

# Industry

## Overview

Overall industrial recovery that commenced from the second quarter of 2002-03 continued in the current year. The rate of growth of industrial sector as measured in terms of Index of Industrial Production (IIP) during April-December 2005-06 was 7.8 per cent compared to a growth of 8.6 per cent in the corresponding period of 2004-05 (Table 7.1).

**Table 7.1 : Annual growth rate of industrial production in major sectors of industry**  
(Based on the index of industrial production)  
Base: 1993-94=100  
(per cent)

Period	Mining & Quarrying	Manuf-acturing	Electricity	Overall
<b>Weights</b>	<b>10.47</b>	<b>79.36</b>	<b>10.17</b>	<b>100.00</b>
1995-96	9.7	14.1	8.1	13.0
1996-97	-1.9	7.3	4.0	6.1
1997-98	6.9	6.7	6.6	6.7
1998-99	-0.8	4.4	6.5	4.1
1999-00	1.0	7.1	7.3	6.7
2000-01	2.8	5.3	4.0	5.0
2001-02	1.2	2.9	3.1	2.7
2002-03	5.8	6.0	3.2	5.7
2003-04	5.2	7.4	5.1	7.0
2004-05	4.4	9.2	5.2	8.4
2004-05 #	5.1	9.2	6.4	8.6
2005-06 #	0.4	8.9	4.8	7.8

# (April-December)

Source : Central Statistical Organisation.

7.2 Impressive performance of the manufacturing sector, which grew at 8.9 per cent during this period, largely contributed to this performance. A moderate deceleration of 0.8 percentage points in the growth rates of IIP in the current year was due to a decline in the growth rates for mining and electricity sectors. Decline in the rate of growth in the

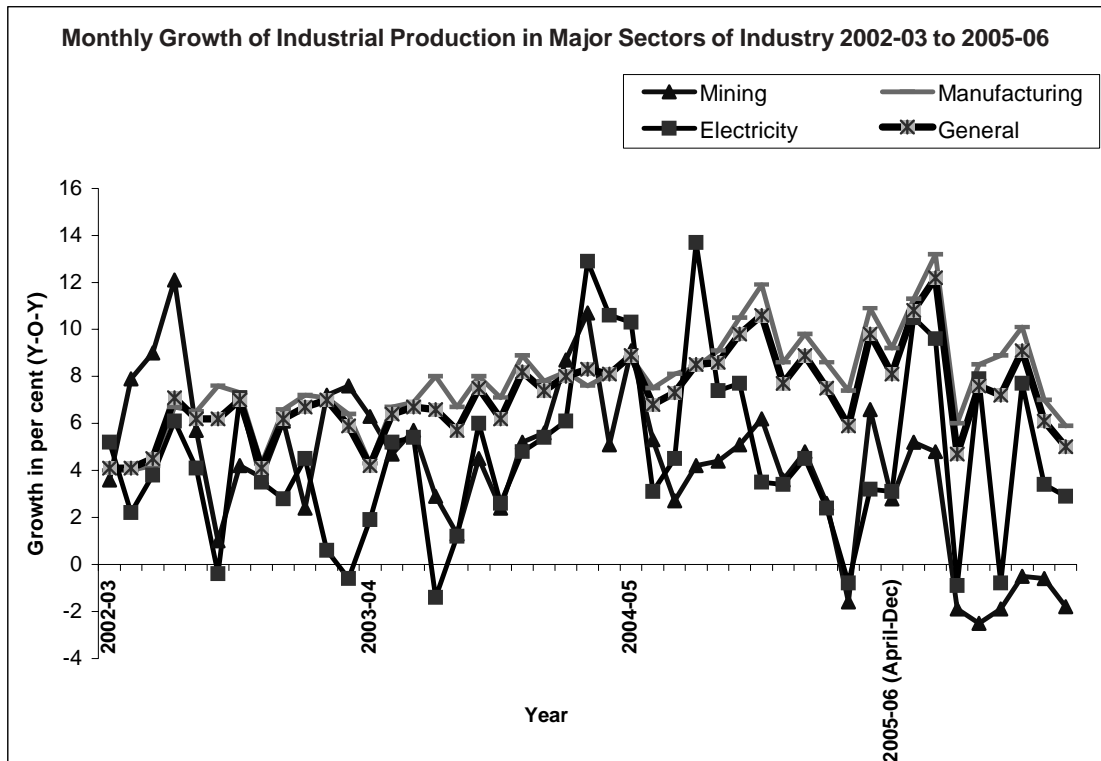
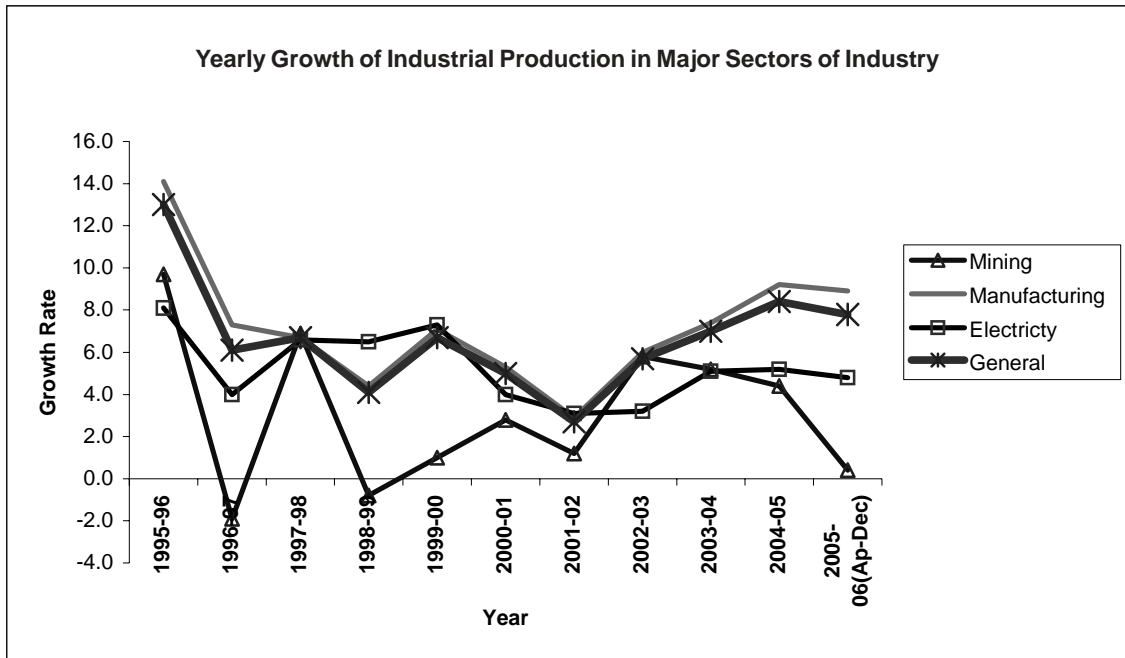
mining sector from an average of 4.4 per cent in 2004-05 to 0.4 per cent in the current year so far was partly due to a fall in the levels of crude oil production as a result of a fire accident in July 2005 at Mumbai High North Platform. The electricity sector also witnessed a moderate slow down in the current year, which could partly be attributed to a shortage of gas and coal. Inadequate investment in these two sectors affected the capacity additions and contributed to this shortage.

7.3 The target growth of industry during the Tenth Plan (2002-07) was put at 10 per cent consistent with an overall GDP growth of 8 per cent. Notwithstanding a distinct improvement in the manufacturing growth in the last two years, overall industrial growth so far has remained well short of the target. Deceleration in the growth of mining and electricity sector in the current year may put added pressure on manufacturing sector to maintain overall industrial buoyancy.

7.4 With respect to use based classification of industries, the growth rate in the capital goods sector in April-December 2005 at 15.7 per cent indicated a substantial improvement over the growth of 13.8 per cent during the same period last year (Table 7.2). Consumer goods, both the durables and non-durables segments, also recorded improved performance with double-digit growth in the last two years. The turn-around in consumer durables since 2003-04 continued. In April-December, growth rate of basic goods remained at 6.0 per cent which is the same as that of the corresponding period in 2004-05. Intermediate goods, however, witnessed a deceleration in growth.

