Industry

The first eight months of the current fiscal, till November 2007, witnessed a moderate slowdown in the growth of the industrial sector. The slowdown has mainly been on account of the manufacturing sector. The mining and quarrying sector grew at a faster pace, while the growth in electricity remained unchanged from April-November 2006. Nonetheless, the 9.2 per cent growth achieved during April-November 2007 by the industrial sector, when seen against the backdrop of the robust growth during the preceding four years, suggests that the buoyancy in this sector has continued, albeit with a degree of moderation (Table 8.1).

8.2 Two important changes have occurred in the growth pattern of the use-based industrial categories during April-November 2007 compared to the corresponding period in 2006 (Table 8.2). First, capital goods have grown at an accelerated pace, over a high base attained in the previous years, which augurs well for the required industrial capacity addition. Secondly, the consumer durables basket that forms part of the Index of Industrial Production (IIP) showed a negative growth during the period, thereby forcing a visible decline in the growth of the total consumer goods basket, despite reasonable growth in the non-durables. The

Table 8.1

Industry — annual growth rate (per cent)[a]

Period	Mining	Manufac-turing	Electri-city	General
(weights)	(10.47)	(79.36)	(10.17)	(100.00)
1995-96	9.7	14.1	8.1	13.0
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
2005-06	1.0	9.1	5.2	8.2
2006-07	5.4	12.5	7.2	11.6
2007-08 (Apr-Nov)	4.9	9.8	7.0	9.2
	(4.2[b])	(11.8[b])	(7.3[b])	(10.9[b])

Source: Central Statistical Organisation;

[a]Based on Index of Industrial Production. Base 1993-94 = 100

[b] Figures for April-Nov 2006-07.

Table 8.2 **Industrial production by use-based classification — growth rates (per cent)[a]**

Sector	(IIP weight)	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	Apr-Nov 2006-07	Apr-Nov 2007-08
Basic goods	35.5	2.6	4.9	5.4	5.5	6.7	10.3	9.4	8.4
Capital goods	9.3	-3.4	10.5	13.6	13.9	15.8	18.2	17.4	20.8
Intermediate goods	26.5	1.5	3.9	6.4	6.1	2.5	12.0	11.1	10.1
Consumer goods (of which)	28.7	6.0	7.1	7.1	11.7	12.0	10.1	9.9	5.2
Consumer durables	5.4	11.5	-6.3	11.6	14.4	15.3	9.2	12.4	-1.7
Consumer non-durables	23.3	4.1	12.0	5.8	10.8	11.0	10.4	8.9	7.8
All Index of Indl. Prodn. (IIP)	100	2.7	5.7	7.0	8.4	8.2	11.6	10.9	9.2

Source: Central Statistical Organisation.

[a] Index of Industrial Production, base: 1993-94 = 100.

Figure 8.1 Growth in capital goods (month-on-month)

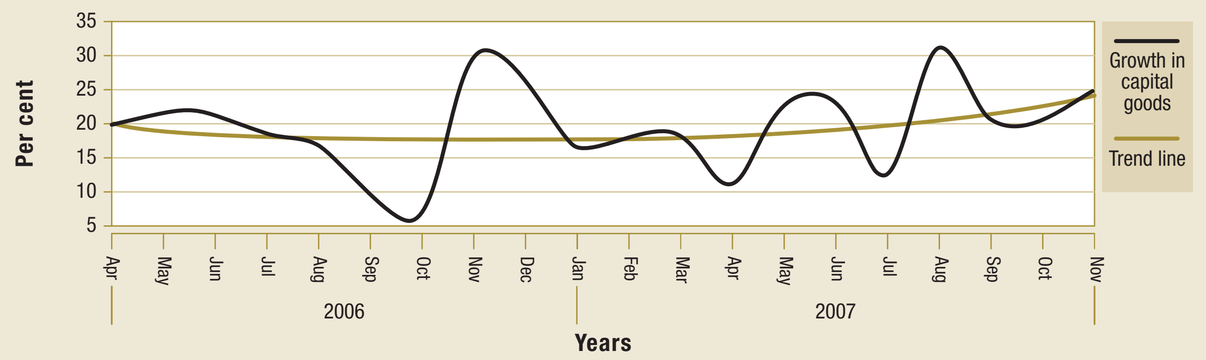
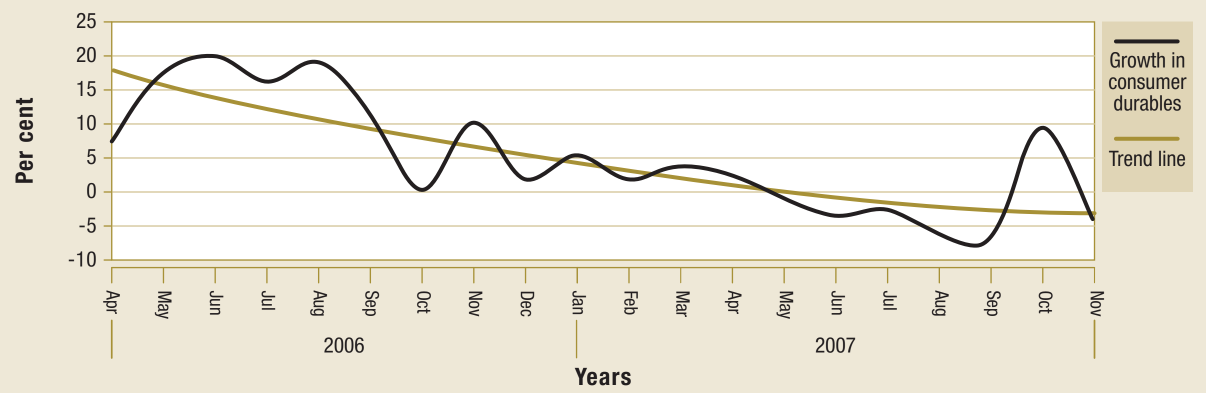


Figure 8.2 Growth in consumer durables (month-on-month)



contrasting patterns of growth in capital goods and consumer durables are presented in Figures 8.1 and 8.2.

8.3 Only one out of the 17 two-digit industrial groups — metal products & parts -- recorded a negative growth during April-November 2007. Of the remaining 16 industry groups, four have registered growth of less than 5 per cent, five have registered growth rates between 5 per cent and 10 per cent and four have registered growth rates between 10 per cent and 15 per cent. The remaining three industry groups, namely, “other manufacturing industries”, “basic metal and alloy industries” and “wood and wood products", "furniture and fixtures”, which together accounted for 12.8 per cent weight of the IIP, recorded growth rates in excess of 15 per cent.

8.4 Six out of the 17 two-digit industry groups, namely, food products, jute textiles, wood products, leather products, chemicals & chemical products and other manufacturing surpassed during April-November 2007 their respective growth rates in April-November 2006. During the current year, seven industry groups exceeded the overall rate of growth of manufacturing while the remaining grew at a lesser pace than the overall growth. Accordingly, substantial changes have occurred in the point contributions of different industry groups to the overall industrial growth from April-November 2006 to April-November 2007 (Table 8.3).

8.5 The contribution of a product group to the total manufacturing growth is determined by the value of the index achieved by the product group, its weight and its current rate of growth. Table 8.4 shows that industrial items totalling 24 per cent of the total weight in manufacturing accounted for 72 per cent growth of the sector during April-November 2007. Interestingly, while one segment of automobiles — commercial vehicles, jeeps and passenger cars — catalyzed manufacturing growth, the slump in the production of motorcycles dampened it. Items like insulated cables/wires, telecom cables, etc., wood products, sugar, computer systems and their peripherals and laboratory and scientific equipments drove growth with their outstanding production performance.

Table 8.3 Industrial production by broad industry groups - growth rates (per cent)[a]

Industrial group		IIP Weight	2005-06	2006-07	Apr-Nov		Apr-Nov (Point contribution)	
					2006-07	2007-08	2006-07	2007-08
Sl. No.	Manufacturing	79.4	9.1	12.5	11.8	9.8	91.21	89.87
	Rate of growth higher than for total manufacturing during April-November 2007							
1	Wood products	2.7	-5.7	29.1	2.4	72.6	0.20	6.62
2	Other manufacturing	2.6	25.2	7.8	10.8	19.1	3.09	6.43
3	Basic metals	7.5	15.8	22.9	20.5	15.6	14.41	14.05
4	Jute textiles	0.6	0.5	-15.8	2.3	13.3	0.06	0.38
5	Leather products	1.1	-4.8	0.6	-3.4	12.2	-0.25	0.94
6	Machinery, equipments	9.6	12.0	14.2	15.0	12.2	18.27	18.16
7	Rubber & petroleum	5.7	4.3	12.9	12.0	10.8	5.79	6.22
	Rate of growth lower than for total manufacturing during April-November 2007							
1	Beverages & tobacco	2.4	15.7	11.0	13.0	9.5	5.20	4.56
2	Chemicals	14.0	8.3	9.6	9.2	9.4	14.56	17.28
3	Non-met min product[b]	4.4	11.0	12.8	13.6	8.4	6.71	4.99
4	Food products	9.1	2.0	8.6	2.5	6.8	1.32	3.98
5	Cotton textiles	5.5	8.5	14.8	13.0	5.5	4.26	2.17
6	Textile products	2.5	16.3	11.5	12.2	4.9	3.34	1.58
7	Wool, silk, MM textiles	2.3	0.0	7.8	7.7	4.5	1.83	1.25
	Very low/negative rates of growth during April-November 2007							
1	Transport equipments	4	12.7	15.0	16.3	2.7	8.67	1.77
2	Paper products	2.7	-0.9	8.7	8.8	1.6	2.30	0.48
3	Metal products	2.8	-1.1	11.4	6.9	-4.4	1.36	-0.99

Source: Central Statistical Organsation.

