limiting foreign investors in business services. By contrast, actual practice in India, as defined by local laws and regulations, may be less restrictive than those outlined in India's GATS Schedule. In the business services example above, the Indian government is free to remove the 51 percent equity cap on foreign investment. For industries identified as "unbound" in its Schedule, and for sectors not mentioned at all, India has not agreed to any limits to its potential restrictions on foreign investors, so India can and likely does restrict trade and investment of these services through its domestic laws and regulations.

India has scheduled the greatest number of commitments in the areas of communication services and financial services, so investors in these industries are provided the most open investment environment. India has also scheduled commitments in business services, construction and related engineering services, and tourism and travel related services.¹⁶

South Asia Free Trade Agreement

SAFTA, which entered into effect in January 2006, is South Asia's most prominent trade agreement. SAFTA requires the developing countries in South Asia (India, Pakistan, and Sri Lanka) to reduce their duties to 20 percent in the first phase of a two year period ending in 2007. In the final five year phase ending in 2012, the 20 percent duty will be reduced to zero in a series of annual cuts.¹⁷ The least developed nations in South Asia (Nepal, Bhutan, Bangladesh and Maldives) have an additional three years to reduce tariffs to zero.¹⁸ A complete elimination of tariffs is estimated to boost intra-regional trade by about 10 percent over its 2006 level. Although SAFTA does not have specific investment-related provisions, India has supported the agreement's general cooperative measures for "expanding investment and production opportunities. . ." among the contracting states and views it as an effective mechanism for future regional investment cooperation.¹⁹ However, since FDI restrictions from Bangladesh and Pakistan into India remain in effect, much of the residual investment benefits gained from greater regional trade liberalization will likely go to SAFTA's least developed members.²⁰

¹⁵ India's Schedule of GATS Commitments (as revised by Supplements 1-4).

¹⁶ Ibid.

¹⁷ Sri Lanka will have until 2013 to reduce its tariffs to zero.

¹⁸ South Asian Association for Regional Cooperation, *Agreement on South Asian Free Trade Area*.

¹⁹ Ibid.

²⁰ Dikshit, "Ban on FDI from Bangladesh May Go."

Bilateral Investment Treaties

In recent years, India has concluded BITs with both developed and developing nations.²¹ The majority of India's BITs (30 of 57) involve developing countries from Asia (16), the Middle East (9), Africa (4), and Latin America (1). Generally, India's BITs focus on the protections of investments relating to expropriation (nationalization of investments), transfers of income or capital, and international arbitration and dispute settlement for both state-to-state and investor-to-state cases.²² India's BITs also cover areas such as non-discrimination in treatment, the entry of personnel and foreign-controlled enterprises, and exceptions dealing with issues of national security or disease and pest prevention. The agreements have a standard duration of 10 years with their investment guarantees valid 15 years after termination.²³

There is considerable uniformity in the broad principles underlying India's BIT. However, some specific differences arise when comparing agreements between developed and developing nations, differences which likely reflect India's relative negotiating position. For example, India's BITs with Ghana, Indonesia, Oman, and Thailand only apply to investors which are "nationals or a company of a contracting party."²⁴ However, India's agreements with Australia and other developed countries additionally include indirect or portfolio investments by third-party institutional investors. Further, under the India-Ghana BIT, claims or disputes taken or completed before the entry into force of the agreement will not be covered by the BIT's obligations. This clause contradicts the general rule that investment claims are protected equally, regardless of when the BIT takes effect.²⁵ With regard to the entry and temporary residence of personnel, India's BITs with Australia and France are particularly notable for two reasons. First, they permit investors to employ key technical and managerial personnel regardless of citizenship, and second, they promote "sympathetic" consideration to the requests for temporary entry and work in connection with the other party's investments.²⁶

Double Tax Avoidance Agreements and CECA

Another policy tool India employs to promote FDI is the use of double tax avoidance agreements. Typically, these tax treaties provide relief from double taxation of income by providing exemptions and sometimes credits for taxes paid in one of the partner countries.²⁷ The laws of the two contracting states govern the taxation of income in their respective states. When an entity has income arising from both India and the partner country, the entity will be taxed under the tax laws of the country of residence.²⁸

²¹ These bilateral agreements are estimated to cover 65 percent (\$4.5 billion) of India's inward FDI and 40 percent (\$2 billion) of its outward FDI in 2005. OECD, "Salient Features of India's Investment Agreements," 3.

²² OECD, Directorate for Financial and Enterprise Affairs, Investment Committee, "Salient Features of India's Investment Agreements," 4.

²³ *Ibid.*, 6.

²⁴ *Ibid.*, 8.

²⁵ *Ibid.*, 8.

²⁶ *Ibid.*, 10.

²⁷ Fenwick & West LLP, *Structuring Venture Capital and Other Investments in India*, 2.

²⁸ *Ibid.*, 3.

Mauritius, India's largest source of FDI in recent years, is the most prominent beneficiary of India's bilateral tax treaties. Due to the local tax benefits it provides and its close historic and cultural ties—68 percent of Mauritius' population is of Indian descent—Mauritius has been a primary destination for entities interested in entering the Indian market.²⁹ Specifically, companies planning to invest in India often first establish a holding company in Mauritius, which offers zero-tax status to overseas corporate bodies (OCBs).³⁰ An OCB in Mauritius then must obtain a tax residency certificate³¹ to qualify for the tax treaty between Mauritius and India.

To avoid misuse of the treaty by Indian-based companies seeking to avoid paying taxes at home, the management of the Mauritian holding company must not be from India, and the company must not have a “permanent establishment” in India. In most cases, companies avoid “permanent establishment” status by establishing a subsidiary in India with limited corporate powers.³² However, controversy over the India-Mauritius tax treaty has grown in India, as there are no strict legal definitions for the terms “management from Mauritius” or “permanent establishment.”³³ Despite these legal uncertainties, FDI from Mauritius reached \$2.6 billion during 2005–06.³⁴ In 2006, FDI approvals from Mauritius into India included Essar Communications (telecom) for \$56 million in equity, ILM Trichy Ltd. (infrastructure) for \$23 million, and Pacifica Infrastructure (construction) for \$15 million.³⁵

Notably, in June 2005, India and Singapore signed a Comprehensive Economic Cooperation Agreement (CECA), which integrated investment provisions, a broad package of trade liberalization, and a tax treaty similar to the one between India and Mauritius.³⁶ For India, this agreement was seen as the most ambitious and comprehensive economic agreement ever concluded with a foreign country.³⁷ CECA is India's first attempt to integrate “BIT-like” investment disciplines in a preferential trade agreement, focusing on new investment facilitation provisions for the movement of natural persons, e-commerce, education, and media.³⁸ Further, although the CECA with Singapore adopts tax concessions similar to those of the India-Mauritius tax treaty, the requirements for Singapore tax residency are much more rigorous compared to those for Mauritius. Specifically, Singapore companies must satisfy predetermined expenditure requirements and show that they have sustainable and

²⁹ EIU, *Business India Intelligence*, 3.

³⁰ Fenwick & West LLP, *Structuring Venture Capital and Other Investments in India*, 3.

³¹ To qualify, an offshore company must (1) have two local directors approved by the Mauritian Offshore Business Activities Act Authority, (2) have a bank account in Mauritius, and (3) comply with Mauritian corporate formalities. The full benefits of the treaty would apply even if the Mauritian entity is established primarily for investment into India. Fenwick & West LLP, *Structuring Venture Capital and Other Investments in India*, 3.

³² Mauritian subsidiaries are usually not deemed to have “permanent establishment” in India as long as the subsidiary does not exercise decision making authority over certain activities. These activities can include making investment decisions, concluding contracts, or securing goods orders on behalf of the parent. Fenwick & West LLP, *Structuring Venture Capital and Other Investments in India*, 2–3.

³³ *Ibid.*

³⁴ Government of India, Ministry of Commerce & Industry, “Fact Sheet on Foreign Direct Investment.”

³⁵ Government of India, Ministry of Finance, various press releases of Department of Industrial Policy and Promotion.

³⁶ Thomas, “Singapore, New Tax Haven for Offshore Investors.”

³⁷ *Ibid.*

³⁸ Government of India, Ministry of Commerce & Industry, Department of Commerce, *CECA Between India and Singapore*.

continuous business operations within Singapore.³⁹ Nonetheless, Singapore is eager to overtake Mauritius as the primary investment route into India.⁴⁰ According to industry lobbying groups in India, Singapore's cumulative investment in India, which was about \$3 billion in 2005, is expected to increase to \$5 billion by 2010 and to \$10 billion by 2015.⁴¹ In addition, since it already acts as a major hub for investment in the region, Singapore is seen to be able to provide investors with a larger basket of financial services compared to Mauritius.⁴² However, it is not yet known whether increased FDI from Singapore will correspond with decreased FDI from Mauritius.

Other Agreements

Similar to SAFTA, the majority of India's bilateral and multilateral trade agreements do not contain detailed clauses regarding investment. However, it is likely that investment opportunities between parties will grow as trade becomes more liberalized. Appendix B provides a comprehensive list of India's partners in trade and investment agreements.

³⁹ Annual expenditures on operations in Singapore must be at least \$132,000 in the 24 months immediately prior to when the tax gains are realized. Fenwick & West LLP, *Structuring Venture Capital and Other Investments in India*, 4.

⁴⁰ Swire, "Singapore and Mauritius Vie To Supply India's FDI."

⁴¹ Basu, "India, Singapore Ink Pact."

⁴² Ibid.

CHAPTER 7

Case Study 1: Automotive Investment in India

Introduction

Since the industry opened up to foreign direct investment (FDI) in 1996 and the government lifted all equity caps for foreign automotive investors in 2002, India has attracted a significant amount of FDI in the auto sector. Out of 42 separate industry sectors in India, the “transportation industry,” which includes but is not limited to passenger vehicles and components, was the fourth largest recipient of FDI from August 1991 through December 2006. With a few exceptions, most FDI has been focused on sales to the local market, but recently, many automotive firms are investing in establishing production bases for export. FDI inflows in the sector totaled \$3.5 billion, accounting for 7 percent of total FDI inflows from August 1991 through December 2006.¹ This case study will describe the factors contributing to the influx of FDI to the Indian automotive sector, including domestic market conditions and Indian government policies specific to the sector; and examine FDI by passenger vehicle manufacturers in the most recent 5 year period—2002 through 2006.

Background on the Domestic Indian Automotive Industry

While rapid growth and extensive FDI in the Indian automotive industry are fairly recent phenomena, the industry itself has a long history. Indigenous automakers Hindustan Motors Ltd., Mahindra & Mahindra Ltd., and Tata Motors Ltd. were all founded in the 1940s, with relative newcomer Maruti Udyog Ltd. founded in 1981. Overall economic liberalization, which began in 1991, led to the delicensing² of the passenger car sector in 1993; however, quantitative restrictions on vehicle imports remained. Many foreign-owned firms established Indian joint-venture subsidiaries in the 1990s. In 2001, quantitative import restrictions were removed and in 2002, 100 percent foreign ownership was permitted.

In the last 5 years, production of passenger cars more than doubled to over 1 million cars in FY 2005–06 (table 7-1).³ Production of utility vehicles also nearly doubled, while multi-purpose vehicle (MPV) production increased only slightly. The compound annual growth rate (CAGR) over the 5 year period for total passenger vehicles is 18.2 percent, and PriceWaterhouseCoopers predicts that, in 2006–07, India’s growth will only be surpassed by China and Slovakia.⁴

¹ The largest sector in terms of FDI—“electrical equipments”—totaled \$6.9 billion and accounted for 14 percent of the total. Government of India, Ministry of Commerce & Industry, Department of Industrial Policy and Promotion, “Fact Sheet on Foreign Direct Investment.”

² Licensing refers to the requirement that importers and/or exporters obtain government approval prior to importing or exporting. As of 1993, motor vehicle importers and exporters no longer needed government approval.

³ The Indian fiscal year runs April 1–March 31.

⁴ McKenzie, “2007 Global Outlook.”

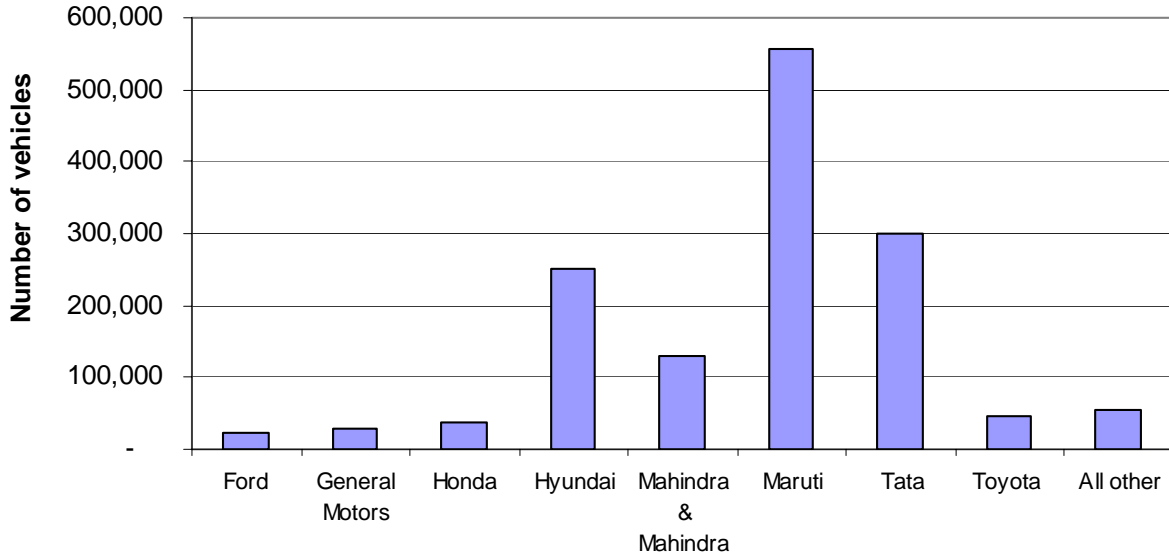
TABLE 7-1 Indian passenger vehicle production, in units, FY 2001–02 through FY 2005–06

Type of vehicle	2001–02	2002–03	2003–04	2004–05	2005–06
Passenger cars	500,301	557,410	782,562	960,487	1,045,881
Utility vehicles	105,667	114,479	146,325	182,018	196,371
Multipurpose vehicles	63,751	51,441	60,673	67,371	66,661
Total passenger vehicles	669,719	723,330	989,560	1,209,876	1,308,913

Source: Society of Indian Automobile Manufacturers Web site.

Maruti Udyog, majority owned by Suzuki (Japan) accounts for the largest percentage of local production, followed by Tata (India) and Hyundai (Korea) (figure 7-1). Maruti was founded by an Indian Act of Parliament in 1981; Suzuki’s initial stake was 26 percent. Maruti was privatized in 2002 when Suzuki’s stake rose to its current level of 54 percent.

Figure 7-1 Indian car and light truck production, 2005



Source: Ward’s Automotive Group, *World Motor Vehicle Data 2006*.

The Indian automotive parts industry exhibited growth similar to that of the auto industry during the 2001–06 period, more than doubling output to an estimated \$10 billion, a response in large part to the strong local automotive market and greater outsourcing by automakers to their suppliers (table 7-2). According to Indian sources, Indian industry output is likely to total \$18.7 billion by 2009 and then reach an estimated \$40 billion by 2014.⁵

TABLE 7-2 Indian automotive parts production: FY2001–02 through FY2005–06, (million U.S. dollars)

Year	Production
2001–02	4,470
2002–03	5,430
2003–04	6,730
2004–05	8,700
2005–06	10,000

Source: Automotive Component Manufacturers Association of India, “Industry Statistics.”

Indian exports of passenger vehicles grew consistently at a CAGR of 34.8 percent from FY 2001–02 to FY 2005–06 (table 7-3). Maruti Udyog, Tata Motors, and Hyundai are the key exporters; leading markets include Sri Lanka, Algeria, South Africa, United Kingdom, and Italy. By 2010, industry observers predict that capacity will surpass domestic sales by 1 million, leaving a significant quantity of vehicles available for export.⁶ Stringent government automotive emission regulations have ensured that vehicles assembled in India meet developed market standards, making them exportable. FDI in the automotive sector is clearly contributing to India’s export growth, with many foreign automakers announcing that new FDI is aimed, at least partially, at production for export.⁷

TABLE 7-3 Indian passenger vehicle exports, in units, FY 2001–02 through FY 2005–06

Type of vehicle	2001–02	2002–03	2003–04	2004–05	2005–06
Passenger cars and multipurpose vehicles	50,088	70,828	126,249	160,677	170,193
Utility vehicles	3,077	1,177	3,067	5,736	5,579
Total passenger vehicles	53,165	72,005	129,316	166,413	175,772

Source: Society of Indian Automobile Manufacturers Web site.

Indian exports of automotive components more than tripled during the period, with a CAGR of 20 percent, and reached an estimated \$1.8 billion in FY 2005–06 (table 7-4). A growing share of Indian production is destined for export markets, which accounted for an estimated 18 percent of Indian production in 2006. Approximately 75 percent of these exports were

⁵ India Brand Equity Foundation, *Auto Components*.

⁶ Fillmore, “Indian Capacity Will Rise,” 4.

⁷ For example, the two largest Indian automakers, Maruti (majority owned by Suzuki of Japan) and Hyundai of Korea are planning for large scale exports—Suzuki is planning to export one-half of the output at its new plant in Manesar, and Hyundai reportedly plans to export a large percentage of its total Indian capacity, which it is raising to 600,000 vehicles per year. Fillmore, “Indian Capacity Will Rise,” 4.

shipped to OEMs, with the remaining 25 percent heading to the aftermarket,⁸ compared with a 35 percent share to OEMs in the 1990s.⁹ Because original equipment manufacturers (OEMs) maintain relatively stringent product and quality specifications, the market shift likely represents, in part, the effect of quality improvements in association with the influx of FDI. Indian auto parts exports are likely to continue to see significant growth, according to at least one industry analyst, who has offered an “industry vision” of such exports reaching \$20–25 billion by 2015.¹⁰

TABLE 7-4 Indian exports of automotive parts: FY 2001–02 through FY 2005–06, (million U.S. dollars)

Year	Exports
2001–02	578
2002–03	760
2003–04	1,000
2004–05	1,400
2005–06	1,800

Source: Automotive Component Manufacturers Association of India at <http://www.acmainfo.com>.

India as an Automotive FDI Destination

The Indian Domestic Market

India is one of the fastest growing auto markets in the world, with sales registering a CAGR of 14.1 percent in the last 5 years (table 7-5), and projected sales of 3 million by 2015.¹¹ Catalysts for increased sales of passenger cars currently include new model offerings, expanding purchase finance options and low interest rates,¹² and reductions in motor vehicle-related taxes.¹³ Maruti is the market leader in passenger car sales by a wide margin (figure 7-2). Other important brands in terms of sales are Hyundai, Tata, and Mahindra & Mahindra.

TABLE 7-5 Indian passenger vehicle sales, in units, FY 2001–02 through FY 2005–06

Type of vehicle	2001–02	2002–03	2003–04	2004–05	2005–06
Passenger cars	509088	541491	696153	820179	882094
Utility vehicles	104253	113620	146388	176360	194577
Multipurpose vehicles	61775	52087	59555	65033	66366
Total passenger vehicles	675116	707198	902096	1061572	1143037

Source: Society of Indian Automobile Manufacturers Web site.