Fig. 7.1

Growth Rates of Industrial Production  
(1993-94=100)



Sector	Weight	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	Apr.-Dec.	
								2004-05	2005-06
Basic goods	35.5	5.5	3.7	2.6	4.9	5.4	5.5	6.0	6.0
Capital goods	9.3	6.9	1.8	-3.4	10.5	13.6	13.9	13.8	15.7
Intermediate goods	26.5	8.8	4.7	1.5	3.9	6.4	6.1	6.9	2.2
Consumer goods of which	28.7	5.7	8.0	6.0	7.1	7.1	11.7	11.4	12.2
Durables	5.4	14.1	14.5	11.5	-6.3	11.6	14.3	15.3	13.6
Non-durables	23.3	3.2	5.8	4.1	12.0	5.8	10.8	10.0	11.7
IIP (Index of Industrial Production)	100	6.7	5.0	2.7	5.7	7.0	8.4	8.6	7.8

**Source : Central Statistical Organisation**

7.5 Within manufacturing, performance varied across the various segments (Table 7.3). At a two-digit level of disaggregation of the manufacturing sector, as many as seven sectors, with a combined weight of 34.1 per cent in IIP, grew at over 10 per cent, on an

average, during the period April–December 2005. During April-December 2004, there were only four such sectors. But, as against only three sectors (food products, jute textiles and wood & wood products) accounting for a weight of 12.4 per cent in IIP in April-December

Code (NIC-1987)	Industry group	Weight	2003	2004-04	Apr 05	May	Jun	July	Aug	Sep	Oct	Nov	Dec.	Apr.-Dec.	
														2004-05	2005-06
20-21	Food products	9.1	-0.5	-0.4	6.6	8.2	3.1	-25.5	-7.4	-19.6	-4.1	4.7	6.9	-0.9	-2.2
22	Beverages, tobacco and related products	2.4	8.5	10.8	7.6	13.2	29.7	25.1	11.8	18.2	23.2	12.6	9.5	9.0	16.4
23	Cotton textiles	5.5	-3.1	7.6	8.0	10.3	11.8	10.1	14.0	13.1	12.7	10.3	2.1	8.2	10.2
24	Wool, silk and man-made fibre textiles	2.3	6.8	3.5	-10.9	-5.9	16.6	-3.6	-3.6	5.5	-5.6	2.5	7.1	4.2	-0.1
25	Jute and other vegetable fibre textiles (except cotton)	0.6	-4.2	3.7	-4.0	-3.1	4.0	10.7	6.5	0.4	3.2	4.2	3.2	-1.4	2.7
26	Textile products (including wearing apparel)	2.5	-3.2	19.2	21.2	29.7	30.6	12.7	25.8	19.2	20.0	8.5	5.7	14.8	18.6
27	Wood and wood products; furniture and fixtures	2.7	6.8	-8.4	-6.0	3.4	4.5	-10.9	2.1	-11.5	-5.0	-4.6	-5.7	-8.5	-3.8
28	Paper & paper products and printing, publishing & allied industries	2.7	15.6	10.5	17.9	7.3	6.6	1.3	5.9	0.8	8.2	-4.0	-25.8	6.8	0.5
29	Leather and leather & fur products	1.1	-3.9	6.7	13.5	9.5	-0.1	2.8	-1.5	0.1	-0.6	-17.4	-16.5	4.1	-1.6
30	Basic chemicals & chemical products (except products of petroleum & coal)	14.0	8.7	14.5	11.8	14.8	19.9	9.6	8.7	12.5	10.2	3.4	-2.4	16.1	9.8
31	Rubber, plastic, petroleum and coal products	5.7	4.5	2.4	2.1	2.9	6.4	7.7	0.6	0.6	0.3	1.5	11.9	2.0	3.8
32	Non-metallic mineral products	4.4	3.7	1.5	2.5	12.9	7.6	7.7	13.3	7.7	8.3	8.3	16.2	1.4	9.4
33	Basic metal and alloy industries	7.5	9.2	5.4	18.0	14.3	15.3	15.6	20.6	11.1	16.0	13.4	11.4	3.9	15.0
34	Metal products and parts, except machinery and equipment	2.8	3.7	5.7	1.3	11.4	-1.3	-17.8	-3.9	-8.2	0.5	4.0	-5.1	6.8	-2.5
35-36	Machinery and equipment other than transport equipment	9.6	15.8	19.8	11.8	10.8	12.0	7.6	7.3	12.6	11.2	10.1	11.3	22.3	10.5
37	Transport equipment and parts	4.0	17.0	4.1	12.5	14.7	11.9	5.1	11.6	16.8	15.9	11.7	12.1	3.4	12.5
38	Other manufacturing industries	2.6	7.7	18.5	9.6	9.3	14.1	30.2	24.7	34.5	39.0	18.6	28.7	19.5	23.8

**Growth rates are estimated over the corresponding period of the previous year.**  
**Source: Central Statistical Organisation.**

2004, five sectors (food products, wool, silk & man-made fibres, wood & wood products, leather and leather & fur products and metal products) with a weight of 17.9 per cent in IIP had a negative growth in April–December 2005. However, in case of food products and wood and wood products, there are some signs of growth revival in the most recent months.

7.6 Significant improvement in performance was observed in beverages & tobacco, cotton textiles, textile products, basic metal and alloy industries, non-metallic mineral products, basic metals & alloys, transport equipments and other manufacturing industries. The sectors where there has been a perceptible slow-down were machinery and equipment, (other than transport equipment); basic chemical and chemical products (except products of petroleum and coal), paper and paper products, metal products (including machinery and equipment) and wool, silk and man-made fibre textiles. Manufacturing growth was reasonably broad-based and high growth sectors were either technology-intensive or with a large export potential.

7.7 Within manufacturing, the share of registered manufacturing, after improving from an average of 58.8 per cent during 1970-1982

to 65.7 per cent during 1992-2004, has remained virtually stable in the post-reform period (Table 7.4). However, significant variations in the relative share of industry segments at the two-digit level were manifest in the post-reform period. There was an erosion in the relative share of food products; cotton textiles; jute textiles; wood & wood products; paper & printing; non-metallic mineral products; metal products and non-electric machinery. Improvement was observed in the relative share of textile products, chemical and chemical products, rubber and petroleum products and electric machinery.

7.8 While it is difficult to classify the industries at two-digit in broad groups such as local-resource-based, or largely export-dependent, or knowledge/technology-intensive, because of overlaps, domestic resource-rich segments comprising food products; all kinds of textiles & textile products; wood, paper & leather products; beverages & tobacco products; and basic metals and alloys witnessed a decline in their relative share in total value added from registered

**Table 7.4 : Structural shift in industry-relative share in value added**

(per cent)

Share of value added	1970-1982	1982-1992	1992-2004	1970-2004	Average annual rate of change (1970-2004)
Registered manufacturing in total manufacturing	58.80	62.69	65.73	63.89	0.46
in registered manufacturing of*					
Food Products	7.98	8.97	8.01	8.23	-0.03
Beverages & Tobacco Products	2.54	2.52	2.89	2.75	0.47
Cotton Textiles	9.90	7.01	3.98	5.54	-3.74
Wool, Silk & Man-made Fibres	3.42	3.97	3.97	3.89	0.69
Jute Textiles	2.31	1.27	0.62	1.01	-5.41
Textile Products	0.95	1.30	2.80	2.18	5.18
Wood & Furniture	1.16	0.76	0.35	0.56	-5.15
Paper & Printing	5.04	4.50	2.93	3.60	-2.36
Leather & Fur Products	0.64	0.66	0.79	0.74	0.65
Chemicals.	13.12	14.90	19.48	17.49	1.78
Rubber & Petroleum.	4.88	7.12	8.09	7.41	2.13
Non-Metallic Products	4.17	5.37	4.98	4.96	0.70
Basic Metal Industries	15.60	12.40	12.39	12.85	-0.92
Metal Products	3.64	2.93	2.67	2.87	-1.39
Non-Elect. Machinery & Parts	7.86	7.53	6.22	6.76	-0.94
Electrical Machinery	5.82	7.74	8.50	7.94	1.72
Transport Equipments	8.08	7.52	7.45	7.56	-0.44
Other Manufacturing	2.89	3.52	3.88	3.65	0.95

\* excluding Repair services.

**Table 7.5 : Net capital stock in industry and the share of public sector**

	1994	2000	2001	2002	2003	2004	CAGR
	in Rupees crore at 1993-94 Prices						in per cent
Mining	75,199	84,061	81,433	80,662	79,351	82,604	0.94
Manufacturing	504,658	956,510	1,001,381	1,031,305	1,070,999	1,123,391	8.33
Electricity, Gas & Water Supply	215,585	277,539	286,758	297,942	303,762	310,832	3.73
<b>Share of the Public Sector (per cent)</b>							
Mining	94.3	93.57	93.13	92.38	92.31	92.77	-0.16
Manufacturing	24.1	14.65	13.73	13.01	12.67	11.72	-6.95
Electricity, Gas & Water Supply	92.8	88.49	87.65	86.28	85.81	85.58	-0.81

manufacturing from 51.7 per cent in 1970-71 to 37.1 per cent in 2003-04. Notwithstanding a near stability in the share of registered manufacturing in overall value added from this sector, a structural shift across its knowledge and technology intensive segments was significant.

7.9 Capacity addition and improved productivity are the two sources of industrial growth. From 1993-94 to 2003-04, net capital stock in industries (comprising mining, manufacturing and electricity sectors), which can proxy capacity addition, increased at an average rate of 6.66 per cent per annum. The dominance of the public sector in mining and electricity continued to persist even after industrial liberalization and opening of these sectors to private sector participation. Lower addition to capital stock deprived these sectors of the buoyancy associated with capacity expansion.