[a]Based on the Index of Industrial Production. Base: 1993-94 = 100.

[b] Non-metallic mineral products.

Note: Growth rates are estimated over the corresponding period of the previous year.

PERFORMANCE OF MANUFACTURING SUBGROUPS

8.6 The following analysis highlights the growth performance of industrial groups at the two-digit level with emphasis on the high-weighted items that have driven growth or decline within each group. In addition, sectoral production data have been used to supplement the analysis.

Food products

8.7 As per the IIP data, food products grew at 6.8 per cent during April-November 2007 compared to 2.5 per cent during April-November 2006. This has been largely due to the phenomenal growth of 57.9 per cent in the production of sugar, which has the highest weight in the "food product" group. Among other high-weight items, production of milk powder declined about 10 per cent, while wheat flour/maida showed an indifferent growth of 1.3 per cent. Vegetable oils in general witnessed a visible decline in production during April-November 2007. Vegetable oils mostly experienced high levels of inflation during 2007. While the production of tea and biscuits declined slightly, chocolates and sugar confectionaries grew by 7.8 per cent during the period.

Beverages, tobacco & related products

8.8 The IIP data indicate that the beverages and tobacco group recorded growth in excess of 10 per cent during the last three years from 2004-05 to 2006-07 and their growth of 9.5 per cent during April-November 2007 came on top of this strong base. Among beverages, the intoxicant categories including beer, Indian-made foreign liquor and country liquor grew in the range of 8 to 11 per cent during April-November 2007. Rectified spirit grew at 21.1 per cent and soft drinks and soda at 4 per cent during the period. The production of cigarettes grew by 4.7 per cent during the period.

Table 8.4 Drivers of manufacturing growth during April-November 2007

Industrial items	IIP weight adjusted to manufacturing =100	Growth (%) April-Nov. 2007	Contribution to manufacturing growth (%)
Drivers of manufacturing growth during April-November 2007			
Iron & steel group	5.92	16.60	10.02
Insulated cables/wires, telecom cables, etc	0.83	157.20	8.60
Wood products	3.40	72.60	7.36
Filament yarn, polyester/viscose staple fibre, etc	3.89	12.40	6.22
Hair oil	0.32	15.10	5.96
Sugar	2.83	57.80	4.80
Syringes	0.51	23.40	4.12
Laminates, PVC pipes & tubes, etc	2.32	22.10	3.80
Computer systems & peripherals	0.50	36.50	3.50
Rectified spirit, beer, Indian-made foreign liquor	1.16	11.30	3.48
Laboratory & scientific equipments	0.55	43.10	3.24
Adhesives, gelatine	0.21	22.30	2.91
Protection systems/switch board/switch gear, etc	0.70	8.90	2.85
CR sheets, HR sheets and pipes & tubes	0.43	26.10	2.51
Commercial vehicles, jeeps, passenger cars	0.75	13.90	2.46
Dampeners of manufacturing growth during April-November 2007			
Cine film, X-rays, photo/roll film	0.35	-34.40	-1.20
Ball & roller bearings, gear boxes	0.67	-13.60	-1.20
Telephone instruments	0.78	-22.70	-2.06
Auto, motorcycles, scooters	1.32	-7.80	-2.82

Textiles

8.9 The IIP data show that during April-November 2007, cotton textiles grew by 5.5 per cent (cotton yarn by 5.7 per cent and cotton cloth by 4.2 per cent), wool, silk and man-made fibre textiles by 4.5 per cent, jute textiles by 13.3 per cent and textile products by 4.9 per cent, compared to the corresponding period in 2006 (Table 8.3).

8.10 Overall, the production of textile fabrics increased by 7.7 per cent during 2006-07 and then recorded a slower growth of 3.4 per cent up to December 2007 on year-on-year basis (Table 8.5).

8.11 During 2006-07, textile exports recorded an increase of 6.9 per cent over 2005-06. During April-October 2007, textile exports increased marginally by 1.49 per cent on year-on-year basis

Table 8.5 Production of fabrics (million square metres)

Sector	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08(P) (April-Dec.)
Mills	1,496 (-3.2)	1,434 (-4.1)	1,526 (6.4)	1,656 (8.5)	1,746 (5.4)	1,308 (-1.3)
Powerlooms (incl.hosiery)	33,835 (4.9)	34,794 (2.8)	37,437 (7.6)	41,044 (9.6)	44,383 (8.1)	34,142 (3.0)
Handlooms	5,980 (-21.2)	5,493 (-8.1)	5,722 (4.2)	6,108 (6.7)	6,536 (7.0)	5,210 (7.5)
Others	662 (2.8)	662 (0.0)	693 (4.7)	769 (11.0)	724 (-5.9)	543 (0.0)
Total	**41,973 (-0.1)**	**42,383 (1.0)**	**45,378 (7.1)**	**49,577 (9.3)**	**53,389 (7.7)**	**41,203 (3.4)**

Source: Monthly Report O/o Textile Commissioner, Mumbai.

P = Provisional

Table 8.6 Export of textiles (US$ million)

Item	2004-05	2005-06	2006-07 (P)	April- October 2006	April- October 2007 (P)	Growth April-Oct. '07(%)
Ready-made garments	6,024.5	7,986.4	8,075.6	4643.6	4413.9	-4.95
Cotton textiles	3,544.2	4600.8	5,485.0	2817.0	2816.3	-0.03
Wool & woolen textiles	417.1	455.9	445.5	271.3	377.5	39.14
Man-made textiles	2,050.7	2,039.6	2,361.2	1328.5	1689.9	27.20
Silk	594.6	693.3	689.6	395.4	384.8	-2.68
Handicrafts	1,013.9	1,314.5	1,259.2	803.8	719.2	-10.52
Coir & coir manufactures	105.6	133.4	156.4	80.5	92.2	14.62
Jute goods	276.3	296.3	257.5	176.4	179.0	1.48
Grand Total	**14,026.7**	**17,520.1**	**18,729.9**	**10,516.5**	**10,672.8**	**1.49**

Source: DGCIS, Kolkata **P= provisional**

(Table 8.6). Though the textile sector seemed to have gathered momentum consequent to the termination of the quota regime in December 2004, yet the export performance of the Indian textiles continues to lag substantially behind that of China in the post-quota era in terms of rate of growth of exports and share in world textile exports. Despite steady growth in production, the textile industry has been plagued by factors like high transaction and power costs, technological obsolescence and labour issues.

8.12 Figure 8.3, based on the IIP data, suggests that the production of cotton textiles may have been affected considerably by the recent appreciation of rupee against US dollar. Textile products may also have been affected to a lesser extent (Figure 8.4).

Figure 8.3 Growth in cotton textiles (month-on-month)

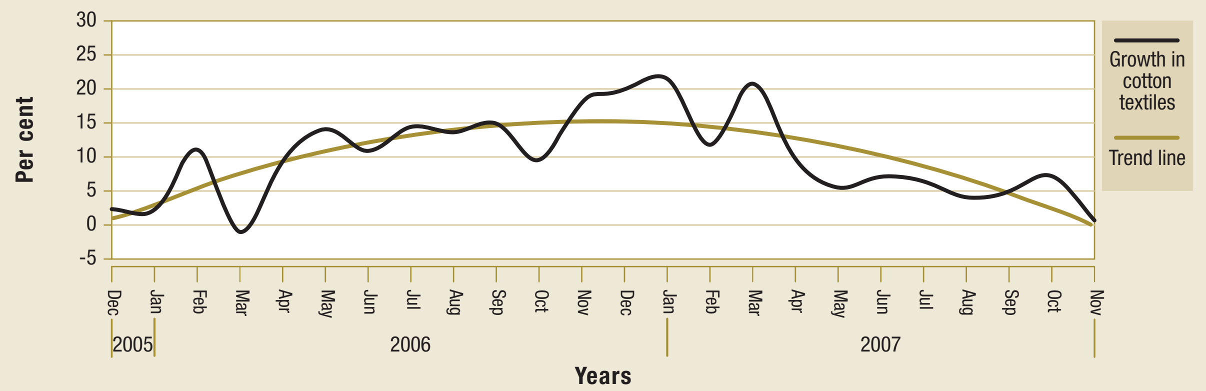
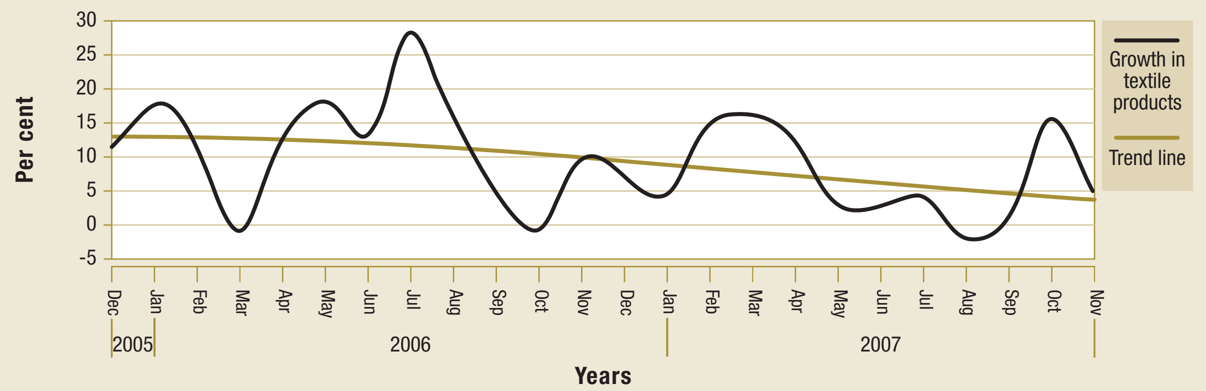