⁸ The term OEM refers to original equipment manufacturers (i.e., automakers); the aftermarket refers to replacement parts sold by dealers, retail operations, and service garages, for example.

⁹ India Brand Equity Foundation, *Auto Components*.

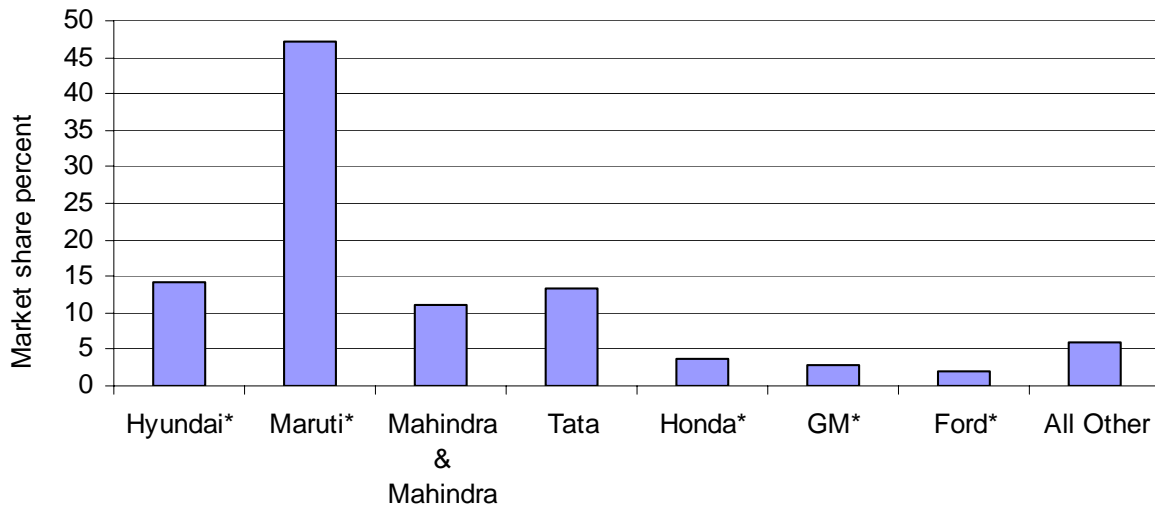
¹⁰ Just-auto.com editorial team, “ACMA-McKinsey’s ‘Vision 2015’ for the Indian Supplier Industry.”

¹¹ Government of India, Ministry of Heavy Industries and Public Enterprises, *Automotive Mission Plan 2006–2016*, 45.

¹² At least 80 percent of passenger vehicle sales are now financed by loans. KPMG, *Automotive and Components Market in Asia*, 22.

¹³ Bissinger, *Dream Machines*.

Figure 7-2 Indian car and light truck market share, by company, 2005



Source: Ward's Automotive Group, *World Motor Vehicle Data 2006*.

Note: * Majority foreign owned.

The composition of the domestic market makes India an attractive FDI destination for automobile components manufacturers. The middle class is expanding, and is estimated to reach 450 million in 2007, or about 45 percent of the total population,¹⁴ and the potential pool of drivers—the segment of the population aged 20–60 years—is growing.¹⁵ Disposable incomes in India are reportedly rising quickly, and Indian consumers tend to be more likely to channel their increased income toward a vehicle purchase than other Asian consumers.¹⁶ The market has much room to expand, as the vehicle penetration rate is just 7 cars per 1,000 people¹⁷—one of the lowest rates in the world.

India is also attractive to the world's automakers because it has a large pool of high technology engineering talent, and its location in the populous Asia-Pacific region allows it to serve as a regional export base. According to the Indian government, the increasing competition in the Indian automotive industry has spurred significant improvements in productivity, making it one of the most productive manufacturing sectors in India.¹⁸

In addition to the favorable market and manufacturing environment in India, the presence of a large number of leading motor vehicle manufacturers has attracted a substantial base of non-Indian automotive parts producers.¹⁹ Because of automakers' specific product, material,

¹⁴ *newKerala.com*, "India—The New Hub of the Automotive Industry."

¹⁵ Business India Intelligence, "India Automotive: Burning Rubber."

¹⁶ KPMG, *Manufacturing in India*, 40. Taken from Sanjeev Sanyal, *India's Changing Households*, Deutsche Bank, November 2004.

¹⁷ Rathore and Swarup, *A Review of India's Automotive Industry*, 11.

¹⁸ Government of India, Ministry of Heavy Industries and Public Enterprises, *Automotive Mission Plan 2006–2016*, ix.

¹⁹ *Press Trust of India*, "Delphi to Invest \$10 Mn in India"; and Doi, "Suzuki Will Build Suppliers Industrial Park," 5.

and quality requirements, they generally purchase components from established producers with the necessary certifications, reputation, and experience. Moreover, automakers prefer to source components locally to benefit from just-in-time delivery and supplier support. To meet these objectives, automakers often encourage their suppliers to invest in greenfield operations or form joint ventures with local manufacturers, particularly when entering new markets with limited or developing component industries. The size of the local vehicle assembly industry also offers sufficient production volumes to warrant the level of investment necessary to support component manufacturing operations in India.

Indian Government Policies Affecting Auto FDI

As noted above, since the 1990s, Indian government policies have been aimed at promoting a globally competitive auto sector, and FDI is a critical component of this plan. In the past 5 years, the government of India has taken a number of steps toward expanding the domestic automotive industry and promoting it as a globally competitive player. These policies are summarized below.

Automotive Policy of 2002

The primary goal of this policy was “to establish a globally competitive automotive industry in India and to double its contribution to the economy by 2010.”²⁰ Key objectives outlined in the 2002 policy included modernizing the domestic industry; fostering domestic design, research, and development; developing alternate propulsion technologies; and establishing domestic environmental and safety standards on par with international standards.²¹ In an important change, the 2002 policy permitted 100 percent foreign ownership of automotive and automotive parts manufacturing firms without minimum investment criteria. The policy also addressed import tariffs, with a stated objective of “facilitat(ing) development of manufacturing capabilities as opposed to mere assembly without giving undue protection; ensur(ing) balanced transition to open trade, promot(ing) increased competition in the market and enlarg(ing) purchase options to the Indian customer.”²² Import duties on components and completely knocked down (CKD) kits²³ were reduced to 30 percent in 2003 and to 15 percent in 2005.²⁴ Coupled with a reduction in local content requirements, these changes encouraged FDI by making it more economical to assemble vehicles in India. The 2002 automotive policy also provided for incentives for R&D and tax concessions.

²⁰ Government of India, Ministry of Heavy Industries and Public Enterprises, Department of Heavy Industry, *Auto Policy*.

²¹ SIAM, “Auto Policy of Government of India.”

²² Government of India, Ministry of Heavy Industries and Public Enterprises, Department of Heavy Industry, *Auto Policy*, art. 8.1.

²³ A CKD is a complete kit needed to assemble a vehicle. It is common practice among automakers to sell knocked down kits to their foreign affiliates; the automaker is typically able to avoid high import taxes, gain market access, and/or receive tax preferences for providing local employment, and the assemblers in developing markets to gain expertise.

²⁴ Bissinger, *Dream Machines*.

Automotive Mission Plan 2006–2016

Recognizing that “the concept of attaining competitiveness on the basis of cheap and abundant labour, favourable exchange rates, low interest rates and concessional duty structure is becoming inadequate and therefore, not sustainable,”²⁵ the Indian government introduced the Automotive Mission Plan (AMP) in September 2006, and finalized in March 2007. The policy states that industry investment in R&D is needed to “increase innovative breakthroughs for vehicle design as well as in manufacturing technology” and that the Indian government has a role to play in attracting this investment.²⁶ The vision statement of the AMP is:

To emerge as the destination of choice in the world for design and manufacture of automobiles and auto components with output reaching a level of \$145 billion accounting for more than 10% of the GDP and providing additional employment to 25 million people by 2016.²⁷

These goals are expected to be addressed via large investments from both industry and the government; according to the AMP, output targets “would require incremental investment of \$35–40 billion. . . by 2016.”²⁸ If successful, India would emerge, in 2016, as the world’s seventh largest passenger car producer, compared to its current rank of eleventh.²⁹

The AMP envisions that the role of the Indian government would entail facilitating infrastructure creation, promoting the country’s capabilities, creating a favorable and predictable business environment, attracting investment, and promoting R&D. Under this scenario, the role of industry would include designing and manufacturing world-class vehicles, improving cost competitiveness and labor and capital productivity, achieving economies of scale and R&D capabilities, and showcasing India’s products in potential markets.³⁰ Specific portions of the AMP are summarized in box 7-1 below.

²⁵ Government of India, Ministry of Heavy Industries and Public Enterprises, *Automotive Mission Plan 2006–2016*, xiii.

²⁶ *Ibid.*, 13.

²⁷ *Ibid.*, 26.

²⁸ *Ibid.*, 10.

²⁹ *Ibid.*, 25.

³⁰ *Ibid.*, 26.

Box 7-1 Key recommended interventions in the AMP

Investment Incentives

- A tax holiday for auto industry investment exceeding \$133 million.
- One-stop clearance of FDI proposals.
- Tax deductions of 100 percent of export profits.
- 30 percent deduction of net (total) income for 10 years for new industrial undertakings.
- Duty suspension for machinery for a greenfield plant or for expansion of an existing operation.
- 50 percent deduction on foreign exchange earnings.
- Actions on the part of state governments to ensure power supply and/or promote captive generation and provide preferential land allotment.

Export Measures

- Reforming the tariff and tax structure.
- Creating a Special Auto-Component Parks system to promote components exports.
- Creating 'virtual SEZs'.
- Adjusting existing export promotion schemes to ensure that they are WTO compatible.
- Extending product and market focus schemes to the auto sector.

Research and Development

- Implement the National Automotive Testing and R&D Infrastructure Project^a.
- Encourage collaboration between industry and research and academic institutions.
- Further develop the facilities and programs of the technical institutes.
- Emphasize fuel economy and alternate propulsion technologies.
- Consideration by the Ministry of Finance of R&D tax concessions, grants of 100 percent for fundamental research, 75 percent for precompetitive technology/application, and 50 percent for product development; zero taxes on technology transfers (products, features, alternate fuel, etc.); increased weighted deduction for expenditures incurred on R&D from 150 percent to 200 percent; and excise duty concession for 'Made-In-India' products.

Education, Training, and Labor Law Reform

- Creation in the Eleventh Five-Year Plan period a National Level Specialized Education and Training Institute for Automotive Sector.
- Providing for multi-year sabbaticals for national laboratory and university R&D personnel to work in industry.
- Expansion of working hours from 48 to 60 per week with a concomitant expansion of allowable hours per day.
- Allowing contract labor in core areas for temporary periods.
- Allowing fixed term contracts in certain core activities.
- Increasing flexibility in recruitment and lay-off of workers in response to changes in market demand.
- Creation by companies of a supplementary unemployment benefits fund.

Infrastructure Development

- Continued government investment in road, rail, port, and power infrastructure.
- Creation of three auto export hubs near Mumbai, Chennai, and Kolkatta, able to each handle 500,000 vehicle exports annually by 2015.
- Allowances for automobile retail trade and service infrastructure.

Sources: Government of India, Ministry of Heavy Industries and Public Enterprises, *Automotive Mission Plan 2006–2016*; *Autocar Professional*, "Mega Auto Project Well On Course"; and Wells and Sadana, "Hub or Hubris? India and the Automotive Mission Plan 2006–2016," 29.

^aThe Indian government established the \$400 million National Automotive Testing and R&D Infrastructure Project (NATRIP), jointly funded by industry and government. NATRIP's detailed project implementation report was approved on July 25, 2006, by the governing council, which comprises representatives both from the Indian automotive industry and the Government of India. NATRIP will set up world-class R&D, testing, and proving grounds facilities in the automotive clusters that will be available to all automakers. The first center is scheduled to open in 2008, with the remaining facilities opening by 2011.

Foreign Investment in the Indian Auto Industry

Automaker FDI decisions are primarily driven by market factors, including proximity to markets, market size, cost of production, and favorable infrastructure. For example, automakers tend to assemble vehicles in or near their major markets, or may choose to invest in a foreign market because of that country's tariff structure or to improve access to local markets. Foreign automakers direct their investment toward manufacturing plants, and also seek to expand their dealer networks and their network certified repair shops. Investments can also go into R&D facilities, training centers, and purchase financing operations. Because of India's improving technical capabilities and low costs, global automakers are increasingly outsourcing R&D, design, and engineering to their Indian partners or subsidiaries.³¹ For example, Suzuki has been increasingly outsourcing more R&D and design work for its global operations to its Indian subsidiary, Maruti, and scaling back on such operations in Japan. Since its inception in 2000, Maruti's R&D staff grew to 250 employees in 2006.³²

Several special economic zones (SEZs) are targeted specifically at the automotive industry, such as the Mahindra World City Auto Ancillary SEZ, which advertises its proximity to Ford and Visteon as one of the many reasons that automotive suppliers would choose to set up operations there,³³ and Adityapur Industrial Area Development Authority, which boasts competencies in sheet metal pressed fabricated components and subassemblies; light and heavy fabrication; castings, forgings and machining; and polymer components.³⁴ Despite the financial incentives offered by Indian SEZs, these zones have been less successful in attracting foreign and domestic investment than other economic zones, such as those operating in China. The Indian zones reportedly lack sufficient size to achieve economies of scale, have been subject to restrictive labor laws, and lack efficient infrastructure to facilitate communication and shipment of goods.³⁵

As discussed in chapter 3, foreign investors in India face issues related to infrastructure and corruption in India, but these are not enough to dissuade investors. Power, road, rail, and port infrastructure all pose challenges for the automotive industry, raising the cost of production and lowering efficiencies. Some automotive industry observers consider the unreliable power supply to be the most significant infrastructure constraint. One source reports that, "on average, a company can expect nearly 17 significant power outages per month, against one per month in Malaysia and fewer than 5 in China. At the same time, costs are higher."³⁶ Many companies reportedly maintain their own private power supplies to compensate for the national shortcomings;³⁷ one study on the Indian manufacturing sector asserts that over 60 percent of companies rely on private power generation.³⁸ The transportation infrastructure is also inadequate. An industry official states that India's weak infrastructure is "the biggest challenge for industry," noting that political disagreements between India's state and federal governments exacerbate the problems.³⁹

³¹ KPMG, *Automotive and Components Market in Asia*, 23.

³² Fillmore, "Short of Engineers at Home," 7.

³³ Mahindra World City Web site.

³⁴ Adityapur Industrial Area Development Authority Web site.

³⁵ *Asian Pacific Bulletin*, "Can India Revitalize its Special Economic Zones to Rival Those in China?"; Johnson, "India Lifts Freeze on Enterprise Zones"; and Srinivasan, "China, India and the World Economy."

³⁶ KPMG, *Manufacturing in India*, 3.

³⁷ U.S. India Business Council official, interview by Commission staff, January 4, 2007.

³⁸ KPMG, *Manufacturing in India*, 35.

³⁹ *Ibid.*

Corruption also adds to automotive companies' cost of doing business. An official of DaimlerChrysler acknowledged that corruption exists and that the company's policy is not to tolerate it. According to the official, "Now you can't say, I won't invest in India because there is corruption. You just have to accept the fact that you will have to find your own way."⁴⁰

U.S.-based passenger vehicle investment

Both GM and Ford have invested in India through their wholly owned subsidiaries, General Motors India and Ford India Pvt Ltd., respectively. General Motors India was incorporated in 1994 as a 50–50 joint venture company with the C.K. Birla Group of Companies (Hindustan Motors), and became a wholly owned subsidiary of General Motors Co. in 1999 (table 7-6). GM's technical center in Bangalore employs 800 and conducts engineering and R&D for local as well as global applications. Company officials recently announced that they plan to add 200 engineering jobs at the center per year.⁴¹ This clearly indicates that GM is ramping up its presence in the Indian market; the company is introducing the Chevrolet Spark small car, and hopes to achieve a 10 percent share of the Indian market by 2010.⁴² GM's total investment of \$750 million⁴³ is geared toward reaching an installed annual capacity of 225,000 automobiles by 2010.⁴⁴ According to GM's chairman and CEO, "India is 'the' candidate for GM's future investments."⁴⁵ While current assembly and domestic sales plans do not leave room for exports, company officials have said that India could become an export hub for mini cars in the future.⁴⁶

Ford commenced operations in India in 1996 through a joint venture with Mahindra & Mahindra; Ford India became a wholly owned subsidiary of Ford Motor Co. in March 2005. Two of the three reported M&A deals from the United States name Ford as the acquirer—the acquisition of Mahindra's 15.88 percent share of Ford India Pvt. Ltd. to make it wholly owned by Ford Motor Co. in 2005, and, later in 2005, a \$75 million equity infusion by Ford Motor Co. into Ford India Pvt Ltd.⁴⁷ Ford is striving for installed annual capacity of 150,000 vehicles by 2010.⁴⁸

⁴⁰ KPMG, *Manufacturing in India*, 6.

⁴¹ LaReau, "GM Wants More Engineers in India," 6.

⁴² *Ward's Automotive Reports*, "Chevy's Spark Key to GM's Growth in India," 7.

⁴³ *Ibid.*

⁴⁴ Business India Intelligence, "India Automotive: Burning Rubber."

⁴⁵ *Ward's Automotive Reports*, "Chevy's Spark Key to GM's Growth in India," 7.

⁴⁶ Bhalla and Allen, "GM Says to Buy More Auto Parts from India."

⁴⁷ Bureau van Dijk, *Zephyr Mergers and Acquisitions database*. The other M&A deal was a 20 percent stake in International Cars and Motors Ltd., purchased from Sonalika Group of India by Citigroup in 2006. International Cars & Motors Ltd. (ICML) was founded in 2003 with a greenfield plant in Amb to manufacture multi-utility vehicles. Plant capacity is 24,000 multi-utility vehicles (MUV) per year. In 2006, ICML launched the Rhino, an MUV designed in collaboration with MG Rover with engines sourced from Isuzu. 3i Web site.

⁴⁸ Business India Intelligence, "India Automotive: Burning Rubber."

TABLE 7-6 U.S. automakers with assembly operations in India

Automaker	Year operations commenced	JV partner "ownership share/JV partner"	Number of plants/location	Total installed capacity ^a	Examples of recently announced investments
General Motors	1994	NA	1/Gujarat	85000	<ul style="list-style-type: none"> Expanded Gujarat from 60,000 to 85,000 in 2007 Greenfield plant in Talegaon to begin production in late 2008—capacity of 140,000
Ford	1996	NA	1/Maraimalai, near Chennai	100000	<ul style="list-style-type: none"> Planning diesel engine plant to produce 100,000 engines/year

Source: Various industry reports, company Web sites, press releases, LocoMonitor, *FDI database*, and SIAM Web site.

Note: NA—not available.

^aTotal installed capacity refers to the total number of vehicles that could be assembled per year if plants were running at full capacity.