7.10 Scarcity of resources has been recognized as a limiting factor for the process of economic growth. The scope for output expansion, based on increased use of resources or inputs, is restricted beyond a certain point due to non-availability and/or diminishing returns. Therefore, efficiency or productivity of resources becomes a crucial factor in the process of growth. Total Factor Productivity (TFP), which is defined as the ratio of real output (or real value added) to a weighted sum of the inputs used in the production process, is a useful measure for this purpose (Box 7.1). Most studies on TFP growth in Indian manufacturing have

concluded that TFP is growing in Indian manufacturing (Table 7.6). However, most of these studies also conclude that there has been a decrease, not an increase, in the growth rate of TFP in Indian manufacturing in the post-reform period. This needs to be looked into and reversed. At the state level, various recent studies reveal that with respect to the overall manufacturing sector, the level of TFP was highest for Karnataka, Uttar Pradesh and Madhya Pradesh, whereas for Gujarat, Bihar and Rajasthan it was the lowest.

#### Box 7.1 : Productivity in Indian manufacturing

There are many different productivity measures. The choice between them depends on the purpose of productivity measurement and, in many instances, on the availability of data. Broadly, productivity measures may be classified as single factor and multifactor productivity. Multifactor productivity can, further, be computed on the basis of:—

- Gross output and value added productivity measures,
- Single deflation and double deflation productivity measures, and
- Growth accounting versus production function productivity approaches.

While each of the method mentioned above has its own advantages and disadvantages, most of the studies in the Indian context has computed Total Factor Productivity (TFP), which is defined as the ratio of real output (or real value added) to a weighted sum of the inputs used in the production process, is a useful measure for this purpose. The results of these studies have varied widely, but the overall conclusions appear to be: TFP is growing, but is growing at a slower rate than the pre-liberalisation period.

**Table 7.6 : Total factor productivity growth in pre and post liberalisation period**

Study	Pre-liberalisation	Post-liberalisation	Methodology
Unni et al (2001)	1985-90	1990-95	Value Added Function Framework  Organised Manufacturing, Unorganised Manufacturing
	4.0	-1.28	
	11.37	-3.13	
Srivastava (2001)	1980-81 to 1989-90	1990-91 to 1997-98	Estimates for aggregate economy With no corrections for capacity utilization made With adjustments made for capacity utilization (Data Source: CSO, NSSO; Methodology: GAA)
	2.56	0.83	
	2.32	1.74	
Goldar and Kumari (2003)	1981-82 to 1990-91	1990-91 to 1997-9	Gross Output Function Framework With no corrections for capacity utilization made With adjustments made for capacity utilization (Data Source: ASI; Methodology: GAA)
	1.89	10.69	
	1.60	1.3	
Unel (2003)	1979-80 to 1990-91	1991-92 to 1997-98	Value Added Function Framework Based on actual Income shares of labour as weights Based on constant labour elasticity of 0.6 (Data Source: ASI, Methodology:GAA)
	1.8	2.5	
	3.2	4.7	
Tata Services Ltd. TSL-(2003)	1982-82 to 1992-93	1993-94 to 1999-2000	Gross Output Function Framework (Data Source: ASI)
Goldar (2004)	1979-80 to 1990-91	1991-92 to 1999-00	Value Added Function
	2.14	1.57	
	1981-82 to 1990-91	1991-92 to 1999-00	Gross Output Function
	0.92	0.65	
	1979-80 to 1990-91	1991-92 to 1999-00	
2.23	1.65	Using Translog Production Function (Data Source: ASI)	
Banga and Goldar (2004)	1980-81 to 1989-90	1989-90 to 1999-00	Based on random effects model Including Contribution of services as inputs to productivity (KLEMS model) Excluding services (KLEM model) (Data Source: ASI; Methodology: PFA)
	1.3	0.5	
	1.5	1.1	
Trivedi (2004)	1980-81 to 1991	1992-93 to 2000	Gross Output Function Framework (Data Source: ASI; Methodology:GAA)
	-92	-01	
	1.9	0.7	
Rodrik & Subramanian (2004)	1981-90	1991-2000	Econometric Approach (estimates for All India).
	2.5	1.6	

## Industrial investment

7.11 Buoyant business expectations successfully lifted the investment tempo in the industrial sector. Filing of investment intentions as reflected in the Industrial Entrepreneur Memorandum (IEMs) for the sectors, which had ceased to have a licensing requirement, picked up again from 2003 after near stagnation in the preceding seven years (Table 7.7). During last three years, from January 2003 to December 2005, more than 15,000 IEMs were filed with proposed intention of investment of Rs 739,637 crore and additional employment generation of 2.96 million persons. During this period, 351 industrial

licenses/letters of intent were issued with proposed investment of Rs 9650 crore. In the post liberalization period (since August 1991) so far, over 66,600 IEMs/LOIs have been filed with investment intentions amounting to Rs 18,94,202 crore and additional employment potential of 12.0 million.

## Foreign Direct Investment

7.12 The government took several steps in the current year in the area of foreign direct investment (FDI) in further pursuit of its already committed path of policy transparency and liberalization in FDI. FDI up to 100 per cent is now permitted on the automatic route in all

**Table 7.7 : Industrial investment intentions in terms of IEMs, LOIs and DILs**

Year	Industrial Entrepreneurs' Memorandum (IEMs)			Letters of Intent (LOIs)/Direct Industrial Licences (DILs)		
	Number	Proposed Investment (in Rs. Cr.)	Proposed Employment (000's)	Number	Proposed Investment (in Rs. Cr.)	Proposed Employment (000's)
1991\$	3,084	76,310	769	195	2,071	34
1992	4,860	115,872	923	620	13,994	97
1993	4,456	63,976	703	528	12,845	100
1994	4,664	88,771	829	546	17,937	130
1995	6,502	125,509	1,114	355	14,265	91
1996	4,825	73,278	696	522	29,932	181
1997	3,873	52,379	522	321	9,528	96
1998	2,889	57,389	521	145	3,274	27
1999	2,948	128,892	477	132	827	17
2000	3,058	72,332	411	203	1,042	31
2001	2,981	91,234	809	117	1,318	14
2002	3,172	91,291	380	89	649	8
2003	3,875	118,612	833	116	1,395	14
2004	5,118	267,069	856	100	5,265	21
2005	6,203	353,956	1271	135	2990	23

**\$ August to December**  
**Source : Department of Industrial Policy & Promotion (DIPP), M/o Commerce & Industry**

sectors/activities except: (a) activities requiring industrial license under the Industries (Development and Regulation Act), (b) proposals where the foreign investor had an existing joint venture/technical collaboration/trademark agreement in the same field of activity, (c) proposals for acquisition of shares in an Indian company in the financial services sector and where SEBI (Substantial Acquisition Of Shares and Takeovers) Regulations, 1997 is attracted and (d) all proposals falling outside notified sectoral policy/caps or under sectors in which FDI is not permitted. Some of the specific measures, which have been taken are as follows:

- FDI cap in the domestic airlines sector has been enhanced from 40 per cent to 49 per cent and NRI investment is permitted up to 100 per cent with no direct or indirect equity participation by the foreign airlines.
- FDI up to 100 per cent under the automatic route is now permitted for development of township, housing, built-up infrastructure and construction development projects. The minimum area requirement has been reduced to 10 hectares for serviced housing plots

and 50,000 square meters built up area for construction-development projects.

- FDI cap has been increased from 49 per cent to 74 per cent in basic and cellular telecom services. The revised cap includes both FDI and portfolio investment.
- FDI has been permitted in FM Radio Broadcasting up to a maximum of 20 per cent (which is inclusive of FDI, NRI, PIO and FII)
- Guidelines for approval of foreign/technical collaborations for projects with existing joint venture/collaboration in the same field have been reviewed

7.13 As a measure towards simplification of the existing procedures in FDI, the following activities have been placed on the general permission route of RBI:

- Transfer of shares in an existing Indian company from residents to non-residents and vice-versa (except in the financial sector and where SEBI takeover code is attracted);
- Conversion of ECB/loan into equity, provided the activity is covered under the

**Table 7.8 : Foreign direct investment in some Asian developing countries**

Country	Foreign Direct Investment Inflows (billions of US \$)			Share in World FDI Inflows		
	2002	2003	2004	2002	2003	2004
China	52.74	53.51	60.63	7.36	8.46	9.35
Hong Kong	9.68	13.62	34.04	1.35	2.15	5.25
India	3.45	4.27	5.34	0.48	0.67	0.82
Indonesia	0.15	-0.6	1.02	0.02	-0.09	0.16
Korea	2.98	3.79	7.69	0.42	0.60	1.19
Malaysia	3.2	2.47	4.62	0.45	0.39	0.71
Philippines	1.79	0.34	0.47	0.25	0.05	0.07
Singapore	5.82	9.33	16.06	0.81	1.47	2.48
Sri Lanka	0.2	0.23	0.23	0.03	0.04	0.04
Thailand	0.95	1.95	1.06	0.13	0.31	0.16
Developing economies	155.53	166.34	233.23	21.72	26.29	35.98
World	716.13	632.6	648.15	100.00	100.00	100.00

Source : World Investment Report 2005, UNCTAD

automatic route and the foreign equity after such conversion falls within the sectoral cap;

- Conversion of preference shares into equity provided the increase in foreign equity participation is within the sectoral cap and the activity is under the automatic route; and
- Conversion of non-repatriable equity invested by NRIs in foreign exchange into repatriable equity allowed under the automatic route provided the original investment was made in foreign exchange under the FDI scheme notified under the FEMA regulations and the sector/activity is which the investment is proposed to be converted into repatriable equity is on the automatic route for FDI.