Figure 8.4 Growth in textile products (month-on-month)



8.13 Two flagship schemes of the Ministry of Textiles, namely, the Technology Upgradation Fund Scheme (TUFS), launched in 1999, and the Scheme for Integrated Textile Parks (SITP), launched in 2005, have been approved for continuation in the Eleventh Five Year Plan. Under TUFS, loans worth Rs. 27,449 crore were disbursed to 10,216 applicants up to March 2007. Under SITP, 30 integrated textile parks of international standards, covering weaving, knitting, processing and garmenting sectors with project proposals worth Rs. 2,893.42 crore (of which assistance from the Government is Rs. 1,054.76 crore) have been sanctioned. These projects are likely to be completed by March 2008.

8.14 The fiscal duty structure has been generally rationalized to achieve growth and maximum value addition within the country. Except for mandatory excise duty on man-made filament yarns and man-made staple fibres, the whole value addition chain has been given an option of excise exemption. For those opting to pay the duty and thereby avail of duty credit, the applicable rate of excise duty is 4 per cent for cotton textile items (i.e. yarns, fabrics, garments and made-ups) and 8 per cent for all other textile goods. The Government has de-reserved hosiery and knitwear from the small-scale industries sector.

8.15 To tide over the difficulties arising out of the steep upsurge in rupee value, the Government announced a set of measures in July 2007 to provide relief to exporters by way of accelerated reimbursement of dues, reduction in the interest rate on pre-shipment and post-shipment credit and revision in drawback rates and Duty Entitlement Pass Book (DEPB) rates. In addition, the Government also notified refund of service tax to exporters for use of services not in the nature of “input services”. A further set of measures was announced in October 2007 extending service tax relief for more services and extending the period of interest subvention on pre-shipment and post-shipment credit for more sectors.

8.16 Besides, in November 2007, the Government announced another package which reduced basic customs duty on certain items relating to the textiles sector and extended refund of service tax paid by exporters on taxable services linked to exports. A support package for providing relief to export sectors, like textiles, which have low import intensity, was also announced with additional subvention of 2 per cent in pre-shipment and post-shipment credit to textiles including ready-made garments and carpets but excluding man-made fibre.

Wood and wood products

8.17 Wood products, represented by particle boards and commercial plywood in the Index of Industrial Production, have had the highest rates of growth among all industrial groups during April-November 2007. Growth has been noteworthy for both the items; the monthly growth profile has been particularly consistent and impressive for particle boards.

Paper and paper products

8.18 Paper and paper products have been subject to wide annual fluctuations in growth. After growing at 15.6 per cent and 10.5 per cent, respectively, during 2003-04 and 2004-05, their growth came down to -0.9 per cent during 2005-06. The rate of growth picked up to 8.7 per cent during 2006-07, but dropped to 1.6 per cent during April-November 2007. As per the IIP data, most items in this product group including machine-made pulp, paper and paper boards and bleached newsprint, showed indifferent growth/decline during April-November 2007.

8.19 The Eleventh Five Year Plan document has observed that despite the fact that India is self-sufficient in most forms of paper, the industry is affected by difficulties like high production cost, problems related to handling pollution, less than acceptable quality and shortage of raw materials, forcing their increased imports.

Leather and leather products

8.20 Leather products, which contribute significantly to employment generation and export earnings, registered an impressive 12.2 per cent growth during April-November 2007. The Western type leather footwear grew at 21.1 per cent, while the Indian type leather footwear and finished leather had visibly lower growth during April-November 2007, as per the IIP production data. The (un-deflated) value of production of leather garments grew close to 30 per cent during the period, while the production of shoe uppers grew at 12.4 per cent.

8.21 The Inter-Ministerial Group constituted to evolve a comprehensive strategy for the development of the sector assessed that India has the potential to step up its leather exports from US$ 2.7 billion in 2006-07 to US$ 7 billion in 2011-12, with footwear accounting for the largest growth (Planning Commission). At the same time, the Eleventh Five Year Plan document has identified inadequate raw material base, low capacities and outmoded technologies of tanneries, constraints faced by small units in complying with rigorous environmental standards, shortage of skilled and semi-skilled workforce, inability of the industry to meet international requirements of quantity and variety and inadequate transport infrastructure as challenges to be overcome by the industry.

Chemical industry

8.22 The chemical industry, which includes basic chemicals and its products, petrochemicals, fertilizers, paints and varnishes, gases, soaps, perfumes and toiletries, and pharmaceuticals, is one of the most diversified of all industrial sectors covering more than 70,000 commercial products.

8.23 The fertilizer industry has seen a slowdown during April-November 2007. The index of production of nitrogenous fertilizers and phosphatic fertilizers declined by 4.4 per cent and 11.5 per cent during the period from their levels during April-November 2006. The Eleventh Five Year Plan document notes that the productive capacity of the fertilizer industry remained stagnant during the Tenth Five Year Plan on account of the absence of fresh investment and that this, along with growing fertilizer consumption, has led to increasing supply-demand imbalances. The challenges faced by the industry include addressing the issues of insufficient domestic availability of raw materials like rock phosphates, inadequate port and transport infrastructure to handle large volume of imports and bulk movement of fertilizers and difficulties in converting non-natural gas-based units into natural gas units. The most important factor is the distorted incentive structure inherent in the system of fertilizer and related subsidies, which has been analyzed by a number of commissions over the decades.

8.24 As per the Index of Industrial Production, the "basic chemicals and chemical products" group grew by 9.4 per cent during April-November 2007. The heavy-weight drivers of growth during the period include items like organic pigments, adhesives, hair oil, vitamin C, filament yarn, polyester fibre and viscose staple fibre, while items like nitrogenous fertilizers, phosphatic fertilizers, ampicillin and photo films acted as dampeners.

8.25 Among the major chemicals, while the rate of growth of inorganic chemicals accelerated during 2006-07, the growth of organic chemicals and alkali chemicals tapered off (Table 8.7).

8.26 Petrochemicals mainly comprise synthetic fibres, polymers, elastomers, synthetic detergent intermediates and performance plastics. The average annual rate of growth of production of polymers and synthetic fibres that constitute the major part of production of petrochemicals has been considerably higher during 2006-07 than during the five-year block of 2002-03 to 2006-07 (Table 8.8). The production of polymers accounted for almost 63 per cent of the total production of major petrochemicals during 2006-07. While the domestic capacity of polymers of 5.2 million tonnes

Table 8.7 Production of major chemicals (production in 000' MT, growth in per cent)

Sector	Production					Annual growth	
	2002-03	2003-04	2004-05	2005-06	2006-07	2002-03 to 2006-07[a]	2006-07
Alkali chemicals	4,792	5,070	5,272	5,475	5,269	4.0	-3.8
Inorganic chemicals	404	441	508	544	602	10.0	10.7
Organic chemicals	1,353	1,474	1,506	1,545	1545	5.8	0.0
Pesticides (Tech.)	70	85	94	82	85	0.7	3.7
Dyes & dyestuffs	26	26	28	30	33	5.4	10.0

Source: Ministry of Chemicals & Fertilizers.

[a] Compound annual growth rate.

Table 8.8 Production of major petrochemicals (production in 000' MT, growth in per cent)

Subgroup	Production					Annual growth	
	2002-03	2003-04	2004-05	2005-06	2006-07	2002-03 to 2006-07[a]	2006-07
Synthetic fibers	1,755	1,868	1,875	1,906	2,250	6.2	18.0
Polymers	4,175	4,499	4,776	4,768	5,183	5.5	8.7
Elastomers	82	87	97	110	101	5.1	-8.2
Synth. detergent intermediates	447	453	488	556	556	5.5	0.0
Performance plastics	95	99	113	127	132	8.0	3.9

Source: Ministry of Chemicals & Fertilizers.
[a] Compound annual growth rate.

as on March 31, 2007 was utilized fully, the capacity of synthetic fibres was utilized only to the tune of 69 per cent.

8.27 India remained a net importer of chemicals till the end of the 1990s. However, there was a turnaround during the post-2000 period. In 2002-03, the exports under chemical industry exceeded the corresponding imports by Rs. 7,346 crore which further increased to Rs. 8,365 crore in 2006-07 (Table 8.9). The share of chemical exports to the total exports stood at 13.2 per cent in 2006-07, while the share of imports to total imports was 8 per cent. Suboptimal size of plants, high input cost, infrastructural deficiencies, stringent/inflexible labour laws and low R&D expenditure have been identified in the Eleventh Five Year Plan document as some of the problems faced by the chemical industry.