European-based passenger vehicle investment

A total of 12 European-based automakers (counting subsidiary investments as distinct from parent company investments) are invested in India; they include Audi, Bentley, BMW, DaimlerChrysler, Fiat, Mercedes-Benz, Porsche, Renault, Rolls Royce, Skoda, Volkswagen, and Volvo. Of these 12, the investments of Bentley, Mercedes-Benz, Porsche, and Rolls Royce are in retail outlets only; they are not assembling cars in India. Similarly, in 2006, Volvo announced an investment in a new subsidiary, Volvo Cars India, that will be selling the XC90 and S80 models imported from Sweden; Volvo has no immediate plans for production in India.⁴⁹

Among the 7 EU-15 automakers assembling or planning to assemble cars in India, the individual level of investment and commitment to the market varies considerably (table 7-7). BMW and Audi, for example, are just beginning assembly operations, and DaimlerChrysler produces less than 3,000 vehicles per year. Conversely, Fiat, Renault, Volkswagen, and Skoda are more heavily invested. Fiat has had the longest presence in India, dating to the 1950s, and is currently aligned with indigenous automaker Tata Motors; Renault, by far the largest European player in India, is also allied with an indigenous automaker—Mahindra & Mahindra.⁵⁰ Volkswagen, although a newcomer, is building a greenfield plant with an installed annual capacity of 110,000 vehicles, and its subsidiary, Skoda, has an annual capacity of 30,000 vehicles with a goal of increasing to 50,000 vehicles by 2010.

The M&As reported for European acquirers include a deal in which Fiat SpA of Italy increased its minority share in Fiat India Ltd. from 19.44 percent to 44.61 percent in 2005; and a deal in which a 10 percent stake in International Cars and Motors Ltd. was acquired by 3i Group plc, a private equity/venture capital firm in the United Kingdom in 2006.⁵¹

⁴⁹ Ford Motor Co., "Volvo to Sell Cars in India."

⁵⁰ As noted earlier, Mahindra was formerly a joint venture partner with Ford, but was bought out by Ford in 2005.

⁵¹ Bureau van Dijk, *Zephyr Mergers and Acquisitions database*.

TABLE 7-7 EU automakers with assembly operations in India

Automaker	Year operations commenced	JV partner "ownership share/JV partner"	Number of plants/ location	Total installed capacity	Examples of recently announced investments
Audi	2006 (announced investment)	NA	NA	NA	<ul style="list-style-type: none"> Plans to start producing cars in autumn 2007 at a Skoda facility in Aurangabad
BMW	2005 (announced investment)	NA	1/Pune	1700	<ul style="list-style-type: none"> Greenfield plant for CKD assembly in Pune came online in March 2007
DaimlerChrysler	1994	NA	1/Pune	2,000 (at a rented Tata facility)	<ul style="list-style-type: none"> Constructing a greenfield plant in Chakan for assembly of Mercedes-Benz models—5,000 per year expected to begin rolling off assembly line in early 2009
Fiat	1951 (Fiat licensed Premier Automobiles to produce a Fiat model)	Tata	NA	NA	<ul style="list-style-type: none"> Announced JV plant with Tata in Ranjangaon—to be operational in 2008 with 100,000 annual capacity, shared with Tata, as well as 200,000 engines
Renault	N/A	Mahindra	1/Nashik	NA	<ul style="list-style-type: none"> JV greenfield plant in Chennai—Mahindra (50%), Renault (25%), and Nissan (25%)—annual capacity of 400,000—to be fully integrated and operational in 2009—capacity rumored to be increased to 700,000 by 2012
Skoda	1999	NA	1/Aurangabad	30000	NA
Volkswagen	2006 (announced investment)	NA	NA	NA	<ul style="list-style-type: none"> Greenfield construction to begin in Pune—full-scale manufacturing plant—annual capacity to be 110,000 by 2009

Source: Various industry reports, company Web sites, press releases, *LocoMonitor FDI database*, and SIAM Web site.

Note: NA—not available.

Asia-Pacific-based passenger vehicle investment

According to *LocoMonitor*, a total of 9 Asian-Pacific automakers invested in India from 2002 through 2006: Honda, Mazda, Nissan, Suzuki, Toyota, and Daihatsu of Japan; Hyundai of Korea; Naza of Malaysia; and MG Rover a subsidiary of Nanjing Auto of China.⁵² Details of the investment made by MG Rover, (in 2002) are not available and may not have come to fruition.

Suzuki and Hyundai are the leading Asian-Pacific automakers in India (table 7-8). Suzuki owns 54 percent of India's Maruti Udyog Ltd., the leading passenger car maker in India, and has been a player in the Indian automotive industry since 1982. Hyundai Motor India Limited (HMIL), a wholly owned subsidiary of Hyundai Motor Company, is the second

⁵² OCO Consulting Ltd., *LocoMonitor FDI database*.

largest carmaker in India and accounts for 60 percent of all cars exported from India.⁵³ Honda, Toyota, and Hyundai entered the industry in the mid to late 1990s, and Nissan and Naza are the most recent Asian-Pacific automakers to begin Indian operations.

Component industry

From FY 2001–02 through FY 2005–06, total investment in the Indian automotive components industry nearly doubled to an estimated \$4.4 billion.⁵⁴ Of known foreign direct investment, roughly one-half of such projects were in higher technology items such as engine components, drive trains, and electronic systems. Most of the FDI represented new projects rather than expansions of existing operations, and focused on manufacturing rather than R&D and other automotive-related activities. As would be expected because of their leading positions in the global automotive industry, U.S., German, and Japanese firms were the principal sources of foreign investment in the Indian components industry.⁵⁵

Additionally, foreign firms increased their total investment in Indian automotive parts producers by a minimum of \$600 million from 2002 through YTD 2007⁵⁶ with 44 announced or completed acquisitions.⁵⁷ U.S. firms led in total number of deals for single countries, with 10 reported acquisitions, and Japanese firms were involved in 8 deals. Europe as a whole took part in 17 acquisitions, with the United Kingdom and Germany accounting for 5 and 4 acquisitions, respectively. The largest deal for which value was reported was the \$128 million acquisition of the majority stake of Ashok Leyland by the Hinduja Group, a London-based multinational with interests in manufacturing, banking, and trade, completed in August 2006.

⁵³ Just-auto.com editorial team, “Hyundai Has Ambitious Plans.”

⁵⁴ Automotive Component Manufacturers Association of India, “Industry Statistics.”

⁵⁵ OCO Consulting Ltd., *LocoMonitor FDI database*.

⁵⁶ Information for mergers and acquisitions compiled from Bureau van Dijk, *Zephyr Mergers and Acquisitions database*.

⁵⁷ Of the 44 acquisitions reported in the Zephyr database, the values of 11 deals were not available.

TABLE 7-8 Asia-Pacific automakers with assembly operations in India

Automaker	Year operations commenced	JV partner ownership share	Number of plants/location	Total installed capacity	Examples of recently announced investments
Honda	1995	Siel /99%	1/Noida	50000	<ul style="list-style-type: none"> • Greenfield plant in Rajasthan announced in 2006—50,000 initial capacity online by 2010, eventually reaching 200,000 • Expanding Noida to 100,000 by 2007 and to 150,000 by 2010 • Expanding dealership network from 53 to 100 by 2010
Nissan	2004	Ownership/ 100%	NA	NA	<ul style="list-style-type: none"> • JV greenfield plant in Chennai—Mahindra (50%), Renault (25%), and Nissan (25%)—eventual annual capacity of 400,000—to be operational in 2009, reaching full capacity by 2016
Suzuki	1982	Maruti/ 54%	4/Gurgaon & Manesar	600000	<ul style="list-style-type: none"> • Upgrading Gurgaon • Expanding the new Manesar plant opening in 2007 to 300,000 by 2009—large supplier park included at new facility • Plan to build R&D center, test track, and collision evaluation facility • Expanding dealership network from 405 to 600 by 2010
Toyota	1997	Toyota/ 89% Kirloskar/ 11%	1/Bangalore	60000	<ul style="list-style-type: none"> • Considering a greenfield plant as an expansion of its current facility—annual capacity would be 100,000—decision awaiting government approval of site selection • Expanding dealership network from 63 to 200 by 2010
Hyundai	1998	NA	1/Chennai	300000	<ul style="list-style-type: none"> • Greenfield plant in Chennai being completed in 2007 to expand total capacity to 600,000 • Adding a \$40 million R&D center, to employ 800 • Expanding dealership network from 183 to 250 • Expanding service network to 1,000 in 2007
Naza	2006 (announced)	NA	NA	NA	<ul style="list-style-type: none"> • Greenfield plant in Tamil Nadu announced in 2006; output expected in late 2008

Source: Various industry reports, company Web sites, press releases, *LocoMonitor FDI database*, and SIAM Web site.

Note: NA—not available.

Many multinational automotive parts producers from these and other major producing countries have been manufacturing in India for years, producing a wide range of products from basic commodities such as castings and forgings to highly sophisticated electronic systems (table 7-9). Some of these firms have also located technology or development centers in India. Of the 400 substantive Indian component producers, roughly 40 percent are joint ventures with foreign manufacturers.⁵⁸ The Indian government has encouraged local industry to partner with foreign firms to enhance its potential as an outsourcing location and global R&D resource center.⁵⁹

TABLE 7-9 Examples of global automotive parts suppliers manufacturing in India

Company	Country	Product examples
Aisin Seiki	Japan	Door latches, window regulators, door hinges
Bosch	Germany	Development center for electronic diesel injection systems
Dana	United States	Clutches, piston rings, axle housings
Delphi	United States	Steering systems, wiring harnesses, driveshafts, catalytic converters, technology center
Denso	Japan	Auto electrical components, fuel pumps, radiators, HVAC units, and heaters
Faurecia	France	Automotive seating and interior components
Siemens VDO	Germany	Dashboard instruments and accessories
Visteon	United States	AC systems, engine cooling systems, instrument panels
Yazaki	Japan	Wiring harnesses

Source: Automotive Component Manufacturers Association of India, <http://www.acmainfo.com>.

⁵⁸ KPMG, *Manufacturing in India*.

⁵⁹ Huber, "The Indian Automotive Scenario."

Conclusion

The key to continued FDI in India's auto sector rests with continued expansion of the domestic market, which seems ensured, and the further development of India as an automotive export hub. "Much will depend upon individual corporate strategies, particularly in terms of manufacturing locations in relation to market served."⁶⁰ Moreover, because of extensive forward and backward linkages, the viability of the AMP and the accomplishment of its goals are reliant on related industries and domestic developments.⁶¹ The slow progress on improvements to the transportation infrastructure and the uncertain availability of inputs such as steel may make it difficult for India to meet its AMP targets. Like the auto industry, the steel industry also has a national plan specifying production and other targets.⁶² However, meeting these targets depends on expansion of the railway network in order to move iron ore, coking coal, and finished steel around the country. The supply of fuel for individual motorists is also problematic in India.⁶³ Some automakers also note that frequently changing government policies have a negative impact on their investment decisions.⁶⁴

⁶⁰ Wells, "Hub or Hubris? Prospects for the AMP to 2016."

⁶¹ Wells and Sadana, "Hub or Hubris? India and the Automotive Mission Plan 2006–16," 29.

⁶² Government of India, Ministry of Steel, National Steel Policy 2005.

⁶³ Wells and Sadana, "Hub or Hubris? India and the Automotive Mission Plan 2006–16," 29.

⁶⁴ Ramachandran, "A Grand Plan for Indian Automobiles."

CHAPTER 8

Case Study 2: Pharmaceutical FDI in India

This case study traces the impact of India's changing patent laws on FDI in the pharmaceutical sector. India's patent laws have evolved from a model protective of pharmaceutical patents during the colonial period (1856–1947), to a legal regime intended to foster the establishment and growth of a domestic industry by excluding pharmaceuticals from patent protection (1972–2005), and finally to the present law (2005), which reestablishes patent protection for pharmaceutical products to comply with the requirements of the international intellectual property system.

The evolution of the patent law appears to have had a substantial impact on domestic and foreign pharmaceutical investment. Foreign firms dominated the market during the colonial period. When there was no pharmaceutical product patent protection in India, domestic firms flourished by reverse engineering patented products to make generic pharmaceuticals, and the market share of multinational pharmaceutical firms declined. While it is still too early to definitively identify the impact of the 2005 change to the patent law, it appears to be motivating increased foreign investment in India's pharmaceutical sector. In anticipation of the new law, pharmaceutical FDI increased sharply in 2004, declined in 2005 and then rebounded in 2006. The decline in 2005 may be attributable to substantial uncertainty as to how India will implement and interpret its new patent law.

Over the last five years (2002-06), FDI and strategic alliances between foreign and domestic firms in the areas of clinical trials, data management services, new drug discovery, and the manufacturing of pharmaceuticals and ingredients all have been on the increase. The valuable intellectual property connected to these activities is protected through operational security procedures, contractual protections and due diligence to ensure trustworthy partners. Multinational firms conduct R&D and manufacturing in India because of cost savings, the skilled labor force and the country's disease profile, among other reasons. These firms have, however, waited to see how the patent law will be interpreted and enforced before expanding their product patenting and commercialization activities in India.

India is charting a new intellectual property path, attempting to foster access to medicine and the growth of the domestic pharmaceutical industry while also phasing in compliance with the requirements of the international intellectual property system. The ultimate impact of India's calibrated approach on the quantity and quality of FDI in the pharmaceutical sector remains to be seen.

The Evolution of India's Patent Laws

The Patent Laws Under British Rule (1856-1947)

India enacted its first patent law in 1856 while the country was under British rule, a period that lasted until India's independence in 1947. While the patent laws were amended throughout the colonial period, they consistently provided for the patenting of pharmaceutical products. Most patents granted during this period went to foreigners. At the

time of independence, India's pharmaceutical sector was dominated by multinational companies with only limited participation by domestic firms.¹

The Post-Independence Patent Laws (1947-1995)

With independence in 1947, the Indian Government began preparing a new patent law, with a goal of fostering the development of an indigenous pharmaceutical industry. In 1972, after repeated expert reports and deliberations in Parliament, the India Patents Act of 1970 came into force.²

The 1970 Act imposed substantial limits on patent rights; these limits were intended to encourage indigenous inventions and secure their production in India on a commercial scale.³ First, and most importantly, pharmaceutical products could not be patented. Second, firms were permitted to patent only a single process for making a pharmaceutical; a firm could not block competitors by patenting all possible processes for making a particular drug. Third, the term for pharmaceutical process patents shortened to 5 years from the grant of the patent or 7 years from application filing, whichever was less, compared to 14 years from application filing for all other inventions. And fourth, the Act imposed very broad "compulsory licensing" provisions for pharmaceutical manufacturing process patents. Within 3 years of the grant, the patents were deemed "licenses of right," meaning that anyone could use the process if they paid a royalty.⁴ In sum, pharmaceutical products had no protection, and pharmaceutical processes were protected only for 3 years if a royalty was paid and for 5 years if no royalty was paid.

The Post-TRIPS Patent Laws (1995-Present)

In January of 1995, India became a founding member of the World Trade Organization (WTO) and agreed to the requirements of TRIPS, the WTO intellectual property agreement. Because India was a developing country that did not provide for pharmaceutical product patenting when TRIPS came into force, it obtained a 10 year transition period, until January 2005, to put in place pharmaceutical patent protections.⁵ During this transition period, India was required to provide a means for applications to be filed and assigned a filing date, a "mailbox" facility. TRIPS also required that "exclusive marketing rights"—the sole right to sell the invention for a specified time—be provided for certain mailbox applications filed during the transition period.⁶ India complied with these requirements through the Patents Act of 1999, after a WTO complaint was filed and resolved against India.⁷

In 2002, India amended its patent law to provide the TRIPS-mandated 20 year patent term for all inventions, to be applied to pharmaceutical patents at the conclusion of the transition period. The amendments also include new compulsory license provisions. These provisions permit a compulsory license application 3 years after a patent is granted if the "reasonable requirements of the public" regarding the invention have not been satisfied, the invention is not available at a reasonably affordable price, or the invention is not being "worked" or

¹ Mueller, "The Tiger Awakens," 16–20.

² *Ibid.*, 22–25.

³ India Patents Act, 1970, § 83.

⁴ Chaudhuri, *The WTO and India's Pharmaceuticals Industry*, 37–38.

⁵ TRIPS Article 65.4.

⁶ TRIPS, Arts. 70.8(a) and 70.9.

⁷ WTO, "India—Patent Protection for Pharmaceutical and Agricultural Chemical Products."

produced in India.⁸ The law also provides for immediate compulsory licensing in cases of a governmental notification of a public health crisis or public non-commercial use, or where the product will be exported to countries with insufficient manufacturing capacity to address public health problems.⁹ The compulsory license provisions of India's law are, by far, the broadest of all the world's patent systems.¹⁰ As such, they raise substantial concerns among multinational pharmaceutical companies; to date, however, no compulsory licenses have been sought or issued under the new law.

The critical step in India's implementation of its TRIPS commitments came in January 2005 with the end of the transition period and the required amendment of its law to provide patent protection for pharmaceutical products. According to Indian industry representatives, India now is taking a "calibrated approach" to intellectual property protection that seeks to take into account concerns for public health and access to medicine as well as the interests of the domestic industry.¹¹ Notwithstanding this focus on domestic issues, India now has in place an IP regime that addresses the requirements of the international IP system.

Ongoing Patent Law Controversies

Despite the substantial patent law changes since India's entry into the WTO, there are still gaps and provisions that raise objections from multinational pharmaceutical companies. First and foremost, multinationals seek a law to protect the clinical trial and other data used to obtain marketing approval of pharmaceuticals that utilize new chemical entities. Clinical trial data is extremely expensive to amass. The fully capitalized cost to develop a new drug has been estimated at an average of \$847 million, with a substantial portion of these costs attributable to the conduct of clinical trials.¹² Conducting clinical trials in India can significantly reduce these costs.

TRIPS requires the protection of such data against "unfair commercial use." However, because TRIPS does not define the critical terms included in this requirement, the obligation's precise nature arguably is unclear. The United States, the European Union, and many multinational pharmaceutical firms interpret TRIPS Article 39.3 to require "data exclusivity," meaning that data submitted to a marketing authority cannot be used by another company or person for a particular period (ranging from 5 years in the United States to up to 10 years in European Union countries). Others assert that developing countries can flexibly interpret TRIPS to protect test data only against misappropriation or other circumstances in which it is unfairly obtained.¹³ Data protection measures have been under consideration in India for years, with no resolution to date.

⁸ India Patents Act, § 84 (2005). Domestic "working" requirements are controversial; the United States challenged at the WTO such a requirement in Brazil's patent law, however, the dispute was terminated based on Brazil's agreement to provide advance notice where it intended to issue a compulsory license based on the fact that the patent needed to be domestically worked. USTR, "Brazil."

⁹ India Patents Act, §§ 92, 92A (2005).

¹⁰ Mueller, "The Tiger Awakens," 107-09.

¹¹ U.S. India Business Council, *Recommendations of the Breakout Session on Biotechnology/Life Sciences/Medical Devices Breakout Session*, "Issues Raised by Indian Industry" and Indian industry official, interview by Commission staff, March 28, 2007.

¹² DiMasi, Hansen, and Grabowski, "The Price of Innovation: New Estimates of Drug Development Costs," 151.