7.14 Procedural simplifications and inclusion of more sectors under the automatic route coupled with a change in the global scenario and a strong increase in FDI in developing countries in 2004 led to an increase in FDI inflows into India. FDI inflows increased by 25.0 per cent in 2004 and a further 33.8 per cent in 2005. India's share in global FDI increased from 0.5 per cent in 2002 to 0.8 per cent in 2004. Nevertheless, FDI inflows into India continue to lag far behind such inflows in some of the developing countries of Asia (Table 7.8).

7.15 As per the latest available figures, the cumulative amount of FDI approvals accorded till November 2005 was Rs.257,952 crore (US\$69,001 million). During the current year up to November 2005, FDI to the tune of Rs. 5,947 crore (US\$ 1,351 million) has been approved. In terms of cumulative inflows and its geographic origin, Mauritius topped the list by accounting for 37.2 per cent of the total inflows. USA was second with a share of 15.92 per cent. The sectoral composition of FDI indicated that electrical equipment was the largest recipient of the FDI inflows (Table 7.9). Over 70 per cent of the FDI was accessed by 10 sectors.

7.16 In terms of the destination of FDI flows Delhi; parts of Uttar Pradesh and Haryana; Maharashtra; Dadra & Nagar Haveli; and Daman & Diu accounted for almost 50 per cent of the total inflows (Table 7.10). In terms of FDI approvals, however, Maharashtra topped the list, followed by Delhi, Tamil Nadu, Karnataka and Gujarat. A concerted strategy at the Central and State level needs to be evolved to ensure a more equitable regional distribution of such flows.

## Highlights of some industries

### Automobiles

7.17 The automobile industry maintained a steady annual growth rate of over 15 per cent in the last four years. With the gradual



**Table 7.9 : Sectors attracting highest FDI inflows***(Amount in Rupees crore and in US\$ in million in parentheses)*

Ranks	Sector	2002-03	2003-04	2004-05	2005-06 (April – Nov)	Cumulative inflows FDI (from Aug 1991 to Sep 2005)	Share of inflows (in per cent)
1	Electrical Equipments (including computer software and electronics)	3,075(644)	2,449(532)	3,281(721)	3,687(223)	20,898(4862)	16.62
2	Transportation Industry	2,173(455)	1,417(308)	815(179)	741(168)	13,073(3,124)	10.39
3	Services Sector (financial and non financial)	1,551(326)	1,235(269)	2,106(469)	1,742(398)	11,981(2908)	9.53
4	Telecommunications (radio paging, cellular mobile, basic telephone services)	1058(223)	532(116)	588(129)	763(156)	12,076(2,863)	9.60
5	Fuels (Power +Oil refinery)	551(118)	521(113)	759(166)	81(19)	10,678(2,514)	8.49
6	Chemicals (other than fertilizers)	611(129)	94(20)	909(198)	843(191)	7,444(1,887)	5.92
7	Food Processing Industries	177(37)	511(111)	174(38)	158(36)	4,677(1,173)	3.72
8	Drugs and Pharmaceuticals	192(40)	502(109)	1,343(292)	4,85(111)	4,047(946)	3.21
9	Cement and Gypsum Products	101(21)	44(10)	1(0)	1,967(452)	3,229(746)	2.57
10	Metallurgical Industries	222(47)	146(32)	881(192)	544(122)	2,679(624)	2.13

Source : FDI Data Cell, Ministry of Commerce

**Table 7.10 : Region-wise/State-wise break- up of FDI inflows**

Rank	RBI's Regional Office	State covered	Amount of FDI Inflows		Share of FDI inflows in rupees (in per cent)
			Rupees in crore	US\$ in million	
1	New Delhi	Delhi, Part of UP and Haryana	21,839.84	4,840.2	25.96
2	Mumbai	Maharashtra, Dadra and Nagar Haveli, Daman and Diu	17,815.62	3,921.1	21.18
3	Bangalore	Karnataka	6,416.03	1,418.5	7.63
4	Chennai	Tamil Nadu and Pondicherry	5,089.62	1,116.7	6.05
5	Ahmedabad	Gujarat	2,793.23	611.5	3.32

Source : FDI Data Cell, Ministry of Commerce

liberalization of the automobile sector since 1991, the number of manufacturing facilities in India has grown progressively to 15 manufacturers of passenger cars and multi-utility vehicles, 9 manufacturers of commercial vehicles, 14 manufacturers of two/three wheelers and 14 manufacturers of tractors. The industry had an estimated investment of nearly Rs. 50,000 crore in 2002-03, which is expected to go up to Rs. 80,000 crore by the year 2007. The turnover of the automobile industry exceeded Rs. 92,500 crore in 2003-

04, and including the turnover of the auto-component sector, it may have well exceeded Rs. 1,44,000 crore. The industry also offered substantial scope for gainful employment – the direct employment creation was estimated to be to the tune of 4.5 lakhs, and indirect employment at about 1 crore.

7.18 Indian automotive industry is finding increasing recognition worldwide. While a beginning has been made in export of vehicles, the potential in this area is far from fully tapped. During the last two years, export from this

<b>Category</b>	<b>1999-00</b>	<b>2000-01</b>	<b>2001-02</b>	<b>2002-03</b>	<b>2003-04</b>	<b>2004-05</b>	<b>2005-06*</b>
Passenger cars	577	513	564	609	842	961	494
Multi-utility vehicles	124	128	106	112	146	249	128
Commercial vehicles	174	157	163	204	275	350	178
Two wheelers	3,778	3,759	4,271	5,076	5,625	6,527	3,568
Three wheelers	206	203	213	277	341	374	201
Total	4,859	4,759	5,316	6,280	7,229	8,461	4,570
Per cent Growth	15.00	(-)2.00	11.70	18.60	15.12	16.80	15.86

\* Figures are for April-September 2005-06  
Source : Ministry of Heavy Industry and Public Enterprises (Department of Heavy Industry)

<b>Category</b>	<b>1999-00</b>	<b>2000-01</b>	<b>2001-02</b>	<b>2002-03</b>	<b>2003-04</b>	<b>2004-05</b>	<b>2005-06*</b>
Passenger cars	23	23	50	71	126	161	87
Multi-utility vehicles	5	4	3	1	3	6	3
Commercial vehicles	10	14	12	12	17	30	18
Two wheelers	83	111	104	180	265	367	260
Three wheelers	18	16	15	43	68	67	39
Total	140	168	185	307	479	620	407
Per cent growth	(-)12.18	20.24	9.74	65.35	55.98	31.25	35.87

Figures are for April-September 2005-06  
Source: Ministry of Heavy Industry and Public Enterprises (Department of Heavy Industry)

sector has grown significantly owing mainly to the export of cars and two/three wheelers (Table 7.12). Exports of automobiles as a proportion of total production have increased from 2.9 per cent in 1999-2000 to 8.9 per cent in 2005-06. For passenger cars and three wheelers, exports in 2005-06 accounted for 18–19 per cent of total production.

### **Textiles**

7.19 Budgetary concessions, rationalization of duty structure and assistance under the Technology Upgradation Fund Scheme (TUFS) started paying dividends in the textile sector. A moderate turnaround in the performance of this sector has now become visible in increased production. During 2004-05, production of fabrics touched a peak of 45,378 million square meters. In the year 2005-06 up to November, production of fabrics registered a further growth of 9 per cent over the corresponding period of the previous year.

7.20 In exports, after near stagnation in 2004-05, better prospects seem to be emerging in the current year. During April-November 2005 textile exports were at US\$ 9,309.81 million, up 8.21 per cent from US\$8,603.33 million during the corresponding period of the previous year. (Table 7.14)

### **Gems and Jewellery**

7.21 Exports of gems and jewellery remained buoyant in 2004-05. Overall exports from this sector in 2004-05 at US\$13.7 billion were up by an impressive 29.6 per cent from US\$10.57 billion in 2003-04. In the current year up to August, 2005, exports were up 23.9 per cent from US\$5.08 billion in the corresponding period of the previous year to US\$ 6.29 billion, indicating a continuation of the robust growth.