8.28 The value of pharmaceutical output grew more than tenfold from Rs. 5,000 crore in 1990 to over 65,000 crore in 2006-07. India is now recognized as one of the leading global players in pharmaceuticals. Europe accounts for the highest share of Indian pharma exports followed by North America and Asia. An increasing number of Indian pharmaceutical companies have been receiving international regulatory approvals for their plants. The policy initiatives taken by the Government of late have led to quantitative and qualitative improvements in the R&D activities of the industry. The National Pharmaceutical Policy, aimed at ensuring availability of lifesaving drugs at reasonable prices, is being finalized. Taking stock of the imperative requirement for skilled manpower, the Government has decided to set up six new National Institutes of Pharmaceutical Education and Research (NIPERs) in different regions of the

Table 8.9 Chemical industry - Exports and imports(Rs. crore; Growth in per cent)

Items/Years	2002-03	2003-04	2004-05	2005-06	2006-07	Compound annual growth 2002-03 to 2006-07
Exports						
(A) Chemicals	17,397	20,679	25,574	33,462	39,352	24.0
(B) Petrochemicals	11,186	13,444	17,492	17,268	21,801	21.0
(C) Drugs/pharmaceuticals	6,779	7,445	9,263	10,821	14,380	23.4
Chemical industry (A+B+C)	35,362	41,568	52,329	61,551	75,532	22.9
Imports						
(A) Chemicals	20,190	25,258	32,838	40,492	47,914	21.5
(B) Petrochemicals	6,674	7,865	10,018	14,141	16,339	24.8
(C) Drugs/pharmaceuticals	1,152	1,150	1,303	1,945	2,914	29.7
Chemical industry (A+B+C)	28,016	34,273	44,159	56,578	67,167	22.6

Source: Ministry of Chemicals & Fertilizers.

country. As a new initiative in the pharmaceutical sector, the First Pharmaceutical Census of India (FPCI) is proposed to be launched during 2007-08 to obtain a robust database for the sector.

Rubber, plastic & petroleum products

8.29 As per the IIP production data, the growth in different categories of rubber tyres has not been impressive during April-November 2007. This could perhaps be attributed to the indifferent performance of automobile production, reflected in the IIP data during the period. While the production of rubber footwear grew by 4.7 per cent, sheets (PVC/rubber) grew by 18.8 per cent. PVC pipes and tubes, which have the highest weight in the product group, grew at 27 per cent during April-November 2007.

Oil & gas

8.30 Crude oil production during April-November 2007 was 22.69 million tonnes (MT) as against 22.56 MT during the corresponding period in the previous year, showing a marginal increase of 0.60 per cent. (Table 8.10) Correspondingly, natural gas production at 21.35 billion cubic metre (BCM) during April-November 2007 showed an increase of 2 per cent. The domestic refining capacity was 148.97 million tonnes per annum (MTPA) as on April 1, 2007. The refinery production during April-November 2007 at 103.06 MT showed an increase of 8.3 per cent compared to April-November 2006.

8.31 Since operationalizing the New Exploration Licensing Policy (NELP) in 1999, 46 oil and gas discoveries have been made by private/joint venture (JV) companies in 13 blocks, which have added more than 600 MT of oil equivalent hydrocarbon reserves. As on April 1, 2007, the investment made by the Indian and foreign companies was US$ 3,887 million, out of which 30 per cent was by the national oil companies, 61.1 per cent by the Indian private companies and the remaining 8.9 per cent

Table 8.10 Petroleum industry production

Item	Unit	2004-05	2005-06	2006-07[a]	2007-08[b]
Reserves[c] (Balance recoverable)					
(i) Crude oil	MT	739	786	756	N.A.
(ii) Natural gas	BCM	923	1101	1090	NA
Production					
(i) Crude oil	MT	33.98	32.19	33.99	22.69
(ii) Petroleum products[d]	"	120.82	121.94	137.35	84.41[f]
Consumption					
(i) Crude oil[e]	"	127.42	130.11	146.55	103.06
(ii) Petroleum products	"	111.63	113.21	119.55	66.52[f]
Refinery: Installed capacity	"	127.37	129.91	136.04	99.31[g]
Refinery production					
(i) Public sector	"	93.11	96.95	108.17	74.56
(ii) Private sector	"	34.31	33.16	38.38	28.50
Total (i & ii)		**127.42**	**130.11**	**146.55**	**103.06**
Natural gas					
(i) Gross production	BCM	31.763	32.202	31.747	21.35
(ii) Utilization	"	30.775	31.325	30.791	20.79
Exploratory drilling					
(i) Wells	Number	117	114	96	NA
(ii) Metreage	000'	329	342	263	NA
Wells & metreage drilled					
(i) Wells	Number	333	301	297	NA
(ii) Metreage	000'	839	801	742	NA

Source: Ministry of Petroleum & Natural Gas.

[a] Provisional.
[b] = Up to November, 2007.
[c] = As on April 1 of the initial year.
[d] = Includes LPG production from natural gas.
[e] = Refinery crude throughput.
[f] = Up to Oct. 2007.
[g] = Prorated figure.
N A = Not Available.
MT = million tonne.
RBF= Refinery Boiler Fuels.
BCM = billion cubic metre.

Table 8.11 Under-recoveries by oil marketing companies

(Rs. crore)

Under-recovery	2003-04	2004-05	2005-06 (P)	2006-07 (P)	April-Sept 07(P)
PDS kerosene and domestic LPG (+)	9,274	17,842	24,630	28,584	13,814
Petrol and diesel	-	2304	15370	20803	12,549
Total	**9,274**	**20,146**	**40,000**	**49,387**	**26,363**

Source: Ministry of Petroleum & Natural Gas.
(+): On gross basis, i.e. before sharing of losses by upstream oil companies;
(P): Provisional

by foreign companies. At present, after concluding six rounds of NELP, 162 production sharing contracts have been signed and area under exploration has increased four times, which covers 44 per cent of Indian sedimentary basins.

8.32 The international price of crude oil and petroleum products has increased phenomenally in recent months. The crude oil price of the Indian basket touched an all-time high of US$ 92.13 per barrel on November 26, 2007. This has a significant impact on the oil marketing companies (OMC) and the Indian economy as India imports about 72 per cent of the crude oil requirement. As done earlier, the Government has tried to equitably distribute the burden of oil price hike among the various stakeholders, namely upstream companies, oil marketing companies, Government and consumers. The Government has decided to issue oil bonds to the tune of 42.7 per cent of the total estimated under-recoveries and make the upstream oil companies bear approximately one-third of the under-recoveries.

8.33 The Petroleum & Natural Gas Regulatory Board (PNGRB), set up under the provisions of PNGRB Act, 2006, is now operational. The initiatives taken to contain adulteration and diversion of PDS kerosene include automation of retail outlets, solutions based on information technology and third party certification of retail outlets selling over 100 kilolitre (KL) per month. Over 53 per cent of the work on fully automating retail outlets selling more than 200 KL per month has been completed. About 40 per cent of the work on adoption of Global Positioning System (GPS) in 26,382 tank trucks has been completed. To give a firm legal footing for the new marker system for detecting adulteration of kerosene in diesel and petrol, launched in October 2006, various control orders governing the sale of kerosene have been amended. Oil marketing companies in the private sector have also been asked to introduce the scheme along the lines of the public sector companies. The oil marketing companies are considering the sale of non-PDS kerosene in one litre bottles. The plant for packaging has been commissioned in October 2007 and the sale is operative on pilot basis. The major policy initiatives taken during 2007-08 are given in Box 8.1.

Box 8.1 Major initiatives in the petroleum sector during 2007-08

- The Coal Bed Methane (CBM) Policy was approved in July 1997. Since then, 26 CBM blocks have been awarded for exploration and production of CBM gas. Six TCF reserves have already been established in 4 CBM blocks. First commercial production of CBM commenced from July 2007. The work relating to the launch of CBM IV has started.
- Seventh round of NELP has been launched on December 13, 2007, under which bids have been invited for 57 (29 onland, 9 shallow water and 19 deep water blocks) exploration blocks.
- Reserve replacement ratio is decided to be maintained at more than one during the Eleventh Five Year Plan period.
- The Assam Gas Cracker Project has been formally launched in April 2007.
- Initiatives have been taken to meet the demand for gas through intensification in domestic exploration and production activities, LNG import, CBM, underground coal gasification, gas hydrates and transnational gas pipelines, etc.

Coal

8.34 Coal production during April-November 2007 was 309.51 MT as against 295.19 MT in the corresponding period last year, registering a growth of 4.85 per cent. The annual action plan target for production of 454.90 MT is likely to be achieved. During April-November 2007, the coking coal production was 20.69 million tonnes as against 20.48 MT in the corresponding period last year. The policy measures initiated during the current year to augment coal production are given in Box 8.2.

Non-Metallic Mineral Products

8.35 Non-metallic mineral products grew at the rate of 8.4 per cent during April-November 2007 compared to 13.6 per cent during April-November 2006. Among the items with considerable weight within the product group, glazed tiles/ceramic tiles grew by 8.5 per cent, bottles/bottle glassware by 10.2 per cent and graphite electrodes and anodes by 20 per cent, while the value of production of polished granite/stone chips declined by 4 per cent.

Cement

8.36 The cement industry recorded a growth of 7.72 per cent (provisional) during April-November 2007. The production increased from 99.99 MT during April-November 2006 to 107.71 MT during April-November 2007.