¹³ See generally, Thomas, *Proprietary Rights in Pharmaceutical Innovation*, CRS-17-19.

Moreover, a substantial backlog of unexamined patents, a lack of patent examiner experience, lengthy pre-grant opposition proceedings, and limited resources raise the concern that the patent law changes have not yet yielded meaningful patent protection.¹⁴ Under these circumstances, the need for data protection—to provide certainty that there will be some return on the investment necessary to support new drug discoveries—may be considered particularly acute. According to Pfizer India, the lack of data protection is part of the reason that “people are talking about India but investing in China.”¹⁵

Another controversial aspect of India’s Patent Act is the exclusion from patentability for derivatives of known substances, unless it can be shown that they are significantly more efficacious than the original substance.¹⁶ This exclusion was meant to preclude “evergreening”—the practice of extending the terms of patents through related patents on modified forms of the same drug, new drug delivery systems or new uses.¹⁷ The types of efficacy data needed to show that a derivative is patentable, the ability of patent examiners to evaluate medical efficacy data, and the standards governing the patent examiner’s data evaluation are all unclear.¹⁸ The Government of India charged a Technical Expert Group with determining whether this exclusion from patentability was TRIPS compatible. The Expert Group issued its opinion in December 2006, concluding that it was not, but they later withdrew the report due to “technical inaccuracies.”¹⁹ The multinational pharmaceutical firm Novartis is in the midst of a high profile challenge to the provision’s legality (box 8-1).

¹⁴ PhRMA, *PhRMA, Special 301 Submission: India*, 71–72.

¹⁵ KPMG International, *The Indian Pharmaceutical Industry: Collaboration for Growth*, 18.

¹⁶ India Patents Act, § 3(d).

¹⁷ Mueller, “The Tiger Awakens,” 72.

¹⁸ In other countries, this type of evaluation of medical data is typically done by health care regulatory and reimbursement officials, not by patent examiners.

¹⁹ The Group has requested the opportunity to review and resubmit an amended report. Nair, “India: Mashelkar Committee Withdraws Its Report.”

Box 8-1 The Novartis Challenge to India's Patent Law

Novartis is challenging in the Indian courts the refusal of the patent office to grant a patent for its cancer drug, Glivec. The patent office found that Glivec was not patentable under Section 3(d) of the Patents Act, which requires that a new form of a known compound demonstrate improved efficacy, and also found that the drug did not satisfy the requirements for novelty and an inventive step. The Novartis case challenges the constitutional validity of the patent law and its TRIPS compatibility. The dispute is pending in the Madras High Court which, in April of 2007, referred part of the case to a newly constituted Intellectual Property Appellate Board.

Novartis asserts that this is not a case of "evergreening." Although Glivec is patented around the world, the pre-2005 bar on product patents precluded Novartis from obtaining a patent in India. Novartis further alleges that it has demonstrated that the new version of the drug is more effective than a previous version, contrary to the findings of the patent office. NGOs and health advocates object to the Novartis challenge on the grounds that it undermines access to medicines and India's ability to place limits on the patenting of essential drugs.

Ironically, although Section 3(d) was intended to limit "evergreening" by multinational companies, it also limits the ability of domestic firms to obtain patents for incremental innovations. Domestic firms are in the early stages of investing the large amounts of money and scientific expertise necessary to discover new drugs. For example, the Indian firm Ranbaxy has reported that its patent applications in 2004 focused primarily on process discoveries for generics. In 2007, its patent filings focused on new drug delivery systems and other incremental innovations. Ranbaxy anticipates it will not be in a position to seek patents for new drug discoveries until 2012.

By limiting the availability of patents in cases of incremental innovation, Section 3(d) may have the opposite effect of that India intended. It may concentrate valuable pharmaceutical product patents in the hands of multinational companies because they have access to the resources and expertise needed for the most complex and costly inventions, at the expense of domestic firms undertaking incremental innovations.

Sources: Novartis, "Questions and Answers"; and Technical Expert Group on Patent Law Issues, "Report of the Technical Expert Group on Patent Law Issues."

The perceived inadequacies in India's patent law described above, as well as the Novartis experience, appear to have impacted multinational pharmaceutical companies' evaluation of the investment environment in India. Novartis has stated in the press that it constructed its new research institute in Singapore rather than India because of its concerns about patent protection. Also, Novartis announced the creation of a Shanghai research institute because of its perception that, unlike India, China has a system in place to improve intellectual property protection. Moreover, Novartis has asserted that because of intellectual property insecurity, its R&D collaborations in India are limited to supportive work rather than the development of new medicines.²⁰ More generally, according to a survey conducted by Ernst & Young and the Economist, more than 62 percent of multinational pharmaceutical companies surveyed in India consider threats to intellectual property a business risk, and 63 percent believe that their companies risked losing intellectual property rights when trying to integrate with local suppliers and third party service providers.²¹ The final chapter on the actual level of patent protection that India will accord pharmaceuticals has not yet been written.

²⁰ *The Business World (India)*, "We Are Not Doing This Out of Spite."

²¹ Shared Expertise Forums, "Survey: Pharmaceutical Companies Cautious of Investments in Emerging China and India Markets."

The Evolution of the Pharmaceutical Industry in India

The Domestic Pharmaceutical Industry

The composition of India's pharmaceutical industry has changed with the patent laws. Multinational firms dominated the Indian market during the colonial period. The removal of patent protection fostered the growth of the domestic industry and a corresponding decline in the market share of the multinationals. During the years after enactment of the 1970 India Patents Act, Indian scientists became particularly adept in the reverse engineering and production of pharmaceutical products patented outside of India and in the development of non-infringing production processes. By contrast, the withdrawal of patent protection caused many multinational pharmaceutical companies to limit their product portfolio in India to patent-expired products, or to pull out of the market altogether.²² In 1970, foreign firms accounted for two thirds of the market; by 2004, they held only a 23 percent market share.²³

Pharmaceutical firms operating in India are a diverse group with varied interests in the new patent law. Although there are approximately 6,000 active firms, the top 300 make up most of the Indian market. In the top tier are approximately 100 domestic and foreign-owned companies, with annual sales greater than \$650,000. The top tier firms, both foreign and domestic, with their own research agendas and discoveries generally support the amended patent law, believing that it provides a necessary incentive for innovation.²⁴

The top three domestic firms, in terms of operating revenues, are Ranbaxy Laboratories, Cipla Ltd., and Dr. Reddy's Laboratories. The only Indian subsidiary of a multinational firm with operating revenues sufficient to place it within the top ten firms in India is ninth-ranked GlaxoSmithKline Ltd. (GSK-India), a subsidiary of UK-based Glaxosmithkline (GSK) (figure 8-1).²⁵ The top domestic firms compete with multinational corporations in the global generics market, often have significant investments outside of India, and engage in R&D, including strategic alliances with foreign and domestic firms.²⁶ In general, the R&D budgets of domestic firms are substantially smaller than those of the multinationals. Ranbaxy, for example, had R&D expenditures of 7 percent of sales in 2005, and Dr. Reddy's Laboratories' expenditures were 10 percent, as compared to an average R&D expenditure of 15 percent for the top 15 global pharmaceutical companies in 2005.²⁷

In the second tier are approximately 200 medium-sized companies including generic producers and firms that specialize in niche areas such as contract research, with annual sales ranging from \$210,410 to \$650,000.²⁸ Many of the mid-sized domestic generics firms have been exclusively focused on the reverse engineering and manufacturing of patented and unpatented drugs. These firms generally oppose the new patent law; they do not have

²² Mueller, "The Tiger Awakens: The Tumultuous Transformation of India's Patent System and the Rise of Indian Pharmaceutical Innovation," 28.

²³ Chaudhuri, *The WTO and India's Pharmaceuticals Industry*, 18.

²⁴ Mueller, "The Tiger Awakens," 60.

²⁵ Bureau van Dijk, *Orbis Companies database*.

²⁶ Sampath, "Indian Pharma within Global Reach," 16-17.

²⁷ *Pharmabiz.com*, "Pharmabiz Studies of Top Cos."

²⁸ Sampath, "Indian Pharma within Global Reach," 16.

inventions of their own to protect and the new law undercuts what has been a successful market niche.²⁹

In the third tier are the remaining firms (approximately 5,700 small firms with annual sales less than \$210,410), some of which perform contract manufacturing services for foreign and domestic pharmaceutical makers. More than the new patent law, contract manufacturing firms are impacted by the revisions to India's Drug and Cosmetics Act, which as of 2005, require the implementation of Good Manufacturing Practices and have necessitated the substantial upgrading of facilities.³⁰ Although many smaller firms have been forced to shut down because they could not meet these enhanced standards, upgrading has provided some remaining manufacturers with increased opportunities to provide contract services to foreign firms.

Foreign Direct Investment in the Drug and Pharmaceutical Sector

Annual FDI inflows into India's drug and pharmaceutical sector have grown steadily from \$12 million in 1994 to \$342 million in 2004, declining to \$116 million in 2005, and rebounding to \$216 million in 2006 (figure 8-2). In 2004, FDI inflows increased 463 percent over 2003 levels, in large part in anticipation of the "advent of the product patent era."³¹ Ongoing uncertainty, perhaps attributable to perceived inadequacies in India's law in the areas of data protection, the standards for patentability, and compulsory licensing appears to have tamped down FDI in 2005 and 2006.

The largest source of FDI in India's pharmaceutical industry is Mauritius.³² The United States is the second largest source, followed by the United Kingdom and Singapore (figure 8-3). FDI in India takes various forms including greenfield projects (both the establishment of new facilities and the expansion of existing ones), strategic alliances between foreign and domestic firms, and mergers and acquisitions (M&A).³³

²⁹ Mueller, "The Tiger Awakens," 59–60.

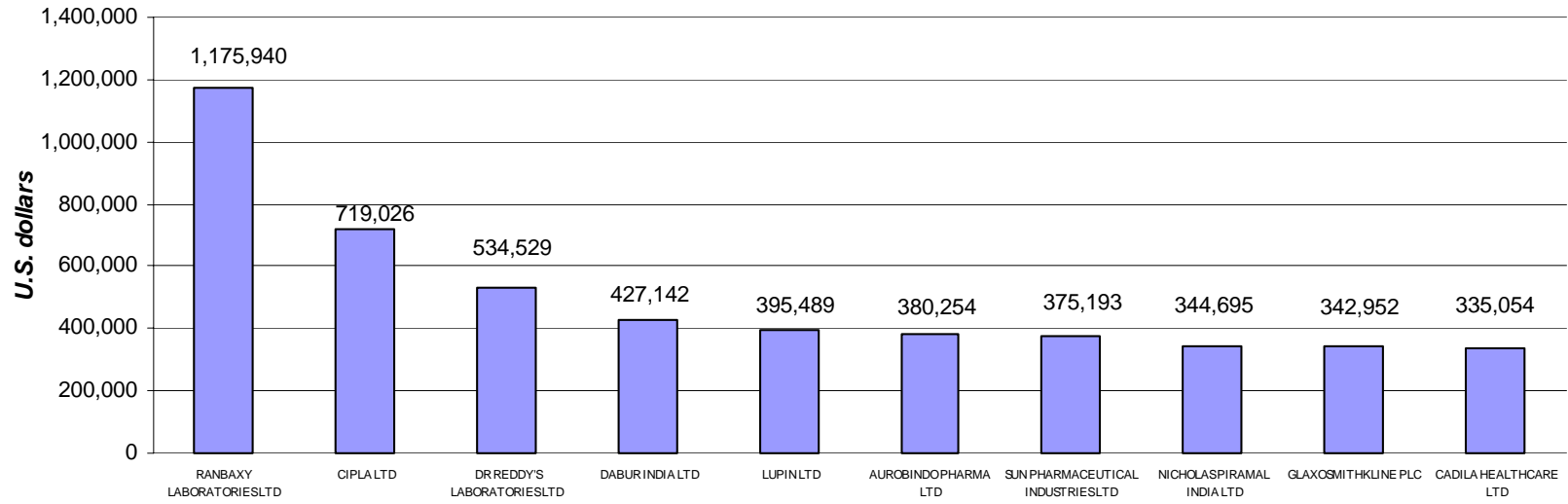
³⁰ Sampath, "Indian Pharma within Global Reach," 19.

³¹ *The Economic Times*, "Pharma Tops the FDI Chart in '04 with \$340 mn Inflow."

³² Many global investors in India route their FDI through Mauritius to take advantage of the India-Mauritius bilateral tax treaty. See chaps. 2 and 6 for further discussion of the treaty and its effects.

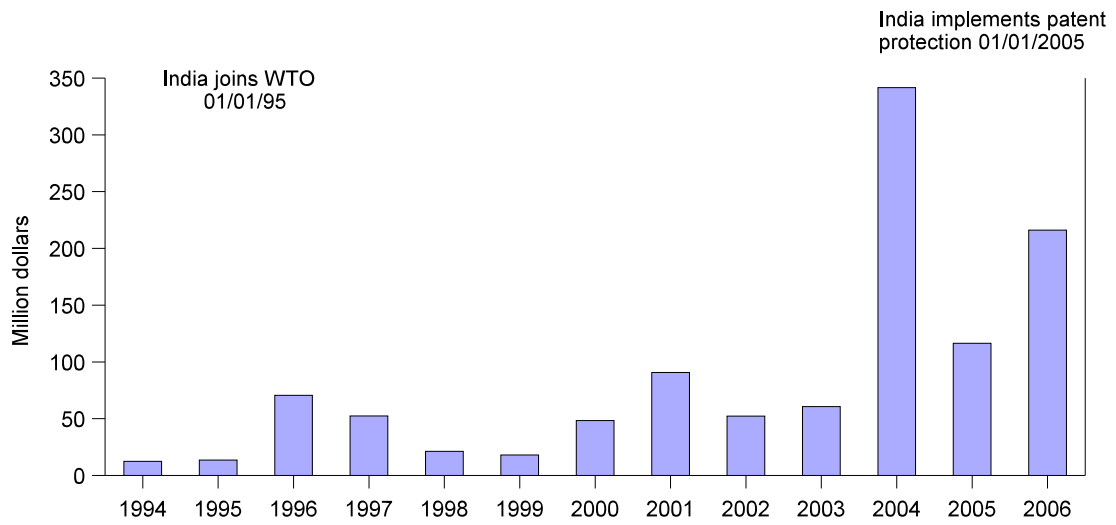
³³ For overall FDI data, this chapter relies on official statistics of the Indian Ministry of Commerce. For greenfield projects, the chapter cites data reported by OCO Consulting through its LocoMonitor database. Discussions of strategic alliances are based on press releases and M&A data is provided by Bureau Van Dijk through its Zephyr database. The features and limitations of these data sources are discussed in chapter 1. The projects and deals identified through the company databases and press releases are illustrative of FDI trends rather than identical to the data provided by the Indian Ministry of Commerce.

Figure 8-1 India's top ten pharmaceutical firms by operating revenue, 2005



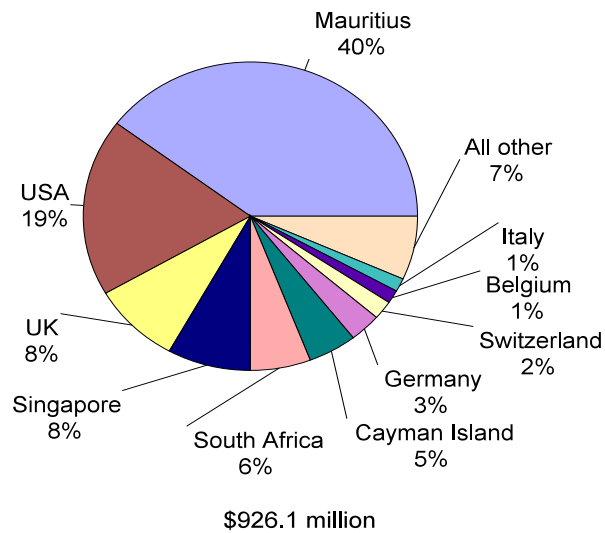
Source: Bureau van Dijk, *Orbis Companies database*.

Figure 8-2 India's FDI inflows, drugs & pharmaceuticals, 1994–2006



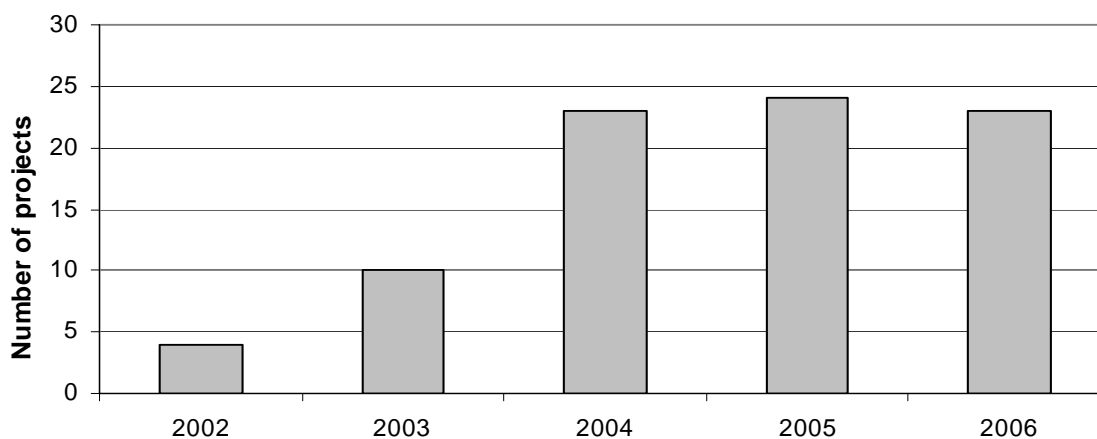
Source: Government of India, Ministry of Commerce & Industry, Department of Industrial Policy & Promotion.

Figure 8-3 Drugs and pharmaceutical FDI by country, 2002–06



Source: Government of India, Ministry of Commerce & Industry, Department of Industrial Policy & Promotion.

Figure 8-4 Greenfield FDI in India's pharmaceutical industry, by year, 2002–06



Source: OCO Consulting Ltd., *LocoMonitor FDI database*.

Greenfield Projects

During the period from 2002–06, foreign firms undertook about 80 greenfield investment projects in the pharmaceutical and health biotechnology sectors. The annual number of projects more than doubled between 2003 and 2004, and remained at high levels in 2005 and 2006 (figure 8-4). Most of the projects were for new facilities (83 percent) rather than expansions of existing facilities (17 percent). R&D was reported as the focus of most of the projects (59 percent), followed by manufacturing (26 percent) and sales and service (9 percent).³⁴

The majority of projects were undertaken by North American firms (51 percent), followed by European firms, including those outside of the European Union (36 percent). North American and European firms concentrated their investment activities in R&D, with 66 percent of all North American projects in this sector and 62 percent of all European projects. For North American firms, the next most frequent investment activity was in sales and service (20 percent) followed by manufacturing (15 percent). By contrast, for European firms, most of the remaining investment activity was focused on manufacturing (34 percent) while only 3 percent was focused on sales and service activities (table 8-1).³⁵

³⁴ OCO Consulting Ltd., *LocoMonitor FDI database*.