7.22 The sustained buoyancy in the export of gems and jewellery reflected the effects of continuing policy initiatives:

Sector	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	April-November	
							2004-05	2005-06(P)
Mills	1,714 (4.4)	1,670 (4.2)	1,546 (3.7)	1,496 (3.6)	1,434 (3.4)	1,526 (3.3)	998 (3.4)	1,010 (3.2)
Power looms (including Hosiery)	29,561 (75.3)	30,499 (75.7)	32,259 (76.8)	33,835 (80.6)	34,794 (82.0)	37,437 (82.5)	24,490 (82.7)	26,631 (82.6)
Handlooms	7,352 (18.8)	7,506 (18.7)	7,585 (18.0)	5,980 (14.2)	5,493 (13.0)	5,722 (12.6)	3,680 (12.4)	4,120 (12.8)
Others	581 (1.5)	558 (1.4)	644 (1.5)	662 (1.6)	662 (1.6)	693 (1.5)	462 (1.5)	462 (1.4)
<b>Total</b>	<b>39,208</b>	<b>40,233</b>	<b>42,034</b>	<b>41,973</b>	<b>42,383</b>	<b>45,378</b>	<b>29,630</b>	<b>32,223</b>

**Note :** Figures in parentheses indicate share in output  
**P – Provisional**  
**Source :** Office of Textile Commissioner, Mumbai

- Import of gold of 8 carat and above allowed under the replenishment scheme subject to the import being accompanied by an Assay Certificate specifying the purity, weight and alloy content;
- Duty free import entitlement of consumables for metals other than gold and platinum at 2 per cent of the FOB value of exports during the previous financial year;
- Duty free import entitlement of commercial samples at Rs.3 lakh;
- Duty free re-import entitlement for rejected jewellery at 2 per cent of the FOB value of exports; and
- Cutting and polishing of gems and jewellery treated as manufacturing for the

purposes of exemption under Section 10A of the Income Tax Act.

7.23 In addition, the Government of India and the Gem and Jewellery Export Promotion Council (GJEPC), a representative body of the trade, have taken several steps to improve exports of gems and jewellery and enhance competitiveness:

- A medium-term export strategy for various sectors, including gems and jewellery, prepared by Ministry of Commerce and Industry;
- GJEPC and Government constantly exploring the possibility of direct procurement of rough diamonds from mining countries;

Item	2002-03	2003-04	2004-05	2004-05	2005-06	Percent Variation
				(April-Nov.)	(April-Nov.)	
Ready made garment	5,689.91	6,231.47	6,026.39	3,519.00	4,185.18	18.93
Cotton Textiles	3,361.44	3,599.95	3,283.61	2,222.94	2,311.20	3.97
Wool & Woollen Textiles	50.92	58.28	66.44	295.13	289.88	-1.78
Manmade Textiles	1,417.48	1,821.24	1,944.75	1,308.80	1,140.91	-12.83
Silk	314.10	379.82	405.99	370.65	397.80	7.32
Handicrafts	1,317.92	1,085.36	939.81	647.95	723.45	11.65
Coir & Coir manufacture	73.36	77.77	101.57	65.16	78.40	20.32
Jute goods	187.57	242.43	270.09	173.70	182.99	5.35
<b>Total</b>	<b>12,412.71</b>	<b>13,496.31</b>	<b>13,038.64</b>	<b>8,603.33</b>	<b>9,309.81</b>	<b>8.21</b>

**Source :** Foreign Trade Statistics of India (Principal Commodities and Countries) DGCI&S, Kolkata

- Funds provided by the Government for setting up the Sardar Vallabh Bhai Patel Centre of Jewellery Design and Manufacture at Surat to give a fillip to the sector;
- Promotion of the image of Indian diamonds and jewellery by GJEPC abroad through advertisements, publicity and participation in international fairs, buyer-seller meets, and direct approach to market retailers;
- Market study by GJEPC through experts in the field to identify new markets. Deployment by GJEPC of Indian designers to various international trade fairs and exhibitions to study the latest trend in designs;
- Promotion of export of 'hallmark' jewellery from India to assure foreign customers of quality and purity of jewellery made in India; and

- Provision of infrastructure facilities for training to enhance the quality, design and global competitiveness of Indian jewellery. A training institute of international level - Indian Institute of Gem and Jewellery-has been set up.

### Steel

7.24 The buoyancy of the steel sector continued for the third year in a row. During April-October 2005, production of finished (carbon) steel increased by 7.4 per cent over the corresponding period of the previous year to reach 24.25 MT (Table 7.15). Additional capacities have been commissioned in this sector. The apparent consumption of finished (carbon) steel was 21.25 MT, which was 8.8 per cent higher than consumption in the corresponding period of the previous year. Exports of finished (carbon) steel during this period at 2.30 MT, however, was down 5.8 per cent from the same period of the previous year

**Table 7.15 : Production, consumption, export and import of finished carbon steel and pig iron**

(in million tonnes)

Item	2002-03	2003-04	2004-05	2004-05 (April-October)	2005-06* (April-October)
<b>PRODUCTION</b>					
Finished carbon steel					
Main producers	14.38 (10.19)	15.19 (5.6)	15.61 (2.8)	8.78	9.06 (3.2)
Secondary producers	19.28 (5.6)	21.77 (12.9)	24.44 (12.28)	13.80	15.2 (10.1)
Total	33.67 (9.9)	36.96 (9.7)	40.06 (8.38)	22.58	24.26 (7.4)
Pig iron					
Main producers	1.11 (8.5)	0.97 (-12.7)	0.62 (-35.3)	0.25	0.56 (125.3)
Secondary producers	4.17 (36.2)	2.80 (-32.9)	2.60 (-6.7)	1.41	1.56 (10.6)
Total	5.28 (29.4)	3.76 (-28.7)	3.23 (14.24)	1.66	2.12 (27.80)
<b>EXPORTS</b>					
Finished carbon steel	4.51 (66.6)	4.84 (7.3)	4.39 (-9.4)	2.44	2.30 (-5.8)
Pig iron	0.63 (101.6)	0.52 (-17.6)	0.40 (-24.1)	0.12	0.11 (-11.3)
<b>IMPORTS</b>					
Finished carbon steel	1.51 (18.8)	1.54 (2.0)	2.2 (36.94)	1.11	1.76 (57.0)
Pig iron	0.001	0.002 (100.0)	0.008 (300.0)	Nil	Nil
<b>APPARENT CONSUMPTION</b>					
Finished carbon steel	28.89 (5.3)	31.17 (7.9)	34.39 (10.3)	19.53	21.25 (8.8)
Pig iron	4.64 (22.4)	3.26 (-29.7)	2.8 (-14.5)	1.48	1.99 (34.1)

Source : Joint Plant Committee. Note : Figures in parenthesis indicate variation over the previous year; \* Provisional

largely due to the China factor and falling global steel prices.

7.25 Steel prices started declining from May 2005 and prices in October were considerably lower than the May 2005 level. The price of hot rolled coil fell 25.4 per cent from Rs.35,875 in May 2005 to Rs.26,750 in October 2005. Steel is a critical input to industry and infrastructure. In continuation of the policy thrust to ensure availability of steel and stabilizing its price through reduction in customs duty and abolition of special additional duty, Government reduced the customs duty on non-alloy steel items to 5 per cent and on alloy/stainless steel to 10 per cent during the current year. The National Steel Policy (NSP) 2005, already approved by Government, will be implemented soon. The long-term goal of NSP is to ensure that India has a modern and efficient steel industry, capable of standing up to international competition and catering to the growing domestic demand for steel.

### **Chemical, petrochemical and pharmaceutical Industry**

7.26 The chemical sector — including basic chemicals and its products, petrochemicals, fertilizers, paints, gases and pharmaceuticals — accounts for about 17.6 per cent of the output of the manufacturing sector, and around 13-14 per cent of the total exports of the country. Over the last few years, the sector has been going through a structural change with an increasing orientation towards modernization, customer satisfaction and environment friendliness. In 2004-05, the sector grew at 14.3 per cent.

#### **Basic Chemicals**

7.27 The production of major basic chemicals of alkali, inorganic and organic chemicals, pesticides and dyes & dyestuffs was 7.38 million tonnes during the year 2004-05 as against 7.07 million tonnes during its previous year, thereby registering a growth of 4.37 per cent. Maximum rate of growth was observed in the case of inorganic chemicals which grew at 15.2 per cent during this period. During the current year, production of basic chemicals

upto September 2005 was higher by 3.75 per cent as compared to the corresponding period of the last year. In the case of inorganic chemicals the growth rate was 8.75 per cent during this period.

#### **Petrochemicals**

7.28 Production of petrochemicals, which mainly comprise of synthetic fibres, polymers, elastomers, synthetic detergent intermediates and performance plastics, increased by 4.9 per cent from 7 MT in 2003-04 to 7.35 MT in 2004-05. However, during the first part of the current year, production of petrochemicals remained almost the same as in the corresponding period of the previous year. The stagnant growth can be attributed mainly to the increase in petrochemical prices, especially of polymers, which, in turn, was a result of the spurt in crude oil prices in recent years.

#### **Pharmaceuticals**

7.29 The Indian pharmaceutical industry, with US\$4.5 billion in domestic sales and over US\$3.8 billion in exports, continues to show satisfactory progress in terms of infrastructure development, technology base and product use. The industry now produces bulk drugs belonging to all major therapeutic groups requiring complicated manufacturing processes. The industry has also developed excellent “good manufacturing practices” (GMP) compliant facilities for the production of different dose forms. The strength of the industry lies in leveraging the country’s strengths in organic synthesis and process engineering and developing, without compromising on quality, cost-effective technologies in the shortest possible time for drug intermediates and bulk activities. The country’s reputation as a low cost producer of antiretroviral drugs, and supplier of the same to international organizations and especially, to the needy patients in Africa, is now well known.