8.37 Expansion of cement capacity and production assumes great importance in view of the growing demand from the infrastructure sector. Cement capacity and production are targeted to grow by 11.5 per cent annually during the Eleventh Five Year Plan. Thus, capacity and production are likely to increase to 269 MT each at the end of the Eleventh Five Year Plan from 166 MT at the end of the Tenth Five Year Plan. However, the Eleventh Five Year Plan document observes that the achievement of targets is crucially dependent on factors like adequate availability of limestone, coal, power and facilities for transport of limestone. The small number of bulk cement terminals poses another challenge.

Basic metals (steel and iron)

8.38 Indian steel companies have marked their diversified presence in the global market, effected mainly through the establishment of the state-of-the-art plants, continuous modernization, and improved energy efficiency of plants. Additional capacities of nearly 6 MT have been commissioned for finished (carbon) steel in the current year.

Box 8.2 Coal: Policy developments during 2007-08

- During April-December 2007, 45 coal blocks with geological reserves of 11,384.49 MT were allocated to the Government and private companies.
- Guidelines have been framed for undertaking detailed exploration by allottees of unexplored coal blocks in public and private sectors.
- To encourage private investment in development of new technologies, a notification specifying coal gasification and liquefaction as end uses has been published in the Gazette of India on July 12, 2007.
- New Coal Distribution Policy has been notified on October 18, 2007
- The royalty rates on coal and lignite have been revised in July 2007 on the basis of a formula consisting of ad-valorem plus a fixed component.
- The Administrative Staff College of India, Hyderabad, appointed as a consultant for preparing the report on the appointment of a Coal Regulator, has submitted a draft report.
- A proposal to confer Nav Ratna status on Coal India Limited (CIL) has been submitted to the Department of Public Enterprises. An order has been issued to confer Mini Ratna Category-I status on six coal companies including CIL.
- To ensure the free play of market forces, a system of e-auction for sale of about 20 per cent of the total production has been introduced.
- For securing metallurgical coal supplies overseas by the PSUs, a proposal for formation of a Special Purpose Vehicle (SPV) has been approved. The CIL has committed to contribute Rs. 1,000 crore in the SPV as equity out of the total authorized capital of Rs. 3,500 crore.
- The Expert Committee on the Road Map for Coal Sector Reforms has submitted its report which is being examined by the Government.

8.39 The imports of carbon steel increased from about 1.5 MT in 2002-03 to 4.44 MT in 2006-07 on account of the supply-demand gap in the domestic market. The Eleventh Five Year Plan document points out that the problems faced by the industry include depleting iron ore resources, inadequate availability of coal, inadequate sintering and pelletization capacities and poor transport infrastructure for movement of raw materials (Table 8.12).

8.40 In conjunction with international trends, the domestic steel prices continued to be high during the first three quarters of 2007-08, despite some softening witnessed in the case of flat products. With a view to augment the supply of steel, the Government reduced the customs duty on seconds and defective steel from 20 per cent to 10 per cent and provided exemption from customs duty to all coking coal. The customs duty on alloys and stainless steel was reduced to 5 per cent in January 2007.

Machinery and equipments

8.41 The machinery sector (except the transport equipments), which grew at a robust rate of 12.2 per cent during April-November 2007, presents a mixed picture within the product group. Encouragingly, the index of production of industrial machinery grew at 27.9 per cent during the period. The other drivers of growth included boilers, turbines and computer system and its peripherals, whose indices of production grew by 36.6 per cent, 57.4 per cent and 36.5 per cent, respectively, during April-November 2007 compared to the corresponding period in 2006. While the production of insulated cables/wires of all kinds increased by more than 2.5 times, the production of telecommunication cables, telephone instruments, TV receivers, and power and distribution transformers declined during the period.

Electronics and computer technology

8.42 In 2006-07, the performance of the Information Technology Enabled Services–Business Process Outsourcing (ITES-BPO) industry was marked by double-digit revenue growth, steady expansion into newer service lines and increased geographic penetration and an unprecedented rise in investments by multinational corporations (MNCs). Total export revenues of IT-ITES industry have grown from US$ 23.6 billion in 2005-06 to US$ 31.3 billion in 2006-07, a growth of 32.6 per cent.

8.43 A total of 90 Indian IT companies were certified at SEI CMM Level 5 by December 2006. Majority of the Fortune 500 and Global 2000 corporations are sourcing IT-ITES from India. Over the last two-three years, a number of reputed companies in electronics/IT/telecom hardware manufacturing like Nokia, Motorola, Foxconn, Flextronics, Aspocomp, Samsung, LG, Elcoteq, Ericsson, Alcatel, Tessolve and DELL have either

Table 8.12 Production, consumption, export and import of steel and pig iron (million tonnes)

Item	2004-05	2005-06	2006-07	April-December[a]	
				2006-07	2007-08
Production					
Finished carbon steel	44.54 (9)	48.9 (10)	55.15 (13)	39.29	41.7 (6.1)
Pig iron	3.23 (-14)	4.69 (45)	4.99 (6)	3.67	3.96 (7.9)
Exports					
Finished carbon steel	4.38 (-10)	4.48 (2)	4.89 (9.3)	3.53	3.67 (4)
Pig iron	0.39 (-25)	0.44 (13)	0.71 (61)	0.49	0.53 (8.2)
Imports					
Finished carbon steel	2.11 (37)	3.85 (82)	4.44 (15)	2.94	4.7 (60)
Pig iron	0.08 (300)	0.03 (-63)	0.03 (0)	0	0.01
Consumption					
Finished carbon steel	34.39 (10)	39.18 (14)	44.33 (13)	31.48	35.51 (12.8)
Pig iron	2.79 (-14)	4.14 (48)	4.34 (4.8)	3.16	3.42 (8.2)

Source: JPC.
[a] provisional estimates.
Note: Figures in parenthesis indicate variation over previous year.

Table 8.13 Growth of production and exports in electronics industry

	Items	2002-03	2003-04	2004-05	2005-06	2006-07[a]
	Electronics production (Rs. crore)					
1.	Consumer electronics	13,800	15,200	16,800	18,000	20,000
2.	Industrial electronics	5,550	6,100	8,300	8,800	10,400
3.	Computers	4,250	6,800	8,800	10,800	12,800
4.	Comm. & broadcasting equipment	4,800	5,350	4,800	7,000	9,500
5.	Strategic electronics	2,500	2,750	3,000	3,200	4,500
6.	Components	6,600	7,600	8,800	8,800	8,800
	Sub-Total	37,500	43,800	50,500	56,600	66,000
7.	Software for exports	46,100	58,240	80,180	1,04,100	1,41,800
8.	Domestic software	13,400	16,250	21,740	29,600	37,800
	Total	**97,000**	**1,18,290**	**1,52,420**	**1,90,300**	**2,45,600**
	Electronics exports (Rs. crore)					
1.	Electronics hardware	5,600	7,700	8,000	9,625	11,500
2.	Computer software	46,100	58,240	80,180	1,04,100	1,41,800
	Total	**51,700**	**65,940**	**88,180**	**1,13,725**	**1,53,300**

Source: Ministry of Communications & Information Technology.

[a] **Estimated**

set up their units or are in the process of investing in the country. India is rapidly becoming an R&D hub. All the top 10 global fabless design companies have operations in India and 17 of the top 25

Box 8.3 Policy developments and new initiatives in Information Technology

- The Special Incentive Package Scheme (SIPS) to encourage investments for setting up semiconductor fabrication and other micro- and nano-technology manufacturing industries was announced in March 2007. The incentives admissible would be 20 per cent of the capital expenditure during the first 10 years for units located in Special Economic Zones (SEZs) and 25 per cent for units located outside SEZs.
- A Task Force has been constituted to promote the growth of electronics IT hardware manufacturing industry.
- The Department of Information Technology has unveiled various components of the National e-Governance Plan (NeGP) covering 27 Mission Mode Projects (MMP) and eight support components to be implemented at Central, State and Local Government levels, at an estimated cost of Rs. 23,000 crore over the next five years. The Government has approved the approach, strategy, key components and implementation framework for NeGP with the vision: "Make all Government services accessible to the common man in his locality through common service delivery outlets and ensure efficiency, transparency and reliability of such services at affordable costs to realize the basic needs of the common man."
- The Government has approved a scheme for facilitating establishment of 1 lakh broadband Internet-enabled Common Service Centres in the rural areas in the public-private partnership mode.
- The Government has approved a scheme for establishing the State Wide Area Networks (SWANs) across the country in 29 States/6 UTs with a total outlay of Rs. 3,334 crore with Central assistance component of Rs. 2,005 crore over a period of five years. The scheme envisages to provide Central assistance to States/UTs for establishing SWANs for States/UTs headquarters up to the block level with a minimum bandwidth capacity of 2 Mbps.
- The Department of Information Technology is setting up Nano Electronic Centres at the Indian Institute of Technology, Mumbai and the Indian Institute of Science, Bangalore. with an outlay of about Rs. 100 crore to carry out R&D activities in nano-electronics devices and materials.
- The software tools and fonts for 10 Indian languages, namely Hindi, Tamil, Telugu, Assamese, Kannada, Malayalam, Marathi, Oriya, Punjabi and Urdu, have been released in the public domain.
- The Information Technology Amendment Bill, introduced in the Parliament in December 2006, was referred to the Parliament Standing Committee which has presented its report to both Houses of Parliament.