³⁵ *Ibid.*

TABLE 8-1 Greenfield FDI in the pharmaceutical and health biotechnology sectors by source region and activity, 2002–06

	North America		Europe		Asia Pacific		Middle East	
	No. of projects	% of projects	No. of projects	% of projects	No. of projects	% of projects	No. of projects	% of projects
R&D	27	66	18	62	0	0	2	67
Manufacturing	6	15	10	34	4	57	1	33
Sales and Service	8	20	1	3	3	43	0	0
Total projects	41		29		7		3	

Source: OCO Consulting Ltd., *LocoMonitor FDI database*.

Note: Because of rounding figures may not total 100 percent.

Strategic Alliances in R&D

Strategic alliances between multinational and domestic firms are an important part of FDI in the R&D and manufacturing sectors. In the R&D area, contract research organizations (CROs) offer pharmaceutical firms a range of services including product development, clinical trial management, laboratory services, and data management.³⁶ The top three reasons multinational companies cite for performing clinical trials in India are the number of potential clinical trial subjects, cost savings, and the country's disease profile.³⁷ These reasons must be compelling; despite China's much larger market size, there are presently 251 clinical trials ongoing in India compared to 227 in China. Companies with a substantial number of clinical trials ongoing in India include GSK with 25, Bristol-Myers Squibb (BMS) with 21, Johnson & Johnson with 16, and Pfizer with 14.³⁸

Prominent examples of contract research services being performed in India include the recent contract between India-based Tata Consultancy Services (TCS) and U.S.-based Eli Lilly (Lilly), in which TCS's services will include "clinical trial data management, statistical analysis and medical writing."³⁹ In 2007, Lilly also announced a new agreement with the Indian firm Nicholas Piramal (NPIL), in which NPIL will design and execute Lilly's global clinical development program, including investigational drug applications and human clinical trials.⁴⁰ The U.S.-based biotechnology firm Amgen recently announced its entry into the Indian market with the opening of a wholly owned subsidiary in Mumbai. The new investment will initially focus on strategic alliances with CROs, particularly in the area of clinical development.⁴¹

Already among India's top ten pharmaceutical firms, GSK-India recently increased its presence in Bangalore by expanding its clinical trial data management, analyses and reporting activities to account for more of the data services required for GSK's global clinical trials.⁴² In addition, GSK-India has signed a new R&D agreement with India-based Ranbaxy to expand their 2003 agreement to increase Ranbaxy's drug-development responsibilities. Under the 2003 agreement, Ranbaxy developed drug leads only to the stage

³⁶ Biotechmedia, "CRD, Contract Research Organizations."

³⁷ Ernst & Young, *Unveiling India's Pharmaceutical Future*, 12.

³⁸ U.S. National Institute of Health, "ClinicalTrials.gov."

³⁹ Chatterjee, "TCS Wins \$35 Mn Eli Lilly Contract."

⁴⁰ Singh, "It's Pharmaceutical Giant's Third Drug Development Alliance in India in Six Months."

⁴¹ Jayakumar, "Amgen Opens Subsidiary in India."

⁴² Matthew, "GSK Identifies Asia, Eastern Europe as Major Centres for Clinical Research."

of candidate selection. Under the expanded agreement, Ranbaxy will “advance the leads beyond candidate selection to completion of clinical proof of concept.”⁴³

Similarly, Wyeth USA and India-based GVK Biosciences entered into a five year agreement under which GVK will set up an R&D center in Hyderabad and hire 150 scientists in 2007 to work on Wyeth’s drug discovery projects. According to Wyeth, the driving factors behind its decision to partner for contract research services were the growing skill base in Asia, India’s 2005 revision of its patent laws, and the high quality of science at GVK.⁴⁴ Most recently, in March 2007, U.S.-based BMS and Indian biotechnology firm Biocon broke ground on a new research facility planned to house 400 scientists working on early drug development for BMS in India.⁴⁵

These new and increasingly sophisticated R&D projects may be surprising given the reported inadequacies in India’s patent law described above, and the fact that India does not have a data protection law. However, different IP protection mechanisms are relevant to the R&D projects described here than to projects which involve product patenting and commercialization. R&D projects depend on the relationship between the parties, pre-contract due diligence, strong contractual protections, operational security practices, and documented compliance with international standards such as ISO 27001, which addresses information security management systems, to ensure the confidentiality of proprietary data. India’s Contract Act and Information Technology Act may also provide statutory bases for the protection of sensitive R&D data and proprietary information; to date, these statutes have been used to protect sensitive information shared in the course of BPO projects.⁴⁶

By contrast, the data protection law sought by multinational firms would govern the commercialization of a product and the submission of clinical trial data to drug regulatory authorities in India. Clinical trial data developed in R&D projects may or may not be submitted to Indian regulatory authorities. If the data supports global trials, it likely will be submitted in regulated markets, such as those of the United States and the European Union, where there are data protection laws. Thus, the lack of a data protection law in India may not be of critical importance to a company’s decision to conduct preliminary R&D there.

This said, this case study reports numerous instances in which multinational pharmaceutical firms have stressed the importance of a strong IP protection environment to their investment decisions. Multinational firms remain wary of investing in countries where the fruits of their investment will be used to foster low cost competitors.⁴⁷ The IP landscape in India prior to 2005 gave rise to substantial uncertainty about whether Indian courts would protect sensitive information developed in pharmaceutical R&D projects. Under the 1970 Patents Act pharmaceutical products were not entitled to patent protection, thus there would be little motivation for a court to protect the R& D used to develop these products under existing contract laws—one could even envision a public policy-based challenge to a contract that attempted to do so. Now that the law does provide patent protection for pharmaceutical products, contract law protections for pharmaceutical R&D also may be more available.

⁴³ Ranbaxy Laboratories Ltd., “Ranbaxy Signs New R&D Agreement with GSK.”

⁴⁴ *The Hindu Business Line*, “GVK Biosciences to Provide Research Services for Wyeth Pharma.”

⁴⁵ Biocon, “Biocon Conducts Ground Breaking Ceremony.”

⁴⁶ Boston Consulting Group, *Harnessing the Power of India*, 5; and Kumar, “How to Protect Data in Outsourcing Deals.”

⁴⁷ Industry official, interview by Commission staff, Washington, DC, April 24, 2007.

Strategic Alliances in Manufacturing

A second major focus of FDI by multinational companies in India is outsourced contract manufacturing. This contract manufacturing includes the production of intermediates, active pharmaceutical ingredients (APIs), bulk drugs, formulations, and generic drugs. U.S.-based Pfizer, for example, maintains a single drug manufacturing facility in India, but also outsources manufacturing to about 20 Indian companies.⁴⁸ U.S.-based Merck has recently decided to outsource 35 percent of its manufacturing processes to developing countries, and particularly India, in order to substantially reduce costs. According to Merck, “the critical factor” driving the decision to increase Indian investment was the patent law change.⁴⁹ The Indian government has noted that “top MNCs like Pfizer, Merck, GSK, Sanofi Aventis, Novartis, Teva, etc. are largely depending on Indian companies for many of their APIs and intermediates” (table 8-2).⁵⁰

TABLE 8-2 Selected contract manufacturing deals in pharmaceuticals in India

Indian contract manufacturer	Multinational company	Product
Lupin Laboratories	Fujisawa (Japan)	Cefixime
	Apotex (Canada)	Cefuroxime Axetil, Lisinopril
	DMS (USA)	API for cephalosporins
Nicholas Piramal	Allergran (USA)	Bulk and formulations
	Advanced Medical Optics (USA)	Eye products
	AstraZeneca (Sweden)	APIs
	Pfizer (USA)	APIs
Wockhardt	Ivax (USA)	Nizatidine (anti-ulcerant)
Dishman Pharmaceuticals	Solvay Pharmaceuticals (Belgium)	APIs and formulations
	GSK (UK)	Intermediates and APIs
	AstraZeneca (Sweden)	Nexium
	Merck (USA)	Losartan
IPCA Labs	Merck (USA)	Bulk Drugs
	Tillomed (UK)	Atenelol
Orchid Chemicals and Pharmaceuticals	Apotex (Canada)	Cephalosporin and other injectables
Sun Pharma	Eli Lilly (USA)	Cardiovascular products, anti-infective drugs and insulin
Kopran	Synpac Pharmaceuticals (USA)	Penicillin
Cadila Healthcare	Altana Pharma (Germany)	APIs and intermediates
	Boehringer Ingelheim (Germany)	Gastrointestinal and cardiovascular products
	Mayne (Australia)	Intermediates for oncology products
Biocon	Bristol Myers Squibb (USA)	Bulk Drugs
Shasun Chemicals	Eli Lilly (USA)	APIs
	GSK (UK)	APIs
	Reliant Pharma (USA)	APIs
	Alpharma (USA)	Generics & APIs
	Boots (S Africa)	APIs
Jubilant Organosys	Novartis	Intermediates and APIs

Sources: Government of India, Ministry of External Affairs, ITP Division, and Greene, William.

⁴⁸ Mueller, “The Tiger Awakens,” 52.

⁴⁹ *The Economic Times*, “India’s on Merck’s Outsourcing Radar.”

⁵⁰ Government of India, Ministry of External Affairs, ITP Division, “Drugs & Pharmaceuticals.”

One reason for India's strength in the area of contract manufacturing compared to other emerging markets is the large number of manufacturing facilities that the U.S. Food and Drug Administration (FDA) has certified.⁵¹ FDA certification allows pharmaceutical products to be imported into the United States. Outside of the United States, India has the largest number of FDA-approved manufacturing facilities, numbering 75 in 2006.⁵² Another reason for the strength of contract manufacturing is the large number of scientists and engineers with unique skills in the areas of process chemistry and biochemistry.

As with contract R&D, contract manufacturing permits the segmentation and protection of production processes so that valuable intellectual property is not lost. For example, different variants of a molecule may be tested in different locations, fire walls may be set up between production functions, and the contract relationship may begin with commodity style production services and evolve only upon the establishment of trust. Indian expertise in BPO also has resulted in a demonstrated competence in security practices and contractual provisions such as non-disclosure agreements, as well as comfort with global standards that cover security domains.⁵³ The gaps identified by multinationals in India's IP regime do not appear to substantially affect collaborations in the manufacturing of pharmaceuticals. In fact, the success of manufacturing relationships for the production of pharmaceuticals has been the precursor to increasingly complex and sophisticated R&D and manufacturing collaborations.

Pharmaceutical M&A

Cross-border M&A deals in India's pharmaceutical sector have been on the upswing since 2003 (figure 8-5). European companies have been the most active acquirers with 61 percent of all deals, followed by North American firms with 26 percent.⁵⁴

The most significant deal in terms of scale and value has been the January 2007 acquisition by Mylan, one of the largest generic drug providers in the United States, of a majority stake in Indian-based Matrix, the world's second largest API manufacturer, in a \$548 million deal. According to Mylan, the merger was needed to expand its manufacturing platform, obtain a presence in key markets, and tap into local technical expertise in the production of generic biologics.⁵⁵ U.S.-based Watson Pharmaceuticals similarly expanded its operations in India by acquiring two Indian companies. In 2005, it acquired a finished dosages manufacturing plant from Dr. Reddy's. Then, in 2006, it acquired Sekhsaria Chemicals, a company focused on process R&D and contract manufacturing services. Watson Pharmaceuticals reported that the two acquisitions would improve efficiencies and cost management and enhance the company's competitive position.⁵⁶ In 2003, U.S.-based Healthscribe reported that it would buy out its Indian joint venture partner in a \$10.3 million deal. The Indian affiliate would continue to provide BPO services to the healthcare sector.⁵⁷

⁵¹ Ernst & Young, *Unveiling India's Pharmaceutical Future*, 10.

⁵² IBEF, *Pharmaceuticals*, 13.

⁵³ Kumar, "How to Protect Data in Outsourcing Deals."

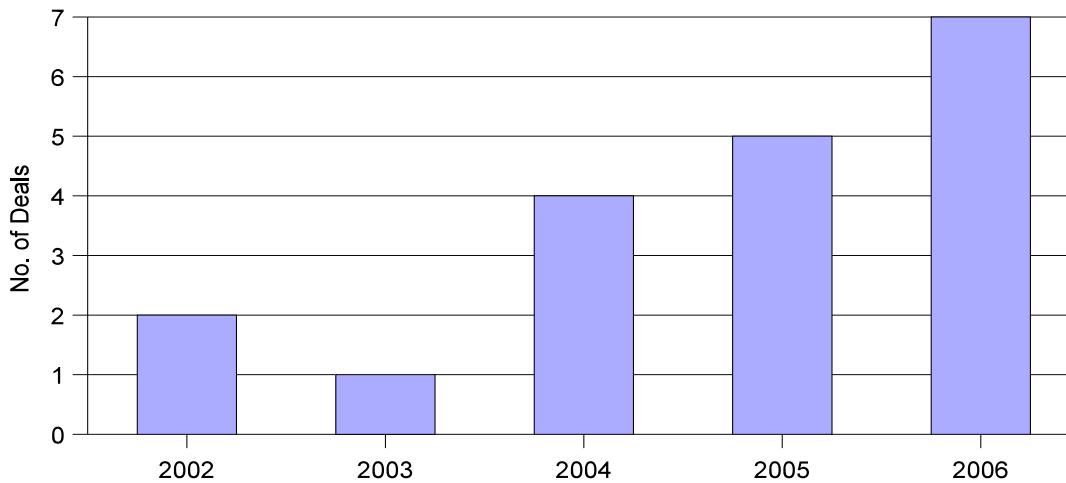
⁵⁴ Although not addressed in this case study, Indian firms have been extremely active in the last several years in acquiring companies in Europe and the United States, particularly in the generics sector. See Greene, *The Emergence of India's Pharmaceutical Industry and Implications for the U.S. Generic Drug Market*, 8-10.

⁵⁵ Roumeliotis, "Mylan in India's Biggest Pharmaceutical Takeover."

⁵⁶ Bureau van Dijk, *Zephyr Mergers and Acquisitions database*.

⁵⁷ Ibid.

Figure 8-5 Pharmaceutical M&A Activity, 2002–06



Source: Bureau van Dijk, *Zephyr Mergers and Acquisitions database*.

Acquisitions by European companies also focused on expanding Indian operations including three acquisitions by Iceland-based Actavis during the period from 2005–07. In 2005, it acquired Lotus Laboratories, a CRO, in a \$27 million deal. In 2006, it acquired a manufacturing plant from Grandix Pharmaceuticals to obtain “backward integration” with an API and a finished dose development and manufacturing unit. Then, in 2007, it acquired Sanmar Specialty Chemicals, a developer and manufacturer of API, with the goal of continuing its backward integration and reducing costs. In 2006, the French company, Merieux Alliance, acquired a majority stake in Shantha Biotechnics, an Indian company focused on R&D for infectious disease vaccines, to get access to proprietary research and a branded product base. M&A activity during this period also enabled European firms—including AstraZeneca and Solvay—to increase their majority stakes in Indian affiliates.⁵⁸

The globalization of clinical research and manufacturing operations—with the goal of reducing costs and accessing Indian expertise—has resulted in increased M&A activities in India over the last five years. As with other types of FDI, these M&A activities have increased in size and scope with the evolution of India’s intellectual property laws towards compliance with international standards under TRIPS.

⁵⁸ Ibid.

Conclusion

India has charted its own path over the last 35 years, attempting to foster the growth of a domestic pharmaceutical industry and access to medicine while, more recently, also addressing the requirements of the international intellectual property regime. Multinational pharmaceutical firms have responded to India's movement towards TRIPS compliance by increasing the quantity and quality of FDI in the areas of R&D and manufacturing. Multinational firms have adopted a more cautious attitude toward investment in the patenting and commercialization of pharmaceutical products in India, waiting to see how Indian courts and patent offices interpret the new laws, and until India enacts data exclusivity legislation. The ultimate success of India's "calibrated approach" to fostering the domestic industry and access to medicine while also addressing international intellectual property requirements remains to be seen.

Bibliography

3i Web site. <http://www.3i.com/portfolio/companies/international-cars-motor.html>
(accessed March 30, 2007).

Abdullah, Omer. Inaugural address to the 35th Annual General Meeting of The Indian Council of Arbitration.

Adityapur Industrial Area Development Authority Web site, <http://www.aiadaonline.com/facts.php>
(accessed June 8, 2007).

Altbach, Philip G. "Higher Education in India." *The Hindu*, April 12, 2005.

American Arbitration Association. International Centre for Dispute Resolution. "Bechtel Enterprises International (Bermuda) Ltd.; Ben Dabhol Holdings, Ltd.; and Capital India Power Mauritius I, claimants against Overseas Private Investment Corp., Respondent. AAA Case No. 50, T195 0050902, September 3, 2005, http://www.opic.gov/insurance/claims/awards/documents/2294171_1.pdf (accessed June 8, 2007).

Anderson, W. Geoffrey. "Legal and Practical Protection of U.S. Foreign Investment." 18 *Transnational Lawyer* 133 (2004).

Asian Development Bank Web site. <http://www.adb.org> (accessed January 11, 2007).

_____. "Key Indicators 2005: Labor Markets in Asia: Promoting Full, Productive, and Decent Employment," 2005.

Asia Pacific Bulletin. "Can India Revitalize its Special Economic Zones to Rival those in China?" Asia Pacific Foundation of Canada, February 1, 2006.
<http://www.asiapacificbusiness.ca/apbn/pdfs/bulletin244.pdf> (accessed June 8, 2007).

AstraZeneca. "AstraZeneca Inaugurates State-of-the-Art Global Process R&D lab in Bangalore (March 21)," 2007.
<http://www.astrazeneca.com/pressrelease/5315.aspx> (accessed April 16, 2007).

A.T. Kearney, Inc. "FDI Confidence Index." Global Business Policy Council, 2005. Volume 8.

Autocar Professional. "Mega Auto Project Well On Course," August 15, 2006.
<http://www.natrip.in/newscontent.aspx?newsid=N:34> (accessed January 19, 2007).

Automotive Component Manufacturers Association of India. "Industry Statistics."
<http://www.acmainfo.com>.

Barnes, David. Remarks at the 5th Summit of the U.S.-India High Technology Cooperation Group, Washington, DC, February 22, 2007.

Basu, Indrajit. "India, Singapore Ink Pact." *Asia Times Online*, July 2, 2005. <http://www.atimes.com/>
(accessed January 12, 2007).