7.30 The task force, set up to explore options other than price control to make life saving drugs at reasonable prices, has submitted its Report. The major

<b>Year</b>	<b>Production (in lakh tonnes)</b>	<b>Growth rate ( in per cent)</b>
2000-01	976.10	(-)0.61
2001-02	1069.00	9.52
2002-03	1163.50	8.84
2003-04	1235.00	6.15
2004-05	1335.70	8.15

Source: Department of Industrial Policy and Promotion

recommendations of the task force span from innovative fiscal measures to laying emphasis on R&D activities. Government in consultation with various stakeholders is considering the recommendations.

### **Cement**

7.31 The impressive performance of the cement industry, both in terms of production (Table 7.16) and export, continues. Export of cement in 2003-04 and 2004-05 was 9 MT and 10.6 MT, respectively. During April-October 2005, exports were 5.10 MT.

7.32 Installed capacity of production was augmented during 2004-05 and in view of the growth trend in the last few years, a production target of 142.0 MT was set for the year 2005-06. During the period April to October 2005, production of 82.26 MT (provisional) has already been achieved. This is 9.39 per cent higher than the production in the corresponding period of the previous year. Efforts to generate adequate domestic demand to meet the excess production capacity available with the industry are also being made.

### **Oil and gas**

7.33 India imports about 75 per cent of its requirement of crude petroleum. However, it continues to have a net exportable surplus in refined petroleum products. The imports of petroleum products were 8.83 MT in 2004-05 and 7.32 MT in April to November 2005. Against this, exports of petroleum products were 18.21 MT in 2004-05 and 12.68 MT during the period April-November 2005. Refining capacity has increased from 118.37 MT per annum (MTPA) as on April 1, 2003 to 127.37 MTPA as on

October 1, 2005. The targeted capacity by the end of the Tenth Five Year Plan is 141.70 MTPA.

7.34 With the declared intention of moving towards market-determined pricing for petroleum products, Government announced the dismantling of the Administered Pricing Mechanism (APM) with effect from April 1, 2002. For kerosene and liquid petroleum gas (LPG), being items of mass consumption, it was decided that subsidies on these will continue on specified flat rate basis. Accordingly, as per the "PDS Kerosene and Domestic LPG Subsidy Scheme, 2002", a flat rate of subsidy per selling unit was approved to be given to public sector Oil Marketing Companies (OMCs). The subsidy was equal to the difference between the cost price and the issue price per selling unit as on March 31, 2002, and was to be phased out in three to five years. The OMCs were to adjust the retail selling prices (RSP) of these products in line with international prices during this period.

7.35 There was an unprecedented sharp and spiraling increase in international oil prices from late 2003, combined with considerable week-to-week and even day-to-day volatility. Notwithstanding the consequent steep rise in international prices of sensitive petroleum products, OMCs, in consultation with Government, moderated the price increase in petrol and diesel besides maintaining the prices of already subsidized products like domestic LPG and PDS kerosene. Consequently, the OMCs suffered under-recoveries on sale of petrol and diesel. However, as the under recoveries of the OMCs were reaching untenable proportions, in October 2003, Government decided that the OMCs would make up about a third of their under-recoveries on these two products from the surpluses in petrol and diesel, and the balance would be equally shared by the upstream companies and the OMCs. In spite of this subsidy-sharing mechanism, and discounts given by the refineries to OMCs, the burden of under recoveries continues to rise steeply. The estimated under-recoveries more than doubled from Rs. 9,274 crore in 2003-04

to Rs.20,146 crore in 2004-05, and continue to rise.

7.36 Spiraling international petroleum prices not only create a pressure on budgetary resources directly and indirectly through losses of oil PSUs, but also have a debilitating effect on the performance of the industrial sector as a whole. Petroleum is a universal intermediate product. In response to the rising international prices of petroleum products, Government raised the prices of petrol and diesel per litre by a moderate Rs. 2.50 and Rs. 2.00, respectively, with effect from June 21, 2005. As the increase continued to persist, Government was forced to increase the prices of petrol and diesel further by Rs. 3 and Rs. 2 per litre, respectively, with effect from September 7, 2005. The prices of domestic LPG and PDS kerosene were, however, left unchanged. The total subsidy as on Jan., 2006 calculated at international prices for 2005-06 per cylinder of domestic LPG of 14.2 kg and per litre of PDS Kerosene, was estimated at Rs. 170.32 and Rs. 12.96 respectively. In order to compensate the public sector OMCs on account of their mounting under-recoveries, over and above the amount allowed as direct subsidy, Budget for 2005-06 provides an additional Rs. 5,750 crore for 'oil bonds'.

7.37 Liquefied Natural Gas (LNG) is being imported, and such import is permitted under the open general license (OGL) category. Petronet LNG Limited (PLL), a joint venture promoted by Gas Authority of India Limited (GAIL), Indian Oil Corporation (IOC), Bharat Petroleum Corporation Limited (BPCL) and Oil & Natural Gas Corporation (ONGC), was formed for import of LNG to meet the growing demand. In March, 2004, PLL constructed 5 MMTPA LNG terminal at Dahej in Gujarat. The terminal capacity is being expanded to 10 MMTPA. Shell's 2.5 MMTPA capacity LNG Terminal at Hazira was commissioned in April 2005. Other LNG terminals under implementation/consideration are at Dabhol, Kochi, Mangalore and Ennore. In June 2005, Sale Purchase Agreement (SPA) for import of 5 MMTPA of LNG from Iran was signed between GAIL/IOC/BPCL and National Iranian

Gas Export Co. Ltd. (NIGEC) and imports are likely to start by the end of 2009.

7.38 With the expected increase in gas availability from domestic sources, particularly in Krishna-Godavari (KG) basin, additional production from Tapti, which is a joint venture field, and imports of LNG by PLL at Dahej and Shell at Hazira, there is a need for commensurate increase in gas pipeline infrastructure. A gas pipeline policy, envisaging authorization from Government/regulator for all gas transmission pipelines is being worked out. For promoting competition and protecting the consumer, provision for non-discriminatory third party open access and regulation of transportation tariff are envisaged. Government is in the process of setting up the Petroleum and Natural Gas Regulatory Board which, among other things, will formulate and regulate the pricing mechanism and ensure competitive structure of this sector.

7.39 In January 1999, ONGC had acquired 9.1 per cent of total equity in IOC and 4.8 per cent in GAIL; and IOC had acquired 9.6 per cent in ONGC and 4.8 per cent in GAIL. Similarly, GAIL had acquired 2.4 per cent of total equity in ONGC. The total market valuation of these crossholdings on January 20, 2006 was estimated at Rs. 29,456 crore. Government has approved the off-loading of these cross-holdings of shares by IOC, ONGC, and GAIL. The manner and timing of off-loading these crossholdings have been left to the individual PSUs to decide keeping in view their fund requirements as well as market conditions.

7.40 As a measure to minimize green degradation, as laid down in the Auto Fuel Policy, Euro II petrol and diesel in all 13 identified cities, and Bharat Stage II petrol throughout the country is being progressively introduced with effect from April 1, 2005. It is proposed to introduce Euro II equivalent norms in the entire country from April 1, 2010, subject to a review in 2006 of the impact of introduction of Bharat Stage II norms in the entire country and Euro III equivalent norms in identified cities.

### Box 7.2 : Oil price and global economic prospects

Crude oil prices remain a key input in determination of global economic prospects. A rise in crude oil prices affects the global economy through a variety of channels.

- An initial fall in aggregate demand owing to a transfer of income from oil consumers to oil producers, who tend to have a lower propensity to consume than the former.
- A supply-side effect reflecting higher production costs and lower profit margins. However, with falling oil intensity over the past three decades, especially in industrial countries, this effect has been weaker.
- A rise in inflation resulting from higher production costs, depending on the response of monetary policy and the extent to which consumers and producers can offset the declines in incomes and profits, respectively.
- A potential impact on activity through lower consumer and investor confidence and reduced willingness to commit to longer-term capital projects.
- A lasting impact on energy demand and supply over time, depending on the duration and extent of price increases.

Source : World Economic Outlook, September, 2005, IMF, page 64.

## Tourism

7.41 The impressive growth profile of the tourism sector observed over the last two years appears to be continuing. As per the World Tourism Organization, about 763 million tourists traveled internationally in 2004 and spent about US\$622 billion. As per an estimate, tourism accounts for 12.2 per cent of total world exports and 8.1 per cent of global employment.

7.42 In 2004-05 the Indian tourism industry registered a growth of 24.0 per cent in foreign tourist arrivals compared to the growth of 19.5 per cent registered in 2003-04 (Table 7.17). Foreign exchange earnings grew at the rate of 26.4 per cent in 2004-05 compared to 31.4 per cent in 2003-04.

7.43 Improvement of airports, passenger amenities and emphasis on targeted tourist segments need to be vigorously pursued to ensure further sustained boost in the tourism

Table 7.17 : Foreign tourist arrivals and foreign exchange earning

Year	Foreign tourists		Estimated foreign Exchange Earnings	
	Number in Lakh	Growth Rate	Million US\$	Growth Rate
1997-98	23.71	1.6	2914	1.3
1998-99	23.97	1.1	2993	2.7
1999-00	25.05	4.5	3036	1.4
2000-01	26.99	7.7	3168	4.3
2001-02	24.28	-10.0	2910	-8.1
2002-03	24.54	1.0	3029	4.1
2003-04	29.33	19.5	3979	31.4
2004-05	36.38	24.0	5029	26.4

Source : Ministry of Tourism

sector. The aggressive campaigns of the neighbouring South East Asian countries, which have been emerging as a major global destination for business, leisure, religious and medical tourism, need to be converted into a complementary factor for boosting the inflow of tourists in India. This requires evolving concrete strategies and improving tourism related information and infrastructure.