Table 8.14 Automobile production (in thousands)

Category	2000-01	2003-04	2004-05	2005-06	2006-07	2007-08 April-Nov
Passenger cars	513	842	951	1,046	1,323	912
Utility vehicles	128	146	249	263	222	156
Total CVs	157	275	350	391	520	339
Total Two-wheelers	3,759	5,625	6,527	7,609	8,444	5,398
Three-wheelers	203	341	374	434	556	340
Grand Total	4,760	7,229	8,451	9,743	11,065	7,145
Growth in per cent	**-2.00**	**15.12**	**16.90**	**15.29**	**13.57**	**-3.55**

Source: Department of Heavy Industry.

semiconductor companies worldwide have a strong presence in India. The total number of professionals employed in the IT-ITES sector grew from an estimated 12,87,000 in 2005-06 to 16,21,000 in 2006-07. In addition, IT-ITES is estimated to have helped create an additional 60 lakh job opportunities through indirect and induced employment in telecom, power, construction, facility management, IT transportation, catering and other services. Some of the policy initiatives recently taken by the Government are summarized in Box 8.3.

Transport equipments & parts

8.44 Production of automotive industry, which provides extensive forward and backward linkages with other key segments of the economy, grew at an impressive rate during the Tenth Five Year Plan (Table 8.14). However, as the IIP data suggest, their production growth has been negative during April-November 2007, chiefly because of a 10.6 per cent decline in the production of motorcycles and 6 per cent decline in the production of auto rickshaws from their levels achieved during the corresponding period in the previous year. At the same time, the production of passenger cars grew by 15.6 per cent and scooters and mopeds by 18.9 per cent.

8.45 Automobile exports crossed the US$ 1 billion mark in 2003-04 and further increased to US$ 2.76 billion in 2006-07. The industry exported over 15 per cent passenger cars produced in 2006-07, almost 10 per cent of the commercial vehicles, 26 per cent of the three-wheelers and 7 per cent of the two-wheelers (Table 8.15).

8.46 The turnover of the fast growing auto component industry, comprising around 500 firms in the organized sector and more than 10,000 firms in the small and unorganized sector, grew from US$ 3.1 billion to US$ 15 billion between 1997-98 and 2006-07. The international recognition received by the producers bears out the vastly improved quality of their products.

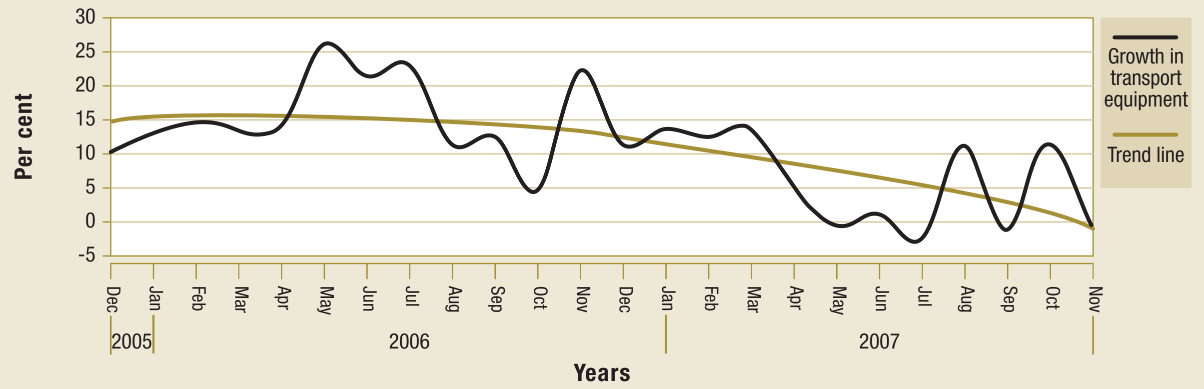
8.47 During the period 2003-06, the exports of auto component industry grew by a compound annual growth rate of 29.07 per cent to reach US$ 2.9 billion while imports grew by 31 per cent to reach US$ 3.33 billion. During 2006-07 the corresponding growth rates were 16 per cent and 34 per cent, respectively. India is a net importer of auto components. In the current liberalized duty

Table 8.15 Automobile exports (in thousands)

Category	2000-01	2003-04	2004-05	2005-06	2006-07	2007-08 April-Nov
Passenger cars	23	126	161	170	194	131
Utility vehicles	4	3	6	5	4	4
Total CVs	14	17	30	41	50	36
Total Two-wheelers	111	265	367	513	619	536
Three-wheelers	16	68	67	77	144	93
Grand Total	168	479	631	806	1,011	800
Growth in per cent	**20.24**	**55.98**	**31.73**	**27.73**	**25.43**	**17.39**

Source: Department of Heavy Industry.

Figure 8.5 Growth in transport equipments (month-on-month)



regime, the challenge faced by the industry is to innovate and upgrade continuously to remain competitive in the international market.

8.48 The initiatives taken by the Government in 2006-07 to boost the automobile sector included: reduction in the duty of raw materials to 5-7.5 per cent from 10 per cent; setting up of the National Automotive Testing and R&D Infrastructure Project (NATRIP) at a cost of Rs. 1,718 crore for enabling the industry to usher in global standards of vehicular safety, emission and performance; and finalization of the Automotive Mission Plan (AMP) 2006-16 for making India a preferred destination for design and manufacture of automobiles and automotive components.

8.49 The IIP data suggest that despite a visible decline in the production of automobiles during April-November 2007 (Figure 8.5), the total rate of growth for the "transport equipments & parts" group has remained positive by the impressive growth in activities like shipbuilding and repair, production of locomotives, and of broad gauge covered wagons.

Other manufacturing groups

8.50 The other manufacturing, which is one of the best performers in terms of growth, is composed of medical and surgical instruments, syringes, process control instruments, AC house service meters, laboratory and scientific instruments, alarm time pieces, wristwatches, writing instruments and pencils. Among them, growth was pushed mainly by a 43.1 per cent growth in laboratory and scientific instruments, strongly supported by medical & surgical equipments and syringes (23.4 per cent) and process control instruments (26.5 per cent). Items like AC house service meters, alarm time pieces, wristwatches, writing instruments and pencils which are placed in the group have shown a decline/negligible increase in production during April-November 2007.

Gems and jewellery

8.51 India has emerged as one of the key players in the gems and jewellery sector on account of its traditional strength in craftsmanship and its reasonable share in global business. Gems and jewellery (G&J) is one of India's niche sectors which accounted for 12 per cent of the country's merchandise exports in 2006-07. Besides, it is an important contributor to semi-skilled employment too. This sector consists of three segments, viz., diamonds; gold jewellery; and coloured gemstones and other items. The major markets for G&J exports are the United States, Hong Kong, UAE, Belgium, Israel, Japan, Thailand and the United Kingdom. The United States is the largest market accounting for about 30 per cent of exports from this sector.

8.52 In 2006-07, there was deceleration in the rate of growth of exports from the G&J sector. This deceleration was due to the reduction in the trading activities in diamonds from bonded warehouses. Besides, the United States terminated the duty-free treatment under the General Scheme of Preferences (GSP) for precious metals (other than silver) and articles of jewellery and parts from India from July 1, 2007, on the ground that this article was exported in quantities exceeding the applicable competitive need limitation in 2006. As a result, the basic import duty of 5.5 per cent is now applicable in the United States on the Indian precious metals and jewellery.

8.53 However, there has been a revival of exports of gems and jewellery in the first half of the current fiscal with a rate of growth in excess of 20 per cent. The revival was partly on account of the extensive policy support provided to the sector under the Foreign Trade Policy (2004-09). The steps including introduction of fiscal measures like abolition of import duty on cut and polished diamonds, reduction of import duty on un-worked corals and rough synthetic stones from 30 to 10 per cent and various trade facilitation steps have encouraged exports from the sector.

Central Public Sector Enterprises

8.54 There were 244 Central Public Sector Enterprises (CPSEs) under the administrative control of various Ministries/Departments as on March 31, 2007, with a cumulative investment of Rs. 4,21,089 crore. The largest investment is in the "industrial sector" comprising electricity, manufacturing, mining and construction sectors, which is about 62.58 per cent of the total financial investment. There were 16.14 lakh (excluding casual workers and contract labour) persons employed in 244 CPSEs; nearly one-fourth of the employed persons were in the managerial and supervisory cadres. The major highlights of the CPSEs during 2006-07 are given in Table 8.16.

Table 8.16 Performance of CPSEs during 2006-07

Parameter	2005-06	2006-07	Change (per cent)
Cumulative investment (end-March)[a]	4,03,706	4,21,089	4.3
Total turnover	8,37,295	9,64,410	15.2
Net Profit	69,536	81,550	17.3
Declared dividend	22,886	26,805	17.1
Market capitalization (on 31.3.2007)		6,53,924	
Net worth	3,97,275	4,52,995	14.0
Corporate tax	27,585	38,435	39.3
Interest paid	23,708	27,069	14.2
Foreign exchange earnings	45,954	65,620	42.8
Contribution to Central Exchequer	1,25,456	1,47,635	17.7

Source: Department of Public Enterprises.

[a] paid up capital + share application money pending allotment + long-term loans.