- Basu, Kaushik. "Why India's Labour Laws Are a Problem." *BBC News*, May 18, 2006. http://news.bbc.co.uk/2/hi/south_Asia/4984256.stm (accessed December 6, 2006).
- Bellman, Eric. "As Economy Grows, India Goes for Designer Goods." *Wall Street Journal Online*, March 27, 2007. <http://www.wsj.com/> (accessed April 2, 2007).
- Bhalla, Nita, and Jonathan Allen. "GM Says to Buy More Auto parts from India." *Reuters India*, April 17, 2007. <http://in.today.reuters.com> (accessed April 18, 2007).
- Bhati, Usha. *Foreign Direct Investment: Contemporary Issues*. New Delhi, India: Deep & Deep Publications, 2006.
- Bilaterals.org*. "India and Mauritius Close to Economic Treaty," February 13, 2007. <http://www.bilaterals.org> (accessed March 16, 2007).
- _____. "Saudi, Kuwait want India to give 'S'pore Treatment'," August 16, 2005. <http://www.bilaterals.org> (accessed January 12, 2007).
- Bindra, Satinder. "India Battles Infrastructure Woes." *CNN*, October 25, 2005. <http://edition.cnn.com/2005/WORLD/asiapcf/09/21/india.eye.infrastructure/index.html> (accessed January 16, 2007).
- Biocon. "Biocon Conducts Ground Breaking Ceremony of New Research Facility at Biocon Park (March 21)." Bangalore, 2007. http://www.biocon.com/biocon_press_releases_details.asp?Fileid=252 (accessed May 8, 2007).
- Biotechmedia. "CRO, Contract Research Organization." <http://www.biotechmedia.com/definitions-c.html> CR), (accessed April 13, 2007).
- Bissinger, Maria. *Dream Machines: Emerging Markets Beckon the World's Carmakers*. Standard & Poor's, March 8, 2006.
- Bombay Stock Exchange Web site. <http://www.bseindia.com> (accessed January 30, 2007).
- Bonasia, J. "Indian Outsourcers Scramble to Meet Need for More Staff." *Investor's Business Daily*, March 2, 2007. <http://www.investors.com/> (accessed March 6, 2007).
- Boston Consulting Group. *Harnessing the Power of India*, May 2006. http://www.bcg.com/publications/files/Rising_to_the_Productivity_Challenge_in_Biopharma_RD_May06.pdf (accessed April 16, 2007).
- Bureau van Dijk. *Orbis Companies database*. <https://orbis.dvdep.com/> (accessed various dates).
- _____. *Zephyr Mergers and Acquisitions database*. <https://zephyr.bvdep.com/> (accessed various dates).
- Business India Intelligence. "India Automotive: Burning Rubber." The Economist Intelligence Unit, December 10, 2006.

- _____. "Hotels," April 17, 2007. <http://dialog.newsedge.com> (accessed April 23, 2007).
- Business Monitor Food & Drink Insight*. "Bharti Confirms Wal-Mart Plans," February 21, 2007. <http://dialog.newsedge.com/> (accessed February 21, 2007).
- Business World, The (India)*. "We Are Not Doing This Out of Spite," February 16, 2007. <http://www.drugwonks.com/2007/02/> (accessed March 25, 2007).
- BusinessStandard.com*. "Industrial Corridor to Get \$50 Billion Investment," April 15, 2007. <http://dialog.newsedge.com> (accessed April 19, 2007).
- _____. "Semiconductor Policy Notified," March 23, 2007. <http://www.business-standard.com/> (accessed March 2, 2007).
- Caterpillar Inc. "Caterpillar Completes Purchase of Former Joint Venture Engine Business in India (November 16, 2006)." Mathagondapalli, India, 2006. <http://cat.com/cda/components/fullArticleNoNav?ids=387571&languageID=7> (accessed June 4, 2007).
- Central Intelligence Agency (CIA). "India." *The World Factbook*, 2006. <http://www.cia.gov/cia/publications/factbook/geos/in.html> (accessed November 22, 2006).
- Chakrabarti, Rajesh. *The Financial Sector in India Emerging Issues*. New Delhi, India: Oxford University Press, 2006.
- Chaudhuri, Sudip. *The WTO and India's Pharmaceuticals Industry: Patent Protection, TRIPS, and Developing Countries*. Oxford: Oxford University Press, 2005.
- Chatterjee, Moumita. "TCS Wins \$35 Mn Eli Lilly Contract." *The Economic Times*, November 13, 2006.
- Confederation of Indian Industry. Northern Region. "Special Economic Zones—Engines for Growth," May 2006. <http://www.ciionline.org/Northern/regionalfocus/836/images/sez.pdf> (accessed November 2, 2006).
- David, Ruth. "India Sets Semi Subsidy Policy." *Forbes.com*, March 22, 2007. <http://www.forbes.com/> (accessed March 2, 2007).
- Data, P.T. Jyothi. "More Global Buys by Pharma Cos Likely." *Hindu Business Line (Internet Edition)*, July 22, 2005.
- Deccan Gold Mines, Ltd. Company press releases <http://www.deccangoldmines.com/media33.htm> (accessed May 14, 2007).
- Deloitte. *China and India: The Reality Beyond the Hype*. Deloitte, 2006.
- Deutsche Bank Web site. <http://www.db.com> (accessed March 5, 2007).

- Dikshit, Sandeep. "Ban on FDI from Bangladesh May Go." *The Hindu Times*, April 4, 2007. <http://www.thehindu.com/> (accessed April 12, 2007).
- DiMasi J.A., R.W. Hansen, and H.G. Grabowski, "The Price of Innovation: New Estimates of Drug Development Costs." *Journal of Health Economics* 2003, 22(2):151–85.
- Doi, Ayako. "Suzuki Will Build Suppliers Industrial Park Next Door to its New Indian Swift Plant." *The Japan Automotive Digest*, June 12, 2006.
- Economic Times, The*. "Hindustan Semiconductor to Chip In \$4 B for Indian Fabs," March 29, 2007. <http://economictimes.indiatimes.com/articleshow/1825640.cms> (accessed April 4, 2007).
- _____. "Pharma Tops the FDI Chart in '04 With \$340 Mn Inflow," April 18, 2005. <http://ibef.org> (accessed March 5, 2007).
- _____. "Patent Pat: Pharma MNCs Prefer Tiger to Dragon," February 13, 2005. <http://ibef.org> (accessed March 5, 2007).
- _____. "India's on Merck's Outsourcing Radar," June 23, 2006. http://economictimes.indiatimes.com/News/CompaniesA-Z/M_Companies/Merck_Pharma/Indias_on_Mercks_outsourcing_radar/articleshow/1672701.cms (accessed March 20, 2007).
- Economist.com*. "Indian Retailing: Getting Cheaper and Better," February 1, 2007. <http://www.economist.com/> (accessed February 1, 2007).
- Economist Intelligence Unit (EIU). *Business India Intelligence*, November 8, 2006.
- _____. "Country Report India—Main report: December 4, 2006." <http://www.eiu.com/> (accessed various dates).
- EIU, *India: Country Commerce 2006*, 22.
- Embassy of India. "FDI Policy and Procedure." http://www.indianembassy.org/newsite//Doing_business_In_India/FDI_Policy_Procedures.asp#6 (accessed February 13, 2007)
- _____. "U.S. Investments in India." http://www.indianembassy.org/newsite//Doing_business_In_India/ (accessed various dates).
- Ernst & Young. *Unveiling India's Pharmaceutical Future*, 2005. [http://www.ey.com/global/download.nsf/International/Industry_Pharmaceuticals_Unveiling_India_Pharma_Future/\\$file/NM_Pharma_Report_Unveiling_India_Future.pdf](http://www.ey.com/global/download.nsf/International/Industry_Pharmaceuticals_Unveiling_India_Pharma_Future/$file/NM_Pharma_Report_Unveiling_India_Future.pdf) (accessed February 1, 2007).
- European Commission (EC). "Bilateral Trade Relations - India." http://ec.europa.eu/trade/issues/bilateral/countries/India/index_en.htm (accessed March 7, 2007).
- _____. *EU 2005 Breakdown of Number of Cases Registered*. Brussels: EC, 2006. http://ec.europa.eu/taxation_customs/resources/documents/customs/customs_controls/counterfeit_piracy/statistics/counterf_comm_2005_en.pdf (accessed February 5, 2007).

- Fenwick & West LLP. *Structuring Venture Capital and Other Investments in India*, 2006.
- Fillmore, Ken. "Indian Capacity Will Rise to 3 Million a Year by 2010, Says Nikkei." *The Japan Automotive Digest*, December 11, 2006.
- _____. "Short of Engineers at Home, Suzuki Will Shift More Design Chores to Maruti." *The Japan Automotive Digest*, January 22, 2007.
- Financial Express, The*. "EADS to Open Technology Centre in Bangalore." April 4, 2007. http://www.financialexpress.com/fe_full_story.php?content_id=160135 (accessed May 3, 2007).
- Financial Times, The*. "FDI in India Expected to Double," December 28, 2006. <http://www.ft.com/> (accessed January 18, 2007).
- Flextronics International Ltd. "SemIndia Announces Flextronics as a Strategic Partner (April 4)." New Delhi, 2006. <http://www.flextronics.com/en/portals/0/press%20releases/20060404SJA.pdf> (accessed April 2, 2007).
- Ford Motor Co. "Volvo to Sell Cars in India (July 5)." Dearborn, 2006. http://media.ford.com/newsroom/feature_display.cfm?release=23361.
- Fraser, Cameron, Axel Berkotsky, Maya Bhandari, Diane Halley. European Policy Centre "EU-India Relations (including EU-India Journalists' Conference report, 30–31 May") EPC issue paper no. 35, June 2005.
- Frontline. Volume 19 - Issue 14, July 6–19, 2002. <http://www.hinduonnet.com/fline/fl1914/19141020.htm> (accessed April 9, 2007).
- General Electric Web site. <http://www.ge.com/in> (accessed December 6, 2006).
- Geneva Convention on the Execution of Foreign Arbitral Awards of 1927.
- Geneva Protocol on Arbitration Clauses of 1923.
- Global Trade Information Service, Inc. (GTIS). *World Trade Atlas database*.
- Government of Goa Web site. <http://www.edc-goa.com> (accessed January 12, 2007).
- Government of India. "Committee Report on Reforming Investment Approval & Implementation Procedures." <http://dipp.nic.in/implrepo/implrepo2.pdf> (accessed March 30, 2007).
- _____. Indian Arbitration and Conciliation Act of 1996 (IACA).
- _____. "SEZ Rules 2006, Chapter 2, Procedure for Establishment of Special Economic Zone." www.seznews.com/acts-and-rules/sez-rules-2006/procedure-for-establishment-of-sez.htm.
- _____. Labour Bureau. *Annual Survey of Industries Scheme*. <http://labourbureau.nic.in/asitab%20new%20sep06.htm> (accessed October 27, 2006).

- _____. Ministry of Civil Aviation. "Policy on Airport Infrastructure."
<http://civilaviation.nic.in/moca/airppol.htm> (accessed March 21, 2007).
- _____. Ministry of Commerce & Industry. "2006 Year of Record FDI Inflows."
<http://pib.nic.in/release/release.asp?relid=23630> (accessed April 17, 2007).
- _____. Ministry of Commerce & Industry. *Economic Survey 2006–2007*.
<http://indiabudget.nic.in/es2006-07/esmain.htm> (accessed April 17, 2007).
- _____. Ministry of Commerce & Industry. "Fact Sheet on Foreign Direct Investment from August 1991 to December 2006." http://dipp.gov.in/fdi_statistics/india_fdi_dec_2006.pdf (accessed April 7, 2007).
- _____. Ministry of Commerce & Industry. "SEZs Future Vehicle of Economic Activity, Says Kamal Nath (November 16)." New Delhi, 2006. http://commerce.nic.in/Nov06_release.htm#h13, (accessed December 5, 2006)
- _____. Ministry of Commerce & Industry. "Special Economic Zones in India—About."
<http://www.sezindia.nic.in/HTMLS/about.htm> (accessed April 2, 2007).
- _____. Ministry of Commerce & Industry. "Special Economic Zones in India—Facilities and Incentives." <http://www.sezindia.nic.in/HTMLS/set-sez.htm> (accessed November 16, 2006).
- _____. Ministry of Commerce & Industry. "Special Economic Zones in India—Home Page."
<http://sezindia.nic.in/> (accessed November 14, 2006).
- _____. Ministry of Commerce & Industry. "Special Economic Zones in India—How to Apply." http://www.sezindia.nic.in/howapply_enterprise.asp (accessed November 28, 2006).
- _____. Ministry of Commerce & Industry. Department of Commerce. *Annual Report 2005–2006*.
<http://commerce.nic.in/annual2005-06/englishhtml/cover.htm> (accessed April 17, 2007).
- _____. Ministry of Commerce & Industry. Department of Commerce. *CECA Between India and Singapore*. <http://commerce.nic.in/> (accessed various dates).
- _____. Ministry of Commerce & Industry. Department of Industrial Policy and Promotion. *Investing in India: Foreign Direct Investment Policy & Procedures*, 2006.
- _____. Ministry of Commerce & Industry. Department of Industrial Policy and Promotion.
http://dipp.nic.in/fdi_statistics/india_fdi_index.htm
- _____. Ministry of Commerce & Industry. Department of Industrial Policy and Promotion. Secretariat for Industrial Assistance. "Destination India." Issue No. 2, 2004.
- _____. Ministry of External Affairs. ITP Division. "Drugs & Pharmaceuticals."
<http://www.indiainbusiness.nic.in/industry-infrastructure/industrial-sectors/drug-pharma.htm> (accessed April 16, 2007).

- _____. Ministry of Finance. Income Tax Department Web site. <http://incometaxindia.gov.in/> (accessed various dates).
- _____. Ministry of Heavy Industries and Public Enterprises. *Automotive Mission Plan 2006–2016: A Mission for Development of Indian Automotive Industry*. <http://www.siam.in/Upload/AMP.pdf>.
- _____. Ministry of Heavy Industries and Public Enterprises. Department of Heavy Industry. *Auto Policy*, March 2002. <http://www.dhi.nic.in/autopolicy.htm>.
- _____. Ministry of Human Resource Development. Sourced from Reserve Bank of India. Handbook of Statistics on Indian Economy, September 18, 2006. <http://www.rbi.org.in> (accessed January 18, 2007).
- _____. Ministry of Labor Web site. <http://labour.nic.in/act/welcome.html> (accessed various dates).
- _____. Ministry of Law and Justice. “Civil Procedure Code As Amended Enforced as of Today (July 1).” New Delhi, 2002. <http://pib.nic.in/archieve/lreng/1yr2002/rjul2002/01072002/r010720022.html> (accessed April 9, 2007).
- _____. Ministry of Law and Justice. “Landmark Legal Reforms in the Social Sector, (October 7).” New Delhi, 2002. <http://pic.nic.in/arcieve/lreng/1yr2002/roct2002/07102002/r071020021.html> (accessed April 9, 2007).
- _____. Ministry of Shipping, Road Transport and Highways. Department of Road and Transport and Highways. “Externally Aided Projects.” <http://north.nic.in/externalproj.htm> (accessed January 12, 2007).
- _____. Ministry of Shipping, Road Transport and Highways. Department of Road and Transport and Highways. “Opportunities for Private Sector Participation.” http://morth.nic.in/pub_pvt_participation.htm (accessed January 12, 2007).
- _____. Ministry of Shipping, Road Transport and Highways. Department of Road and Transport and Highways. “Status of BOT Projects Awarded.” http://morth.nic.in/BOT_Proj_NHAL.htm (accessed January 12, 2007).
- _____. Ministry of Steel, National Steel Policy 2005. <http://www.steel.nic.in/nspolicy2005.pdf> (accessed June 29, 2007).
- _____. Planning Commission. *Foreign Investment, India*, August 2002.
- Grace, Cheri. “The Effect of Changing Intellectual Property on Pharmaceutical Industry Prospects in India and China,” June 2004. <http://www.dfid.gov.uk/pubs/files/indiachinadomproduce.pdf> (accessed March 19, 2007).

- Greene, William. *The Emergence of India's Pharmaceutical Industry and Implications for the U.S. Generic Drug Market*, USITC Publication 2007-05-A. Washington, DC: USITC, 2007. http://www.usitc.gov/ind_econ_ana/research_work_papers/documents/EC200705A.pdf (accessed May 7, 2007).
- Grocer. "Bharti to Invest \$2.5 Billion in Chain," February 24, 2007. <http://dialog.newsedge.com/> (accessed April 12, 2007).
- GulfNews.com. "Japan to Help India Build \$50 Billion Industry Corridor," April 15, 2007. <http://archive.gulfnews.com/articles> (accessed April 17, 2007).
- Gupta, Ritesh. "India Gears Up For Retail." *Chain Store Age*, February 2007.
- Gutierrez, Carlos, Secretary of the U.S. Department of Commerce, and David Sampson, Deputy Secretary of the U.S. Commerce Department, Remarks at the 5th Summit of the U.S.-India High Technology Cooperation Group, Washington, DC, February 22, 2007.
- HSBC Web site. <http://www.hsbc.com> (accessed March 5, 2007).
- The Hindu. "New Hunt for the Yellow Metal." December 15, 2003. <http://www.hindu.com/biz/2003/12/15/stories/2003121500241600.htm> (accessed May 14, 2007).
- Hindu Business Line. "GVK Biosciences to Provide Research Services for Wyeth Pharma," January 14, 2006. <http://www.thehindubusinessline.com/2006/01/14/stories/2006011403320200.htm>.
- Hindustan Lever Limited Web site. <http://www.hll.com> (accessed October 5, 2006).
- Huber, Hans-Michael. "The Indian Automotive Scenario: Past – Stable, Present – Bright, Future – Promising!" http://www.fadaweb.com/indian_auto_scenario.htm
- Human Rights Features, *Legal Reform and Investment Prospects in India*, HRF/154/06, November 30, 2006.
- Iloveindia Web site. <http://www.iloveindia.com/finance/bank.html> (accessed March 5, 2007).
- India Brand Equity Foundation. *Auto Components*. <http://www.ibef.org/industry/autocomponents.aspx>.
_____. *Pharmaceuticals*, July 2006. http://www.ibef.org/download/Pharma_sectoral.pdf (accessed March 19, 2007).
- India Mart. *Taxation - Tax Treaties*. 2007. <http://www.finance.indiamart.com/taxation/taxtreaties.html> (accessed January 12, 2007).
- Indian Express. "Work on Delhi-Mumbai Corridor from January," April 14, 2007. <http://dialog.newsedge.com> (accessed April 19, 2007).
- Indian Insurance Regulatory and Development Authority Web site, <http://www.irdaindia.org/hist.htm> (accessed April 5, 2007).