## Electronics & computer technology

7.44 Information Technology (IT) and IT-enabled business process outsourcing (ITES-BPO) services continue to be on a robust growth path. Exports of the Indian software and services sector was Rs. 78,230 crore (US\$17.2 billion) in 2004-05, up 34 per cent from Rs. 58,240 crore (US\$12.8 billion) in 2003-04 (Table 7.18). The IT exports are likely to grow by 30-32 per cent in the current year. Output of the Indian electronics and IT industry was Rs. 1,48,360 crore during 2004-05, up 25.4 per cent from Rs. 1,18,290 crore in 2003-04 (Table 7.19).

7.45 With satisfactory growth of the Indian ITES-BPO sector both on-shore as well as offshore, export revenues from this sector increased rapidly from US\$2.5 billion in 2002-03 to US\$3.6 billion in 2003-04 and further to US\$5.1 billion in 2004-05. A major impact of this growth has been on employment creation, which has almost doubled every year. The number of professionals employed in India by IT and ITES sectors is estimated at 10.45 lakh



**Table 7.18 : Electronics exports***(Rs. Crore)*

Items	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05
1. Electronics Hardware	1,400	4,788	5,800	5,600	7,700	8,000
2. Computer Software	17,150	28,350	36,500	46,100	58,240	78,230
<b>Total</b>	<b>18,550</b>	<b>33,138</b>	<b>42,300</b>	<b>51,700</b>	<b>65,940</b>	<b>86,230</b>

**Table 7.19 : Electronics production***(Rs. Crore)*

Items	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05
1. Consumer Electronics	11,200	11,950	12,700	13,800	15,200	16,800
2. Industrial Electronics	3,750	4,000	4,500	5,550	6,100	8,300
3. Computers	2,500	3,400	3,550	4,250	6,800	8,800
4. Communications and Broadcasting Equipments	4,000	4,500	4,500	4,800	5,350	4,800
5. Strategic Electronics	1,450	1,750	1,800	2,500	2,750	3,000
6. Components	5,200	5,500	5,700	6,600	7,600	8,800
Sub-Total	28,100	31,100	32,750	37,500	43,800	50,500
7. Software for Exports	17,150	28,350	36,500	46,100	58,240	78,230
8. Domestic Software	7,200	9,400	10,874	13,400	16,250	19,630
<b>Total</b>	<b>52,450</b>	<b>68,850</b>	<b>80,124</b>	<b>97,000</b>	<b>1,18,290</b>	<b>1,48,360</b>

as on 31st March 2005. While some initiatives, including fiscal, have been taken recently, a lot still remains to be done to improve the competitive edge of this sector (Box 7.3).

### Industrial sickness

7.46 Since its inception in May 1987 till the end of August 2005, the Board for Industrial and Financial Reconstruction (BIFR) received

#### Box 7.3 : Policy initiatives for electronics and IT sector

- Customs duty on all the 217 tariff lines covered under the Information Technology Agreement (ITA-1) of WTO has been abolished;
- All goods required in the manufacture of ITA-1 items have also been exempted from customs duty subject to Actual user condition;
- An additional duty of 4 per cent has been imposed on items bound by ITA-1 (except IT software) and their inputs, raw materials, parts, capital goods covered under various customs notifications;
- Specified capital goods required in the manufacture of capacitors, electronic fuses, [full pls] TDM, DC micro motors, PCBs, relays and switches have been exempted from customs duty;
- Expenditure incurred on in-house R&D facility for scientific research by a company engaged in the business of electronic equipments, computers, telecom, etc. has been allowed a weighted deduction of 150 per cent of the expenditure incurred. Time limit for availing this benefit has been extended up to March 31, 2007;
- In order to improve information security with growing applications of IT, an Information Security Management System has been set up. A security cooperation agreement has been signed with Microsoft to exchange computer security related information and training of technical personnel;
- An expert committee has been set up to review the IT Act;
- A national facility for Electro Magnetic Interference (EMI) and Electro Magnetic Compatibility (EMC) evaluation of electronic equipments and systems has been set up at SAMEER – Chennai; and
- A joint project for setting up Nanoelectronics centers at the Indian Institute of Science, Bangalore and the Indian Institute of Technology, Bombay has been sanctioned with a total outlay of Rs.99.80 crore over a period of five years.

6,775 references under the Sick Industrial Companies (Special Provision) Act (SICA), 1985 (Table 7.20). These references included 295 references from Central and State PSUs (CPSUs and SPSUs). Out of the references received, 5,300 references were registered under section 15 of SICA. 1,987 references were dismissed as non-maintainable under the Act; 637 rehabilitation schemes, including 218 by Appellate Authority for Industrial and Financial Recommendation (AAIFR) or Supreme Court (SC), were sanctioned; and 1,306 companies were recommended to be wound up. 385 companies were declared 'No longer sick' and were discharged from the purview of SICA on their net worth turning positive after the implementation of the schemes. Among the 295 references for PSUs, 211 (90 CPSUs and 121 SPSUs) were registered up to August 2005. Rehabilitation schemes were sanctioned for 25 CPSUs and

20 SPSUs. It was recommended that 31 CPSUs and 41 SPSUs be wound up. 6 CPSUs and 11 SPSUs were declared 'no longer sick'. As on March 31, 2001, 2002, 2003 and 2004 the gross disposal of cases was 2160, 2400, 2867 and 3318, respectively. In the current year, the gross disposal of cases, as on August 30 was 3,762.

### Industrial relations

7.47 There was a secular decline in the number of strikes and lockouts during 2000-2004 (Table 7.20). The total number of strikes and lockouts went down 13.6 per cent from 552 in 2003 to 477 in 2004, with a sharper decline in strikes than in lockouts. While the decline in the total number of mandays lost on account of strikes and lockouts by 6.39 million between 2003 and 2004 indicated an improvement in industrial relations, the number of mandays lost only on account of

**Table 7.20 : References to BIFR as on March 31, 2005**

Sl. No.	Status	Private	Central PSUs	State PSUs	Total PSUs	Total
1	References received	6,480	107	188	295	6,775
2	Registration declined	1,377	17	66	83	1,460
3	Under Scrutiny	14	0	1	1	15
A 4	References registered	5,089	90	121	211	5,300
	<b>DISPOSALS</b>					
5	Dismissed					
	(i) as non-maintainable	1,455	9	33	42	1,497
	(ii) as multiple registered	218	0	0	0	218
6	Rehabilitation schemes approved/sanctioned					
	(i) by BIFR	593	24	20	44	637
	(ii) by AAIFR/SC	17	1	0	1	18
7	Declared on longer sick out of Sl No. 6	368	6	11	17	385
8	Winding up recommended to the concerned high courts	1,234	31	41	72	1,306
9	Dropped now	80	4	2	6	86
B	Total (5+6+8+9)	3,597	69	96	165	3,762
C	<b>PENDING</b>					
10	Draft schemes circulated	47	1	0	1	48
11	Winding up notice issued	110	3	3	6	116
12	Pending for sickness determination	823	8	12	20	843
13	Declared sick	412	6	1	7	419
14	Schemes failed and reopened	21	1	2	3	24
15	Pending cases remanded by AAIFR	42	2	3	5	47
16	Stay ordered by courts	37	0	4	4	41
	<b>C=A-B</b>	<b>1,492</b>	<b>21</b>	<b>25</b>	<b>46</b>	<b>1,538</b>

Source : BIFR, Department of Economic Affairs, Ministry of Finance.

<b>Table 7.21 : Strikes and lockouts</b>						
<b>Year</b>	<b>Strikes</b>		<b>Lockouts</b>		<b>Total</b>	
	<b>Number</b>	<b>Mandays lost (in million)</b>	<b>Number</b>	<b>Mandays lost (in million)</b>	<b>Number</b>	<b>Mandays lost (in million)</b>
1999	540	10.62	387	16.16	927	26.79
2000	426	11.96	345	16.80	771	28.76
2001	372	5.56	302	18.20	674	23.77
2002	295	9.66	284	16.92	579	26.58
2003	255	3.21	297	27.05	552	30.26
2004	236	4.83	241	19.04	477	23.87
2005(Jan-Sep)(P)	155	2.83	185	4.47	340	7.30

P – Provisional, Total may not tally due to rounding off  
Source : Labour Bureau, Shimla

strikes actually increased. Most of these strikes and lockouts were in private sector establishments on account of wages and personnel issues.

7.48 The number of strikes and lockouts during 2005 (January to September) was 340. During this period, the State of West Bengal experienced maximum instances of strikes and lockouts, followed by Tamil Nadu and Gujarat. The industrial disturbances were concentrated mainly in the textile, engineering, chemical and food product industries.