8.55 The growth in turnover of CPSEs in the manufacturing sector was 64.62 per cent, followed by services (18.91), mining (11.75), electricity (4.69) and agriculture (0.03) sectors. Out of the net profit of Rs. 81,550 crore earned during 2006-07, the profit of profit-making CPSEs (156) was Rs. 89,773 crore, the total loss of loss-making enterprises (59) stood at Rs. 8,223 crore.

8.56 As many as 44 CPSEs are listed on the stock exchanges of India. Market capitalization of all listed CPSEs as a percentage of market capitalization of BSE was 18.35 per cent as on March 31, 2007.

8.57 The Government has delegated enhanced financial and operational powers to the Navaratna, Miniratna and other profit-making public sector enterprises. Besides professionalizing the Board of Directors of CPSEs, the Government has issued guidelines on corporate governance. The Board for Reconstruction of Public Sector Enterprises (BRPSE) has been established to advise the Government on revival of sick and loss-making enterprises. The BRPSE has made recommendations in 47 cases including two for closure till October 31, 2007. The proposals for revival of 26 CPSEs and closure of two have been approved. The total assistance approved by the Government up to December 2007 in this regard is Rs. 8,285 crore including Rs. 1,955 crore cash assistance and Rs. 6,330 crore non-cash assistance.

Micro and Small Enterprises

8.58 The micro and small enterprises (MSEs) provide employment to an estimated 31.2 million persons in the rural and urban areas of the country. During 2003-07, the MSE sector registered continuous growth in the number of enterprises, production, employment and exports (Table 8.17). It is estimated that there are about 128.44 lakh MSEs in the country as on March 31, 2007, accounting for about 39 per cent of the gross value of output in the manufacturing sector.

8.59 Under the Micro, Small and Medium Enterprises Development (MSMED) Act, 2006, the definitions and coverage of the MSE sector were broadened significantly. Further, the Act also defined the medium enterprises for the first time. Informal estimates suggest the contribution of the MSME sector to be much higher than those based

Table 8.17 Performance of micro and small enterprises

Year	Number of units (in lakh)			Production (Rs. crore) (at 2001-02 prices)	Employment (in lakh)	Exports (Rs. crore)
	Registered	Un-registered	Total			
2002-03	16.03	93.46	109.49 (4.1)	3,06,771 (8.7)	263.68 (4.5)	86,013 (20.7)
2003-04	17.12	96.83	113.95 (4.1)	3,36,344 (9.6)	275.30 (4.4)	97,644 (13.5)
2004-05	18.24	100.35	118.59 (4.1)	3,72,938 (10.9)	287.55 (4.5)	1,24,417 (27.4)
2005-06	19.30	104.12	123.42 (4.1)	4,18,884 (12.3)	299.85 (4.3)	1,50,242 (20.8)
2006-07[a]	20.32	108.12	128.44 (4.1)	4,71,663 (12.6)	312.52 (4.2)	N.A.

Source: Office of the Development Commissioner (MSME)
[a] Estimates based on definitions prior to enactment of MSMED Act, 2006.
Note: Figures in parenthesis indicate percentage growth over previous year.

on the 3rd All-India Census. To capture the data for the MSME sector, the 4th Census of MSME sector is being launched.

8.60 Recently, major initiatives have been taken by the Government to revitalize the MSME sector. They include:

(i) Implementation of the Micro, Small and Medium Enterprises Development (MSMED) Act, 2006 (Box 8.4).

(ii) A "Package for Promotion of Micro and Small Enterprises" was announced in February 2007. This includes measures addressing concerns of credit, fiscal support, cluster-based development, infrastructure, technology, and marketing. Capacity building of MSME Associations and support to women entrepreneurs are the other important features of this package.

(iii) To make the Credit Guarantee Scheme more attractive, the following modifications have been made: (a) enhancing eligible loan limit from Rs. 25 lakh to Rs. 50 lakh;

Box 8.4 Implementation of the MSME Development Act, 2006

For implementation of the MSMED Act, 2006, notifications of Rules were to be issued by the Central and State Governments. The Central notifications are as follows:

- Principal notification in July 2006 that MSMED Act becomes operational from October 2, 2006.
- Notification in September 2006 for the Rules for National Board for Micro, Small and Medium Enterprises (NBMSMEs) to be constituted under the Act.
- Notification in September 2006 for the constitution of the Advisory Committee.
- Notification in September 2006 for classifying enterprises.
- Notifications in September & November 2006 declaring DICs in the States/UTs as "Authority" with which the entrepreneurs memorandum could be filed by the medium enterprises.
- Notification in September 2006 for the form of memorandum to be filed by the enterprises, procedure of its filing and other matters incidental thereto.
- Notification in October 2006 for exclusion of items while calculating the investment in plant and machinery;
- Notification in May 2007 for constitution of NBMSMEs.
- Notification in May 2007 for dividing the country into six regions; and, notification in June 2007 for the amendment of EM format.
- 28 States/UTs have notified the authority for filing of entrepreneurs memorandum, 17 States/UTs have notified rules for MSEFCs and 15 States/UTs have notified constitution of MSEFCs.

(b) raising the extent of guarantee cover from 75 per cent to 80 per cent for (1) micro enterprises for loans up to Rs. 5 lakh, (2) MSEs operated or owned by women and (3) all loans in the North-East Region; and (c) reducing one-time guarantee fee from 1.5 per cent to 0.75 per cent for all loans in the North-East Region.

(iv) The phased deletion of products from the list of items reserved for exclusive manufacture by micro and small enterprises is being continued. 125 items were de-reserved on March 13, 2007, reducing the number of items reserved for exclusive manufacture in micro and small enterprise sector to 114. Further, 79 items were dereserved through a notification dated February 5, 2008.

Tourism

8.61 Global tourism continued to move upward during 2006 with the number of international tourist arrivals worldwide reaching about 846 million (UNWTO estimates) and international tourism receipts scaling US$ 735 billion in the year. The aforesaid variables grew at 5.7 per cent and 8.4 per cent, respectively, compared to 2005.

8.62 The rate of growth of the tourism sector of India has been way above the world average in the last few years. 2006-07 is the fourth consecutive year of high growth in foreign tourist arrivals and foreign exchange earnings from tourism (Table 8.18).

Table 8.18

Foreign tourist arrivals and foreign exchange earnings from tourism

Year	Foreign tourist arrivals		Foreign exchange earnings[a]	
	Number in lakh	Growth rate	Million US$	Growth rate
1999-00	25.05	4.5	3,036	1.4
2000-01	26.99	7.7	3,497	15.2
2001-02	24.28	-10.0	3,137	-10.3
2002-03	24.54	1.1	3,312	5.6
2003-04	29.33	19.5	5,037	52.1
2004-05	36.03	22.8	6,666[b]	32.3
2005-06	41.00	13.8	7,853[b]	17.8
2006-07	46.33[d]	13.0	9,696[c]	23.5

Source: Ministry of Tourism.

[a] figures worked out using the new methodology.

[b] Revised Estimates.

[c] Advance Estimates.

[d] Provisional.

8.63 The prospects for growth of tourism in India are bright. The overall development of tourism infrastructure coupled with other efforts by the Government to promote tourism such as appropriately positioning India in the global tourism map through the “Incredible India” campaign, according greater focus in newly emerging markets such as China, Latin America and CIS countries, and participating in trade fairs and exhibitions will facilitate tourism growth.

Prices of manufactured products

8.64 From the construction of Wholesale Price Index (WPI) and the Index of Industrial Production (IIP), it is not possible to distinguish between input and output prices at the two-digit level classification of industrial groups. This renders it difficult to verify the correspondence between industrial input and output prices. It is observed that during April-November 2007, inflation of manufactured products, in general, has been slightly higher than their levels during the corresponding period in 2006, while the growth has been lower. At the disaggregated level, for instance, among food products, sugar recorded a phenomenal growth in production and recorded a negative point-to-point inflation of -16.4 per cent during April-November 2007. Likewise, the growth performance of edible oils has been generally poor, while their inflation has been 13.2 per cent. Updated figures of inflation in terms of absolute manufacturing price indices can be further perused from Table 4.5 (Chapter 4).

8.65 While the overall inflation could be influenced most directly by monetary factors, the rate of price change in specific segments like manufacturing (and product groups within) would be significantly affected by changing demand conditions and input prices. In this context, it is the movement in relative prices rather than absolute prices that becomes more relevant. The relative inflation of a manufacturing product group has been measured as the rate of growth in the ratio of the wholesale price index of that product group to the overall wholesale price index. As a rigorous treatment of relative manufacturing prices is beyond the scope of this section, a simple presentation of relative prices during 2005-07 is attempted in Table 8.19. While establishing correspondence between the WPI and the IIP, of the total of 17 two-digit level IIP groups, four groups pertaining to textiles are clubbed together. Similarly, basic metals and metal products are combined, while "other manufacturing" is omitted.

8.66 Table 8.19 shows that, on the whole, the relative manufacturing inflation that remained negative during 2005-06 and 2006-07 turned positive during April-November 2007. Of the 12 industrial product groups presented in Table 8.19, product groups other than food products, textiles and transport equipments, and paper and paper products contributed towards this change.