- Indo-Asian News Service*. "India Woos Foreign Equity in Infrastructure," February 23, 2007. <http://www.hindustantimes.com/news> (accessed May 31, 2007).
- Industries Commission rate, Government of Gujarat, *New Initiatives Special Economic Zones*, <http://www.icgujarat.gov.in/new-initiatives/SEZ-intro.htm>.
- Intel. "Intel Outlines \$1 Billion Multi-year Investment Plans, Highlights India's Importance (December 5)." City of release, 2005. http://www.intel.com/pressroom/archive/releases/20051205corp_b.htm (accessed May 8, 2007).
- International Bank for Reconstruction and Development (IBRD)/World Bank. *Doing Business in South Asia 2007*. Washington, DC: The World Bank, 2007.
- International Center for Alternative Dispute Resolution (ICADR) Web site. <http://www.icadr.org/aboutus/about.html> (accessed March 23, 2007).
- International Chamber of Commerce (ICC). *Global Survey on Counterfeiting and Piracy*. London: ICC, 2007. <http://www.iccwbo.org/bascap> (accessed February 27, 2007).
- International Finance Corporation Web site. <http://www.ifc.org> (accessed January 11, 2007).
- International Intellectual Property Alliance (IIPA). *2003 Special 301 Report: India*. Washington, DC: IIPA, 2003. <http://www.iipa.com/rbc/2003/2003SPEC301INDIA.pdf> (accessed February 5, 2007).
- _____. *2007 Special 301 Report: India*. Washington, DC: IIPA, 2007. <http://www.iipa.com/rbc/2007/2007SPEC301INDIA.pdf> (accessed February 14, 2007).
- International Monetary Fund (IMF). *India: Selected Issues*, March 2005.
- Islamic Republic News Agency*. "India Attractive Destination for PGCC Investments," February 12, 2007. <http://www2.irna.ir/en/> (accessed February 14, 2007).
- iTWire. "Google Likely to Set Up \$1 Billion Datacenter in India," August 11, 2006.
- Jacob, Jayanth. "India to Advance Zero-Tariff SAFTA Date." *The Indian Express*, April 1, 2007. <http://www.indianexpress.com/> (accessed April 12, 2007).
- Jayakumar, P.B. "Amgen Opens Subsidiary in India," March 30, 2007. <http://www.business-standard.com/general/pintpage.php?autono=279348> (accessed April 10, 2007).
- Jha, "UAE, India to Expand Ties."
- Johnson, Jo. "India Lifts Freeze on Enterprise Zones." *Financial Times*, April 6, 2007. <http://www.ft.com/cms/s/c45ad352-e408-11db-bf06-000b5df10621,-i-rssPage=ff3cbaf6-3024-11da-ba9f-00000e2511c8.html> (accessed June 8, 2007).
- Just-auto.com editorial team. "Hyundai Has Ambitious Plans," August 25, 2006. <http://www.just-auto.com/article.aspx?id=88826&lk=s>.

- Just-auto.com editorial team. "ACMA-McKinsey's Vision 2015 for the Indian Supplier Industry: How Achievable Is It?" <http://www.just-auto.com/article.aspx?id=86273&lk=s> (accessed March 14, 2007).
- Kanellos, Michael. "India's Tech Renaissance—U.S.-Style Labor Pains from Mumbai to Bangalore." *CNET News.com*, June 28, 2005. <http://news.com.com/Indias+renaissance+U.S.-style+labor+pains> (accessed December 6, 2006).
- Kantor, Mark. "Arbitration Award May Alter Dabhol Debate." 1 *Transnational Dispute Management* 2 (May 2004).
- Kapur, Devesh. Center for Advanced Study of India. University of Pennsylvania. Remarks at a conference at the Woodrow Wilson International Center for Scholars, Washington, DC, April 13, 2007.
- Kaushik, Neha, and Anil Sasi. "Indian Wages Cheaper Than Chinese." *Hindu Business Line*, November 15, 2005. <http://www.thehindubusinessline.com> (accessed November 7, 2006).
- Khaleej Times*. "DP World's India Foray Runs Into Murkier Waters," March 30, 2006. <http://www.khaleejtimes.com> (accessed May 17, 2007).
- _____. "Gulf Arab Investors Target Asia as US Ties Wane," March 28, 2007. <http://www.khaleejtimes.com> (accessed May 17, 2007).
- _____. "Upbeat India Scales Up FDI Projections by 25 Percent," March 28, 2007. <http://www.MENAFN.com> (accessed April 2, 2007).
- KPMG. *Automotive and Components Market in Asia*. KPMG International, 2005.
- _____. *Manufacturing in India: Opportunities, Challenges, and Myths*. KPMG International, 2005. <http://www.kpmg.ca/en/industries/cib/industrial/documents/ManufacturingInIndia.pdf>.
- _____. *The Indian Pharmaceutical Industry: Collaboration for Growth*. KPMG International, 2006. http://www.kpmg.de/library/pdf/060618_KPMG_IndiaPharma_en.pdf (accessed April 16, 2007).
- Kumar, Sushil. "How to Protect Data in Outsourcing Deals." *Supplement - India IP Focus 2007 4th edition*, March 2007. <http://www.managingip.com/?Page=16&ISS=23507> (accessed April 16, 2007).
- LaReau, Jamie. "GM Want More Engineers in India." *Automotive News*, April 30, 2007.
- Law Commission of India, *On Revision of Court Fees Structure* (189th Report), February 2004.
- Law Commission of India Web site. http://lawcommissionofindia.nic.in/adr_conf/adr_index.htm (accessed March 23, 2007).
- Lopez-Claros, Augusto, Michael E. Porter, Xavier Sala-i-Martin, and Klaus Schwab. *The Global Competitiveness Report 2006–2007*. New York, NY: Palgrave Macmillan, 2006.
- Mahindra World City Web site. <http://www.mahindraworldcity.com/chennai/> (accessed June 8, 2007).
- Maddox, Jeff. "From Single Brand to Open Season." *FinancialTimes.com*, February 20, 2007. <http://www.ft.com/> (accessed February 27, 2007).

- Matthew, Joe. "GSK Identifies Asia, Eastern Europe as Major Centres for Clinical Research," September 25, 2006. http://www.gsk-india.com/News/GSK_news.asp (accessed April 7, 2007).
- McKenzie, Michael. "2007 Global Outlook." *PwC Automotive Institute Analyst Note*, January 18, 2007.
- McKinsey & Co., McKinsey Global Institute. *New Horizons: Multinational Company Investment in Developing Economies*. San Francisco: McKinsey & Co., 2003.
- Microsoft Web site. <http://www.microsoft.com/India> (accessed September 26, 2006).
- Motorola Web site. <http://www.motorola.com> (accessed September 21, 2006).
- Mueller, Janice M. "The Tiger Awakens: The Tumultuous Transformation of India's Patent System and the Rise of Indian Pharmaceutical Innovation." *68 U. Pitt. L. Rev.* (forthcoming 2007), <http://ssrn.com/abstract=923538> (accessed March 15, 2007).
- Nair, M.S. "India: Mashelkar Committee Withdraws Its Report." *Lex Orbis Intellectual Property Practice*, March 1, 2007. <http://www.mondaq.com/article.asp?articleid=46480&lastestnews=1> (accessed March 7, 2007).
- National Stock Exchange Web site. <http://www.nseindia.com> (accessed March 5, 2007).
- newKerala.com*. "India—The New Hub of the Automotive Industry," October 6, 2006. <http://www.newkerala.com/news4.php?action=fullnews&id=32376>.
- New York Convention of 1958 on the Recognition and Enforcement of Foreign Arbitral Awards.
- Novartis. "Questions and Answers." <http://www.novartis.com/downloads/about-novartis/india-glivec-patent-case-faq.pdf> (accessed May 2, 2007).
- Nokia. "Nokia Taps Chennai as New Nokia Global Networks Solutions Center Site, (December 16)." Chennai, 2005. http://www.nokia.com/link?cid=Editorial_4326 (accessed September 20, 2006).
- OCO Consulting Ltd. *LocoMonitor FDI database*. <http://www.locomonitor.com/> (accessed various dates).
- OECD. *Counterfeiting and Piracy: Measurement Issues*. Geneva: OECD, 2005. <http://www.oecd.org/dataoecd/42/44/35651123.pdf> (accessed April 17, 2007).
- OECD. Directorate for Financial and Enterprise Affairs, Investment Committee. "Salient Features of India's Investment Agreements." DAF/INV/WD(2006)3, March 23, 2006.
- Overseas Private Investment Corporation (OPIC). *Annual Reports for 2004, 2005, and 2006*. Washington, DC: OPIC, 2004, 2005, and 2006.
- Patent Office, India. *Manual of Patent Practice and Procedure*. Mumbai: India Patent Office, 2005. <http://www.patentoffice.nic.in/ipr/patent/manual-2052005.pdf> (accessed March 3, 2007).
- Pharmabiz.com*. "Pharmabiz Studies of Top Cos." April 17, 2006. <http://www.pharmabiz.com> (accessed March 7, 2007).

- Pharmaceutical Research and Manufacturers of America (PhRMA). *PhRMA Special 301 Submission: India*. Washington, DC: PhRMA, 2007.
- PhRMA. *PhRMA Survey of Pharmaceutical Counterfeiting Laws and Remedies: China, India, Russia, Brazil and Mexico*. Washington, DC: PhRMA, 2006.
- Prasad, Ashish S., and Violeta I. Balan. "Strategies for U.S. Companies to Mitigate Legal Risks from Doing Business in India." 1587 PLI/Corp 9 (2007).
- Press Trust of India*. "Delphi to Invest \$10 Mn in India, Double Halfshaft Production," April 12, 2006. <http://www.newsedge.com>.
- _____. "Morgan Stanley, Citigroup, Actis Pick Up 6 pc Stake in NSE," March 9, 2007. <http://dialognewsedge.com> (accessed March 12, 2007).
- _____. "Orissa to Pursue POSCO Project with 'Humane' Face: Naveen," April 18, 2007. <http://dialognewsedge.com> (April 19, 2007).
- _____. "VP Writes to PM on POSCO Issue: Demands Intervention," April 18, 2007. <http://dialognewsedge.com> (April 19, 2007).
- PriceWaterhouseCoopers. "Offshoring in the Financial Services Industry: Risks & Rewards." PriceWaterhouseCoopers Global Financial Services Briefing Programme, September 2005.
- Ramachandran, Sudha. "A Grand Plan for Indian Automobiles." *Asia Times Online*, February 1, 2007. http://www.atimes.com/atimes/South_Asia/IB01Df01.html.
- Ranbaxy Laboratories Ltd. "Ranbaxy Signs New R&D Agreement with GSK," February, 2007. http://www.ranbaxy.com/newsroom/pressrelease_det.asp?sno=322 (accessed March 19, 2007).
- Rathore, Deepesh, and Tilak Swarup. *A Review of India's Automotive Industry*. Bromsgrove, UK: Aroq Limited, June 2006.
- Reuters. "World bank Halts India Health Funds on Fraud Claim." April 4, 2006.
- Roumeliotis, Gregory. "Mylan in India's Biggest Pharmaceutical Takeover as it Enters the Matrix." *In-Pharma Technologist.com*, August 30, 2006. <http://www.in-pharmatechnologist.com/news/ng.asp?id=70188-mylan-matrix-novartis-teva-india> (accessed April 7, 2007).
- "Royal Indian Raj International Corporation Pens Estimated \$4 Billion Deal with Choice Hotels for at Least 12,000 Budget Hotel Rooms Throughout India, Vancouver, British Columbia and New Delhi, India (April 12)." _____, 2007. <http://dialog.newsedge.com> (accessed _____, 2007).
- Sahoo, Pravakar. "Foreign Direct Investment in South Asia: Policy Trends, Impact and Determinants." *ADB Institute Discussion Paper No. 58*, November 2006.
- Sampath, P. "Indian Pharma within Global Reach." In J. Chataway, D. Kale and D. Ried, *The Indian Pharmaceutical Industry Before and After Trips*, Special Issue of the Journal of Technology Analysis and Strategic Management. September 2007. <http://www.merit.unu.edu/publications/wppdf/2006/wp2006-031.pdf> (accessed February 14, 2007).

- Samsung Electronics Co., Ltd. "Samsung Dedicates a Mobile Phone Plant in India (April 3)." Seoul, 2006. <http://www.samsung.com/in/products/gsm/news> (accessed September 28, 2006).
- SemIndia. "Empowering India: The Semiconductor Way." <http://www.semindia.in/> (accessed April 2, 2007).
- Shared Expertise Forums. "Survey: Pharmaceutical Companies Cautious of Investments in Emerging China and India Markets," December 2, 2005. <http://www.sharedservicesbpo.com/file/2998/survey-pharmaceutical-companies-cautious-of-investments-in-emerging-china-and-india-markets.html> (accessed April 12, 2007).
- Sikarwar, Deepshikhas. "Mauritius Overhauls DTAA Agreement." *Economic Times*, February 27, 2007. <http://dialog.newsedge.com> (May 2, 2007).
- Singh, Harsimran. "Analysts Skeptical of Chip Fab in India." *IndiaTimes.com*, February 6, 2007. <http://infotech.indiatimes.com/> (accessed March 12, 2007).
- Singh, Seema. "It's Pharmaceutical Giant's Third Drug Development Alliance in India in Six Months." *Red Herring*, January 12, 2007. <http://www.redherring.com/Article.aspx?a=20712&hed=Lilly+Signs+India%E2%80%99s+Piramal> (accessed April 7, 2007).
- Society of Indian Automobile Manufacturers (SIAM). "Auto Policy of Government of India." <http://www.siamindia.com/scripts/PrintView.aspx> (accessed January 17, 2007).
- Society of Indian Automobile Manufacturers Web site. <http://www.siamindia.com> (accessed various dates).
- South Asian Association for Regional Cooperation. *Agreement on South Asian Free Trade Area*. <http://www.saarc-sec.org/> (accessed April 2, 2007).
- Srinivasan, T.N. "China, India and the World Economy." Working Paper No. 28. Stanford Center for International Development, July 2006. <http://scid.stanford.edu/pdf/SCID286.pdf> (accessed June 8, 2007).
- Statesman, The (India)*. "India Attracts \$15b FDI During 2006-07," April 14, 2007. <http://dialog.newsedge.com> (accessed April 17, 2007).
- Swire, Mary. "Singapore and Mauritius Vie To Supply India's FDI." *LawAndTax-News.com*, October 25, 2005. <http://www.tax-news.com/> (accessed various dates).
- Technical Expert Group on Patent Law Issues. "Report of the Technical Expert Group on Patent Law Issues." December 2006. <http://www.patentmatics.org/pub2007/pub2c.pdf> (accessed May 2, 2007).

- Thomas, Dorothy. "Singapore, New Tax Haven for Offshore Investors." *The Hindu Times*, January 8, 2005. <http://www.thehindu.com/> (accessed January 12, 2007).
- Thomas, John. *Proprietary Rights in Pharmaceutical Innovation: Issues at the Intersection of Patents and Marketing Exclusivities*. CRS Report for Congress RL33288. Washington, DC: Congressional Research Service, 2006.
- Thomson Scientific, "I.P. Overload?—Thomson Scientific 2007 Patent Focus Report." *Knowledge Link*, January 2007. <http://scientific.thomson.com/newsletter> (accessed March 5, 2007).
- Tippu, Sufia. "India's Coming Bandwidth Boom." *BusinessWeek.com*, February 7, 2007. <http://www.businessweek.com/> (accessed March 9, 2007).
- UNCTAD. "Foreign Direct Investment Rose by 34% in 2006 (January 9)." Geneva, 2007. <http://www.unctad.org/templates/webflyer.asp?docid=7993&intItemID=1634&lang=1>, (accessed June 11, 2007).
- UNCTAD. "UNCTAD Proposes Ways to Limit Excessive Incentives Competition to Attract Foreign Direct Investment, (March 28)." Geneva, 1996. <http://www.unctad.org/Templates/webflyer.asp?docid=3391&intItemID=2298&lang=1>, (accessed February 15, 2007).
- UNCTAD, *World Investment Report 2006*. (United Nations, Geneva and New York, 2006).
- United Nations Web site. <http://untreaty.un.org/ENGLISH/bible/englishinternetbible/partI/chapterXXII/treaty1.asp> (accessed March 23, 2007).
- United Nations. Economic and Social Council. Commission on Human Rights. Civil and Political Rights. Including the Questions of the Judiciary, Administration of Justice, Impunity. Written Statement Submitted by the Asian Legal Resource Centre (ALRC), E/CN.4/2005/NGO/107, February 15, 2007.
- U.S. Customs and Border Protection (USCBP). *FY 2005 Top IPR Commodities Seized*. Los Angeles: USCBP, 2005. http://www.cbp.gov/linkhandler/cgov/import/commercial_enforcement/ipr/seizure/trading/fy05_midyear_stats.ctt/fy05_ipr_midyear.pdf (accessed February 5, 2007).
- _____. *FY 2006 Top IPR Commodities Seized*. Los Angeles: USCBP, 2006. http://www.cbp.gov/linkhandler/cgov/import/commercial_enforcement/ipr/seizure/trading/fy06_midyear_stats.ctt/fy06_ipr_midyear.pdf (accessed February 5, 2007).
- U.S. Department of Commerce (USDOC). *The Agreement on Trade Related Investment Measures*. <http://commerce.nic.in/wtotrims.htm> (accessed March 23, 2007).
- _____. Bureau of Economic Analysis (BEA). International Economic Accounts. "Operations of Multinational Companies." <http://www.bea.gov/international/index.htm#omc> (accessed various dates).

- _____. U.S. Commercial Service. *India: Architecture/Construction/Engineering Services*, June 2006.
- _____. U.S. Commercial Service. *India Country Commercial Guide*. Washington, DC: U.S. Department of Commerce, 2006. <http://www.buyusa.gov/india/en/88.html> (accessed March 15, 2007).
- _____. U.S. Commercial Service. *Doing Business in India: A Country Commercial Guide for U.S. Companies 2006*.
- _____. U.S. Commercial Service. *India: Electric Power Equipment*, August 2006.
- U.S. Department of Labor. *A Chartbook of International Labor Comparisons: The Americas, Asia-Pacific, Europe*, January 2007.
- U.S. Department of State. "Congress Passes U.S.-India Civilian Nuclear Cooperation Bill (December 9)." Washington, DC, 2006. <http://usinfo.state.gov/> (accessed April 5, 2007).
- _____. "President Bush Signs U.S.-India Civil Nuclear Agreement (December 18)." Washington, DC, 2006. <http://usinto.state.gov/> (accessed April 5, 2007).
- U.S. India 2006 CEO Forum. "U.S. India Strategic Economic Partnership," March 2006. <http://planningcommission.nic.in/reports/genrep/USIndia.pdf> (accessed on January 18, 2007)
- U.S. India Business Council. *Recommendations of the Breakout Session on Biotechnology/Life Sciences/Medical Devices Breakout Session*, February 2007. <http://www.usibc.com/documents/Feb%20Life%20Sciences.pdf> (accessed March 25, 2007).
- U.S. National Institutes of Health. "ClinicalTrials.gov." <http://www.clinicaltrials.gov> (accessed May 1, 2007).
- U.S. Patent and Trademark Office (USPTO). "U.S. and India Sign Historic Memorandum of Understanding on Bilateral Cooperation on Intellectual Property (December 20)." Washington, DC, 2006. <http://www.uspto.gov/web/offices/com/speeches/06-72.htm> (accessed February 14, 2007).
- United States Trade Representative (USTR). *2006 Special 301 Report*. Washington, DC: USTR, 2006. <http://www.ustr.gov> (accessed February 2, 2007).
- _____. "Brazil." *2006 National Trade Estimate Report on Foreign Trade Barriers*. Washington, DC: USTR, 2006. http://www.ustr.gov/Document_Library/Reports_Publications/2006/2006_NTE_Report/Section_Index.html?ht= (accessed March 7, 2007).
- _____. "India." *2007 National Trade Estimate Report*. Washington, DC: USTR, 2007. http://www.ustr.gov/assets/Document_Library/Reports_Publications/2007/2007_NTE_Report/asset_upload_file_452_10951.pdf (accessed April 17, 2007).
- _____. *2007 Special 301 Report*, 26.