7.49 The importance of reforming the labour laws to enhance productivity, competitiveness, employment generation and general economic reforms hardly needs emphasis. A beginning has already been made in this direction. During the current financial year, The Payment of Wages (Amendment) Act, 2005 (41 of 2005) proposing to enhance the wage ceiling from the present level of Rs.1,600 per month to Rs.6,500 per month and empowering the Central Government to further increase the ceiling in future by way of notification, has already been put into effect from November 9, 2005. The Factories (Amendment) Bill 2005 proposing to provide flexibility and safety to the employed women, and amendment of Labour Laws (Exemption from Furnishing Returns and Maintaining Registers by Certain Establishments) Act, 1988 to simplify the procedure for maintaining registers and filing returns are under active consideration.

## **Environmental issues**

7.50 Polluting industries, including thermal power plants, have been a significant source of air and water pollution. Monitoring of designated cities/towns for air pollution revealed that while the levels of sulphur dioxide were within the standard limits, those of oxides of nitrogen exceeded the limits in many cities, with high levels of suspended particle matter (SPM) being the more prevalent form of air pollution in almost all the metro-cities. Similarly, recent assessment of water quality of aquatic resources reveal that while organic pollution continued to be the predominant pollutant, there is a gradual improvement in this indicator of water quality over time. Flyash, phospho-gypsum and iron & steel slags comprise the main forms of solid wastes generated in India.

7.51 The challenge of sustainable development requires integration of the quest for economic development with environmental concerns. Traditional energy- and resource-intensive and waste-generating models of industrialization not only impose a heavy cost on society in terms of pollution and deteriorating quality of life, but also is unsustainable in the medium to long run, particularly with exhaustible natural resources.

7.52 Government has put in place necessary legislative and regulatory measures, both preventive and promotive, for protection, conservation and development of

### Box 7.4 : Initiatives to control environmental pollution

- Existing policy initiatives to improve environment like the National Conservation Strategy and Policy Statement for Environment & Development, 1992, Policy Statement for Abatement of Pollution, 1992 and National Forest Policy, 1988;
- Stipulation of ambient and industry specific emission and effluent standards;
- Setting up of clean technology mechanisms in polluting industries;
- Setting up of Common Effluent Treatment Plants (CETPs) in industrial estates;
- Establishing waste minimisation circles (WMC) in clusters of small scale industries;
- Implementing recommendations of Charter of Corporate Responsibility for Environmental Protection (CREP) in 17 categories of highly polluting industries;
- Prior environmental clearance of development projects based on impact assessment;
- Implementation of an Eco-mark scheme to encourage production/consumption of environment - friendly products;
- For controlling vehicular pollution, progressive emission norms at the manufacturing stage have been notified, cleaner fuels like unleaded petrol, low sulphur diesel and compressed natural gas (CNG) introduced;
- Promotion of economic instruments to internalize the costs of pollution and fiscal incentives for pollution control equipment; and
- Monitoring of ambient air and water quality, bio-monitoring of rivers/lakes and identification of hazardous wastes streams in various sectors/processes.

#### New Policy Initiatives:

- Formulation of a National Environment Policy;
- Setting up of National Clean Development Mechanism (CDM) Authority as per Kyoto Protocol;
- Reengineering of environmental clearance process with a view to bringing greater transparency and efficiency in the clearance process;
- Revisiting the Coastal Regulation Zone (CRZ) Notification to enable environmentally sustainable use of coastal resources; and
- Developing a National Chemical Management profile for the country.

the environment, an effective implementation of which is expected to harmonize the demands of development and environment. Major thrust areas, ongoing and proposed, for abatement of pollution are summarized in Box 7.4.

#### Small enterprises

7.53 Between 2000-01 to 2004-05, the small enterprises sector registered

continuous growth in the number of units, production, employment and exports (Table 7.22). During this period the average annual growth in the number of units was around 4.1 per cent and in employment 4.3 per cent annually. Further, the annual average growth in production, at current and constant prices, was 12.4 per cent and 8.1 per cent respectively. Thus, there has been a significant

Table 7.22 : Performance of small scale enterprises

Year	No. of units (lakh)			Production (Rs. crore)		Employment in lakh	Exports (Rs. crore)
	Regd.	Unregd.	Total	(at current prices)	(at constant prices)*		
2000-01	13.10	88.00	101.10 (4.1)	2,61,289 (11.5)	1,84,401 (8.2)	239.09 (4.4)	69,797 (28.8)
2001-02	13.75	91.46	105.21 (4.1)	2,82,270 (8.0)	1,95,613 (6.1)	249.09 (4.2)	71,244 (2.1)
2002-03	14.68	94.81	109.49 (4.1)	3,11,993 (10.5)	2,10,636 (7.7)	260.13 (4.4)	86,013 (20.7)
2003-04	15.54	98.41	113.95 (4.1)	3,57,733 (14.7)	2,28,730 (8.6)	271.36 (4.3)	97,644 (13.5)
2004-05	16.57	102.02	118.59 (4.1)	4,18,263 (16.9)	2,51,511 (10.0)	282.91 (4.3)	N.A.

Note : Figures in parenthesis indicate percentage growth over previous years \* 1993-94 prices.  
Source : Development Commissioner (SSI).

### **Box 7.5 : Policy initiatives for promoting small enterprises**

- For allowing small enterprises to grow, 193 items reserved for exclusive manufacture in the SSI sector dereserved in 2004-05 to bring down the total number of reserved items to 506. After consultations with stakeholders, more items are proposed to be dereserved in 2005-06.
- As announced in the Budget 2005-06, the turnover eligibility limit under the General SSI Excise Exemption Scheme raised from Rs.3 crore to Rs.4 crore.
- With a view to integrating small and medium enterprises, facilitating their growth and enhancing their competitiveness (including measures to reduce the rigours of the "Inspector Raj" faced by the sector), the 'Small and Medium Enterprises Development (SMED) Bill 2005' introduced in the Lok Sabha on 12th May 2005.
- A 'Policy Package for Stepping up Credit to Small and Medium Enterprises' announced on 10th August, 2005.
- Under the 'Credit Linked Capital subsidy Scheme' (CLCSS) for technology upgradation, amendments made with effect from September 29, 2005, which, inter alia, raise ceiling on loans from Rs.40 lakh to Rs.1 crore and the rate of subsidy from 12 per cent to 15 per cent.
- RBI formulated the scheme of 'Small Enterprises Financial Centers' (SEFC) to encourage banks to establish mechanisms for better coordination between their branches and branches of Small Industries Development Bank of India (SIDBI) in the identified clusters for more efficient credit delivery.
- To facilitate technology upgradation and enhance competitiveness, the investment limit (in plant and machinery) raised from Rs.1 crore to Rs.5 crore in respect of 69 items reserved for manufacture in the small scale sector and for all items in the drugs and pharmaceuticals sector. Notification to this effect to be issued shortly.
- A new 'Package for Promotion of Micro and Small Enterprises' under formulation to include supplementary measures to encourage adequate credit flow, provide further incentives for technology upgradation, infrastructure and marketing facilities, capacity building of micro and small enterprises, and support to women entrepreneurs.

increase in the contribution of this sector to the economic development and employment generation in the country.

7.54 With increasing competition on account of globalization of the Indian economy, size of the enterprises and the level of technology employed by them have assumed critical significance in the context of the small enterprises becoming globally competitive. Several policy initiatives have been taken during the year (see Box 7.5) to address the problems faced by the sector, which mainly relate to access to timely and adequate credit, technological obsolescence, infrastructure bottlenecks, marketing constraints and a plethora of rule and regulations. The provisions of the proposed SMED Bill, 2005 aim at facilitating their growth in terms of size and also the graduation of small enterprises into medium ones, thus enhancing their global competitiveness. The policy initiatives taken during the year are expected to help enhance the overall contribution of the sector to the national economy, especially in creating more employment potential.

### **Outlook**

7.55 The high growth in the industrial sector continued for the third year in succession. The major driver of this growth in the year 2004-05 was the manufacturing sector. The growth of the electricity sector was almost the same as that of the last year whereas the mining sector showed considerable deceleration. Somewhat subdued performance of the electricity and deceleration in mining sector moderated the manufacturing driven industrial growth. Capital goods maintained a steady increase in its rate of growth during 2004-05. The sector is poised to increase its rate of growth further during the current year.

7.56 With a perceptible improvement in the investment scenario, both domestic and foreign, coupled with the policy measures towards further liberalisation and simplification of the norms guiding such investment, the overall productive capability of the industrial sector, as a whole, is likely to increase substantially. With a likely pick up in the production of crude oil, the mining sector is

expected to improve its performance in the near future. Recent softening in the price of oil in the international market, if sustained, would have a positive impact on the industrial sector. The electricity sector, however, remains a cause of concern as private investment in this sector has remained almost stagnant. The hardening of the interest rates, could also be another dampening factor for sustained growth in investment.

7.57 While various sectors within manufacturing registered an impressive increase in the volume of production and exports, this was largely input driven and the growth in total factor productivity was hardly noticeable. Sustained efforts to remove bottlenecks hindering the productivity and efficiency of the manufacturing sector would boost the performance of the manufacturing sector substantially.