- Van den Bossche, Peter. *The Law and Policy of the World Trade Organization: Text, Cases and Materials*. United Kingdom: Cambridge University Press, 2006.
- Venkatesan, V. "Trial and Execution." *Frontline*. Volume 19-Issue 14, July 6–19, 2002. <http://www.hinduonnet.com/fline/fl1914/19141020.htm> (accessed April 9, 2007).
- VoIP Now*. "VoIP in India," October 12, 2005. <http://www.voipnow.org/> (accessed April 9, 2007).
- Wakhlu, Bharat. Tata, Inc. Remarks at a conference at the Woodrow Wilson International Center for Scholars, Washington, DC, April 13, 2007.
- Ward's Automotive Group. *World Motor Vehicle Data 2006*. Southfield, MI: Ward's Automotive Group, 2006.
- Ward's Automotive Reports*. "Chevy's Spark Key to GM's Growth in India," April 30, 2007.
- Wells, Dr. Peter and Shanivi Sadana. "Hub or Hubris? India and the Automotive Mission Plan 2006–2016." *World Commercial Vehicles*, November 2006.
- Wells, Dr. Peter. "Hub or Hubris? Prospects for the AMP to 2016." *Automotive World* December 21, 2006. <http://www.automotiveworld.com/wcv/print.asp?contentid=57070> (accessed January 17, 2007).
- World Bank Web site. <http://www.worldbank.org> (accessed October 30, 2006 and January 18, 2007).
- World Bank. "Doing Business Report 2007." <http://www.worldbank.org> (accessed October 30, 2006).
- _____. "Do the Benefits of Special Economic Zones Outweigh Their Costs?" Archives discussion moderated by James Crittle and Gokhan Akinci, July 2004. <http://rru.worldbank.org/Discussions/Topics/Topic40.aspx> (accessed November 14, 2006).
- _____. "Enterprise Surveys, India 2006." <http://www.enterprisesurveys.org/ExploreEconomies/Default.aspx?economyid=89&year=2006>, (accessed February 20, 2007).
- _____. "Enterprise Surveys, What Businesses Say." <http://www.enterprisesurveys.org/exploreconomies> (accessed January 4, 2007).
- _____. "India, Inclusive Growth and Service Delivery: Building on India's Success." Report No. 34580-IN, May 29, 2006.
- _____. "India Transport Sector." <http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/SOUTHASIAEXT/EXTSARREGTOPTRANS/PORT/0,,contentMDK:20703625~menuPK:868822~pagePK:34004173~piPK:34003707~theSitePK:579598,00.html> (accessed various dates).
- _____. *Sustaining India's Services Revolution*, 2004. <http://web.worldbank.org/> (accessed March 9, 2007).

_____. *The Investment Climate in Brazil, India, and South Africa: A Contribution to the IBSA Debate*, September 2006.

_____. *World Development Indicators database*.
<http://ddp-ext.worldbank.org/ext/DDPQQ/report.do?method=showReport> (accessed various dates).

World Bank/International Finance Corporation (IFC). *India: Investment Climate and Manufacturing Industry*, November 2004.

WTO. “India—Patent Protection for Pharmaceutical and Agricultural Chemical Products.”
WT/DSSO/AB/R, January 16, 1998.

_____. “Indonesia—Certain Measures Affecting the Automobile Industry.” Report of the Panel,
WT/DS54/R, WT/DS55/R; WT/DS59/R; WT/DS56/R, July 2, 1998 (98-2505)

_____. “Understanding the WTO, Services: Rules for Growth and Investment.”
http://www.wto.org/english/thewto_e/whatis_e/tif_e/agrm6_e.htm (accessed various dates).

APPENDIX A

Sector-specific Guidelines for FDI in India

APPENDIX A: Sector-specific Guidelines for FDI in India

Sector/Subsector	FDI Equity Cap	Entry Route	Notes
Air transport services	49% for FDI; 100% for non-resident Indian investment	Automatic	No direct or indirect equity participation by foreign airlines allowed.
Airports			
-Greenfield projects	100%	Automatic	Subject to Ministry of Civil Aviation regulations.
-Existing airports	100%	FIPB beyond 74%	Subject to Ministry of Civil Aviation regulations.
Alcohol distillation and brewing	100%	Automatic	Subject to licensing by appropriate authority.
Asset reconstruction companies	49% for FDI only	FIPB	Individual investments beyond 10% of equity subject to regulation.
Atomic minerals	74%	FIPB	Subject to Department of Atomic Energy guidelines.
Atomic energy	FDI Prohibited		
Banking (private sector)	74% for FDI + foreign institutional investors (FII)	Automatic	Branches and subsidiaries of foreign banks subject to RBI guidelines.
Broadcasting			
-FM radio	20% for FDI + FII	FIPB	Subject to Ministry of Information and Broadcasting guidelines.
-Cable network	49% for FDI + FII	FIPB	Subject to Cable Television Network Rules (1994) by the Ministry of Information and Broadcasting.
-Direct-to-home	49% for FDI + FII (FDI not to exceed 20%)	FIPB	Subject to Ministry of Information and Broadcasting guidelines.
-Hardware setup (Up-linking, HUB, etc.)	49% for FDI + FII	FIPB	Subject to Up-linking Policy by the Ministry of Information and Broadcasting.
-Up-linking news and current affairs channel	26% for FDI + FII	FIPB	Subject to Ministry of Information and Broadcasting guidelines.
-Up-linking of non-news and current affairs channel	100%	FIPB	Subject to Ministry of Information and Broadcasting guidelines.
Cigars and cigarettes manufacturing	100%	FIPB	Subject to industrial licensing.
Coal and lignite mining for captive consumption by power projects, iron, steel, and cement production, and other approved activities	100%	Automatic	Subject to the Coal Mines Act (1973).
Coffee and rubber processing and warehousing	100%	Automatic	

APPENDIX A: Sector-specific Guidelines for FDI in India–Continued

Sector/Subsector	FDI Equity Cap	Entry Route	Notes
Construction development projects.	100%	Automatic	Subject to minimum capitalization and land size requirements.
Courier services for carrying items not covered by the Indian Post Office Act (1898)	100%	FIPB	Subject to existing laws and any related activities exclusively reserved for the State.
Defense production	26%	FIPB	Subject to licensing under the Industries (Development and Regulation) Act (1951) and further guidelines on the production of arms and ammunition.
Floriculture, horticulture, development of seeds, animal husbandry, pisciculture, aquaculture, and the cultivation of vegetables and mushrooms under controlled conditions	100%	Automatic	
Gambling and betting sector	Prohibited		
Hazardous chemicals –	100%	Automatic	Subject to licensing under the Industries (Development and Regulation) Act (1951) and other sectoral regulations.
Industrial explosives – manufacture	100%	Automatic	Subject to licensing under the Industries (Development and Regulation) Act (1951) and regulations under the Explosives Act (1898).
Insurance	26%	Automatic	Subject to licensing by the Insurance Regulatory and Development Authority.
Investing companies in infrastructure/services sector (except telecom sector)	49%	FIPB	FDI in an investing company will not be counted toward sectoral caps in infrastructure/services sector provided that the investment is no larger than 49% and company management is Indian.
Lottery business	Prohibited		
Mining	100%	Automatic	Subject to Mines and Minerals Act (1957) and applicant must declare no existing joint venture for the same area/and or mineral.
Non-bank finance companies	100%	Automatic	Subject to minimum capitalization norms, subsidiary and joint venture regulations, and Reserve Bank of India guidelines.

APPENDIX A: Sector-specific Guidelines for FDI in India–Continued

Sector/Subsector	FDI Equity Cap	Entry Route	Notes
Petroleum and natural gas sector			
-Other than refining – includes market study and formulation, investment/financing, setting up infrastructure for marketing	100%	Automatic	Subject to sectoral regulations by the Ministry of Petroleum and Natural Gas and future divestment requirements in petroleum product trading and marketing.
-Refining	26% for public sector enterprises (PSUs); 100% for private companies	FIPB for PSUs and Automatic for private companies	Subject to sectoral regulations.
Power, including generation (except atomic energy), transmission, distribution, and power trading	100%	Automatic	Subject to the Electricity Act (2003).
Print media			
-Publishing of newspapers and periodicals dealing with news and current affairs	26%	FIPB	Subject to Ministry of Information and Broadcasting guidelines.
-Publishing of scientific magazines, specialty journal/periodicals	100%	FIPB	Subject to Ministry of Information and Broadcasting guidelines.
Satellites – establishment and operation	74%	FIPB	Subject to sectoral regulations by the Department of Space.
Special economic zones and free trade warehousing zones, covering setting up of units	100%	Automatic	Subject to Special Economic Zones Act (2005) and foreign trade policy.
Tea sector, including tea plantations	100%	FIPB	Subject to state government approval and future divestment requirements.
Telecommunications services, except ISP without gateway	74%	Automatic up to 49%; FIPB beyond 49%	Subject to licensing and security requirements by the Department of Telecommunications
-ISP without gateway, infrastructure providing dark fiber, electronic mail, and voice mail	100%	Automatic up to 49%; FIPB beyond 49%	Subject to licensing, security, and future divestment requirements.
-Manufacture of telecom equipment	100%	Automatic	Subject to sectoral requirements.

APPENDIX A: Sector-specific Guidelines for FDI in India—Continued

Sector/Subsector	FDI Equity Cap	Entry Route	Notes
Trading			
-Wholesale, cash and carry trading	100%	Automatic	Subject to investment guidelines.
-Trading for exports	100%	Automatic	Subject to investment guidelines.
-Trading of items sourced from the small scale sector	100%	FIPB	Subject to investment guidelines.
-Test marketing of pre-approved manufactured items	100%	FIPB	Subject to investment guidelines.
-Single brand product retailing	51%	FIPB	Subject to investment guidelines.
-Multiple brand product retailing	Prohibited		

Source: Government of India, Ministry of Commerce & Industry, DIPP, *Investing in India: Foreign Direct Investment Policy and Procedures*.

Note: Those sectors not specifically covered here are allowed 100 percent equity, through the automatic route, without additional restrictions. FDI and FII represent the maximum combined equity limit for direct and foreign institutional investments.

APPENDIX B

Web site Addresses of State and Union Territory (UT) Governments and their Investment Promotion Agencies in India

APPENDIX B: Website Addresses of State and Union Territory (UT) Governments and their Investment Promotion Agencies in India

Andaman & Nicobar (UT)

Government: <http://www.and.nic.in>

Investment Promotion Agency: <http://www.aniidco.nic.in>

Andhra Pradesh

Government:

<http://www.aponline.gov.in/apportal/index.asp>

Investment Promotion Agency: <http://www.apidc.org>

Arunachal Pradesh

Government: <http://arunachalpradesh.nic.in>

Assam

Government: <http://assamgovt.nic.in>

Bihar

Government: <http://gov.bih.nic.in>

Investment Promotion Agency: <http://www.bicico.com>

Chandigarh (UT)

Government: <http://chandigarh.nic.in>

Investment Promotion Agency: <http://www.citco.nic.in>

Chhattisgarh

Government: <http://chhattisgarh.nic.in>

Investment Promotion Agency: <http://www.csidcindia.com>

Dadra and Nagar Haveli (UT)

Government: <http://dnh.nic.in>

Investment Promotion Agency: <http://www.oidc.nic.in>

Daman and Diu (UT)

Government: <http://goidirectory.nic.in/daman.htm>

Investment Promotion Agency: <http://www.oidc.nic.in>

Delhi (UT)

Government: <http://delhigovt.nic.in/index.asp>

Investment Promotion Agency: <http://www.dsidc.org>

Goa

Government: <http://goagovt.nic.in>

Investment Promotion Agency: <http://www.goaidc.com>

Gujarat

Government: <http://www.gujaratindia.com>

Investment Promotion Agency: <http://www.gidc.gov.in>

Haryana

Government: <http://haryana.gov.in>

Investment Promotion Agency: <http://hsidc.nic.in/hfi.htm>

Himachal Pradesh

Government: <http://himachal.nic.in/welcome.asp>

Investment Promotion Agency: <http://hpsidc.nic.in>

Jammu and Kashmir

Government: <http://jammukashmir.nic.in>

Jharkhand

Government: <http://jharkhand.nic.in>

Karnataka

Government: <http://www.karnataka.gov.in>

Investment Promotion Agency: <http://www.ksidc.com>

Kerala

Government: <http://www.kerala.gov.in>

Investment Promotion Agency: <http://www.kinfra.com>

Lakshadweep (UT)

Government: <http://lakshadweep.nic.in>

Investment Promotion Agency:

<http://www.lakshadweep.nic.in/depts/industries/home.htm>

Madhya Pradesh

Government: <http://mpgovt.nic.in>

Investment Promotion Agency: <http://www.mpsidc.org>

Maharashtra

Government: <http://www.maharashtra.gov.in>

Investment Promotion Agency: <http://www.midcindia.org>

Manipur

Government: <http://manipur.nic.in>

Meghalaya

Government: <http://meghalaya.nic.in>

Investment Promotion Agency:

<http://www.meghalaya.nic.in/MIDC/midc.htm>

Mizoram

Government: <http://mizoram.nic.in>

Nagaland

Government: <http://nagaland.nic.in>

Orissa

Government: <http://orissagovt.nic.in>

Investment Promotion Agency: www.idcoindia.com/

Pondicherry (UT)

Government: <http://pondicherry.nic.in>

Investment Promotion Agency: <http://www.pipdic.com>

Punjab

Government: <http://punjabgovt.nic.in>

Investment Promotion Agency:

<http://www.punjabgovt.nic.in/Industry/ind552.htm>

Rajasthan

Government: <http://www.rajasthan.gov.in/Rajasthan1024.asp>

Investment Promotion Agency: <http://www.riico.co.in>

Sikkim

Government: <http://sikkim.gov.in>

Investment Promotion Agency:

<http://www.sikkiminfo.net/sidico/>

APPENDIX B: Website Addresses of State and Union Territory (UT) Governments and their Investment Promotion Agencies in India—Continued

Tamil Nadu

Government: <http://www.tn.gov.in>

Investment Promotion Agency: <http://www.tidco.com>

Tripura

Government: <http://tripura.nic.in>

Investment Promotion Agency:
<http://www.tripura.nic.in/tidc/>

Uttar Pradesh

Government: <http://upgov.nic.in>

Investment Promotion Agency: <http://www.upsidc.com>

Uttaranchal

Government: <http://www.ua.nic.in>

Investment Promotion Agency: <http://www.sidcul.com>

West Bengal

Government:

<http://www.wbgov.com/e-gov/English/EnglishHomePage.asp>

Investment Promotion Agency: <http://www.wbidc.com>

Source: Embassy of India, Washington, DC.

Note: Not all states have investment promotion agency Web sites.

APPENDIX C

Bilateral International Agreements That Affect Investment in India

APPENDIX C: Bilateral International Agreements that Affect Investment in India

Country	Bilateral Investment Agreement	Double Tax Avoidance Agreement	Free Trade Agreement	Notes
Argentina	X			
Armenia	X*	X		
Australia	X	X		
Austria	X	X		
Bahrain	X*		X	Framework Agreement for establishing a free trade area completed. India-Gulf Cooperation Council (GCC) FTA under negotiation.
Bangladesh		X	X	Under the South Asia Free Trade Agreement (SAFTA) and Asia Pacific Trade Agreement (APTA).
Belarus	X	X		
Belgium	X	X		
Bhutan			X	Under SAFTA.
Brazil		X		
Bulgaria	X	X		
Canada		X		Bilateral investment agreement under negotiation.
Chile			X	Framework Agreement on Economic Cooperation.
China		X		
Croatia	X			
Cyprus	X	X		
Czech Republic	X	X		
Denmark	X	X		
Djibouti	X*			
Egypt	X	X		
Finland	X	X		
France	X	X		
Germany	X	X		
Ghana	X*			
Greece		X		
Hungary	X*	X		
Indonesia	X	X		
Ireland		X		
Israel	X	X		
Italy	X	X		
Japan		X		
Jordan		X		

APPENDIX C: Bilateral International Agreements that Affect Investment in India—Continued

Country	Bilateral Investment Agreement	Double Tax Avoidance Agreement	Free Trade Agreement	Notes
Kazakstan	X	X		
Kenya		X		
Korea	X	X	X	Under APTA.
Kuwait	X		X	Framework Agreement for establishing a free trade area completed. India-Gulf Cooperation Council (GCC) FTA under negotiation.
Kyrgyzstan	X	X		
Laos	X			
Libya		X		
Luxembourg	X			
Malaysia	X	X		
Maldives			X	Under SAFTA.
Malta		X		
Mauritius	X	X	X	Comprehensive Economic Cooperation and Partnership Agreement (CECPA) under negotiation.
Mongolia	X	X		
Morocco	X	X		
Namibia		X		
Nepal		X	X	Under SAFTA.
Netherlands	X	X		
New Zealand		X		
Norway		X		
Oman	X	X	X	Framework Agreement for establishing a free trade area completed. India-Gulf Cooperation Council (GCC) FTA under negotiation.
Pakistan			X	Under SAFTA.
Philippines	X	X		
Poland	X	X		
Portugal	X*	X		
Qatar	X	X	X	Framework Agreement for establishing a free trade area completed. India-Gulf Cooperation Council (GCC) FTA under negotiation.

APPENDIX C: Bilateral International Agreements that Affect Investment in India—Continued

Country	Bilateral Investment Agreement	Double Tax Avoidance Agreement	Free Trade Agreement	Notes
Romania	X	X		
Russia	X	X		
Saudi Arabia		X	X	Framework Agreement for establishing a free trade area completed. India-Gulf Cooperation Council (GCC) FTA under negotiation.
Serbia and Montenegro	X			
Singapore		X	X	India-Singapore Comprehensive Economic Cooperation Agreement
Slovenia		X		
South Africa		X		
Spain	X	X		
Sri Lanka	X	X	X	Under SAFTA and APTA.
Sudan	X*	X		
Sweden	X	X		
Switzerland	X	X		
Syria		X		
Taiwan (China)	X			
Tajikistan	X			
Tanzania		X		
Thailand	X	X	X	Framework Agreement for establishing a free trade area completed.
Trinidad and Tobago		X		
Turkey	X*	X		
Turkmenistan	X*	X		
Uganda		X		
Ukraine	X	X		
United States		X		
United Arab Emirates		X	X	Framework Agreement for establishing a free trade area completed. India-Gulf Cooperation Council (GCC) FTA under negotiation.
United Kingdom	X	X		
Uzbekistan	X	X		
Vietnam	X	X		
Yemen	X*			

APPENDIX C: Bilateral International Agreements that Affect Investment in India—Continued

Country	Bilateral Investment Agreement	Double Tax Avoidance Agreement	Free Trade Agreement	Notes
Zambia		X		
Zimbabwe	X*			

Sources: Government of India, Ministry of Finance, *Economic Survey 2006–2007*; Government of India, Income Tax Department; and OECD, Directorate for Financial and Enterprise Affairs, Investment Committee, “Salient Features of India’s Investment Agreements.”

Notes: (*) As of June 2006, agreement has not entered into force.

India is also in framework/free trade agreement negotiations with ASEAN (Association of South East Asian Nations), BIMSTEC (Bangladesh, Bhutan, Myanmar, Nepal, Sri Lanka, and Thailand), MERCOSUR (Argentina, Brazil, Paraguay, and Uruguay), and SAARC/SAPTA (Bangladesh, Bhutan, Maldives, Nepal, Pakistan, and Sri Lanka).