8.67 During 2005-06 to 2007-08, the rate of growth in relative prices remained negative for food products, textiles and transport equipments, while for beverages and tobacco products, wood and wood products and non-metallic mineral products, the same has been positive during the period. Among textile products, the growth performance has been sluggish, except for jute textiles; yet their inflation levels have been mild. In the face of a near-stagnation in export growth experienced during April-September 2007, mainly on account of appreciation of rupee, price adjustments may have been attempted by the textile industry to remain internationally competitive. The RBI study of corporates has revealed that among the textile corporates, net profit to sales ratio has declined during the first half of the current fiscal.

8.68 Among the six product groups exhibiting both increasing and declining relative prices in different years, the annual fluctuations were most pronounced in the case of leather and leather products.

Corporate profitability and investment

8.69 The profits earned by companies affect their retained earnings and saving rate, their cost of capital and consequently their investment. The data on corporate profitability, relevant to the industrial sector, presented here relate to a sample of non-government, non-financial public limited companies studied and analyzed by the Reserve Bank of India (RBI). Net corporate profits (net of taxes) have increased considerably for all industrial groups except food products and beverages and textiles during the first half of the current fiscal. Corporate profitability too has been visibly higher for most industrial groups in the first half of 2007-08 compared to that of 2006-07 (Table 8.20). Nonetheless, the study has observed that the rates of growth in sales and net profits are lower during

Table 8.19 Manufacturing relative price growth (per cent)

Product group	2005-06	2006-07	April-November 2006	April-November 2007(P)
Manufactured products	-1.29	-0.94	-1.35	0.55
Product groups with declining relative prices				
Food products	-3.19	-2.09	-2.24	-1.09
Textiles	-8.54	-3.10	-2.56	-3.85
Transport equipments	-0.76	-3.67	-3.23	-2.56
Product groups with increasing relative prices				
Beverages and tobacco	0.42	1.84	1.78	5.74
Wood & wood products	3.83	0.55	2.65	2.16
Non-met mineral products	3.24	7.01	7.40	4.67
Product groups with varying yearly patterns in relative prices				
Paper & paper products	-2.09	1.33	1.93	-2.08
Leather & leather products	2.60	-9.30	-10.48	1.68
Rubber & plastic products	-0.96	1.12	0.82	2.50
Chemicals & products	-0.81	-2.28	-1.83	0.50
Basic metals & products	2.88	1.32	-1.51	2.54
Machinery & machine tools	0.69	0.13	-0.58	3.73

P=Provisional

Table 8.20 Profits and profitability of corporates

Sector	Rate of growth in profit April-Sept. 2007-08		Net profits to sales ratio April-Sept.	
	Sales	Net profit	2006-07	2007-08
Computer and related activities	23.9	28.7	21.2	22.0
Cement and cement products	24.3	35.2	18.3	19.9
Mining and quarrying	24.6	38.3	12.8	14.2
Chemicals and chemical products	10.5	22.3	11.3	12.5
Petroleum refinery	10.4	31.9	10.0	12.0
Iron and steel	21.7	54.0	8.5	10.8
Fabricated metal products	15.9	19.5	10.3	10.6
Machinery and machine tools	25.0	21.6	9.4	9.2
Paper and paper products	11.6	26.8	7.3	8.3
Electrical machinery & apparatus	28.3	38.4	7.5	8.1
Motor vehicles, etc	8.1	-	8.5	7.9
Medical precision, etc,	37.9	33.4	5.4	5.2
Rubber and plastic products	14.3	128.8	2.3	4.6
Food products and beverages	23.4	-2.1	5.7	4.5
Textiles	12.9	-20.2	5.6	4.0
Jewellery and related articles	21.7	31.0	3.7	4.0

Source: Reserve Bank of India.

the first half of 2007-08, compared to those of the first half of 2006-07.

8.70 The table presents the industry groups in descending order of the ratio of net profits to sales during the first half of 2007-08. It shows that there is a strong industry-specific pattern to the behavior of corporate profits and profitability (Table 8.20).

8.71 Higher profits, backed by sound balance sheets, would suggest higher capacity to invest, which is reflected in the corporate investment plans for the medium term. The analysis of the inter-temporal investment plans of the private corporate sector done by the Reserve Bank of India (RBI), on the basis of the study of 1,054 companies which were sanctioned assistance by banks and other financial Institutions in 2006-07, brings out a bright picture. Analyzing the phasing of capital expenditure of the companies over years, the RBI study estimated that the capital expenditure envisaged for 2006-07 amounted to Rs. 1,55,038 crore, which shows an increase of 60.2 per cent over 2005-06. Further, it is estimated that the total cost of the projects of the private corporate sector which were sanctioned assistance in 2006-07 went up to Rs. 2,83,440 crore (against Rs. 1,31,299 crore in 2005-06). Out of this, about 34 per cent has been planned to be spent in 2007-08. Besides this, additional capital expenditure has been envisaged from external commercial borrowings and domestic equity issuances.

Foreign Direct Investment

8.72 During April-November 2007, Foreign Direct Investment (FDI) equity inflows stood at Rs. 45,098 crore (US$ 11.14 billion) against Rs. 33,030 crore (US$ 7.23 billion) during April-September 2006, signifying a growth of 36 per cent in terms of rupee and 54 per cent in terms of US dollar (Table 8.21).

8.73 From April 2000 to November 2007, Mauritius remained the predominant source country for FDI to India accounting for 44.24 per cent share of the cumulative total, followed by the United States (9.37 per cent), the United Kingdom (7.98 per cent) and the Netherlands (5.81 per cent).

Table 8.21 FDI: Cumulative equity flow

Period	Rs. crore	US$ million
August 1991 to March 2007	2,32,041	54,628
April 2007 to November 2007	45,098	11,141
August 1991 to November 2007	2,77,139	65,769
April 2000 to November 2007	2,16,534	49,070

Source: Department of Industrial Policy & Promotion.

Table 8.22 Sectors attracting highest FDI flows

(Rs. crore)

Sector	Amount of FDI Inflows				Cumulative inflows	Share of inflows (per cent)	
	2004-05 (April-March)	2005-06 (April-March)	2006-07 April-March)	2007-08 (April-Nov.)	(April 2000 to Nov. 2007)	April 2000 to Nov. 2007	April-Nov. 2007
Services sector [a]	1,986	2,399	21,047	9,121	38,228	19.86	20.22
Computer software & hardware	2,441	6,172	11,786	4,217	30,760	15.98	9.35
Telecommunications [b]	570	2,776	2,155	3,963	15,607	8.11	8.79
Construction [c]	696	667	4,424	3,593	9,989	5.19	7.97
Automobile industry	559	630	1,254	1,191	8,350	4.34	2.64
Power	241	386	713	206	5,958	3.09	0.46
Chemicals except fertilizers	909	1,979	930	733	5,956	3.09	1.63
Housing & real estate	0	171	2,121	5,161	7,573	3.93	11.44
Drugs & pharmaceuticals	1,343	760	970	353	4,633	2.41	0.78
Metallurgical industries	836	654	787	1,909	4,572	2.37	4.23

Source: Department of Industrial Policy & Promotion.

[a] **financial & non-financial services.**

[b] **radio paging, cellular mobile, basic telephone services.**

[c] **construction including roads & highways.**

During April-November 2007, the position of Mauritius remained still prominent (42.77 per cent). While the shares of the United States (5.45 per cent), the United Kingdom (2.19 per cent) and the Netherlands (4.51 per cent) were lower, those of Japan (5.72 per cent) and Singapore (8.73 per cent) were higher. In the sectoral distribution of FDI inflows, financial and non-financial services secured a growth of more than seven times during 2006-07, to secure first spot in cumulative inflows, displacing computer software and hardware. Along with services, the shares of sectors like telecommunications, construction and housing and real estate have buoyed during April-November 2007 (Table 8.22).

Table 8.23

Region-wise break-up of FDI received (April 2000 to November 2007)

Regional Office of the RBI	States covered	Share in FDI inflows (per cent)
Mumbai	Maharashtra, Dadra & Nagar Haveli, Daman & Diu	25.14
New Delhi	Delhi, parts of UP & Haryana	22.68
Bangalore	Karnataka	7.03
Chennai	Tamil Nadu & Puducherry	6.69
Hyderabad	Andhra Pradesh	4.12
Ahmadabad	Gujarat	2.84

Source: Department of Industrial Policy & Promotion.

8.74 Of the total FDI received, about 53.57 per cent came through the automatic route of the Reserve Bank of India, while 20.15 per cent came through the Government approval route and the rest in the form of acquisition of existing shares. Among the destinations of FDI inflows, Mumbai, New Delhi, Bangalore and Chennai maintained the first four positions in that order (Table 8.23).

8.75 During August 1991 to November 2007, India received 7,898 approvals for foreign technology transfer, of which 81 were obtained during 2006-07 and 52 during April-November 2007.

FDI Policy

8.76 As a result of the comprehensive review of the FDI policy, wide-ranging policy changes were notified in 2006, extending automatic routes, increasing equity caps, removing restrictions, simplifying procedures and extending the horizon of FDI to vistas like single brand product retailing and agriculture. Of late, several steps have been initiated to facilitate FDI inflows which, among other things, include: raising the equity cap in civil aviation; organizing Destination India events in association with CII and FICCI with a view to attract investments; activating the Foreign Investment Implementation Authority (FIIA) towards speedy resolution of investment-related problems; setting up of National Manufacturing Competitiveness Council (NMCC) to provide a continuing forum for policy dialogue to energize the growth of manufacturing; regular interactions with foreign investors through bilateral/regional/international meets and meetings with individual investors; and making the website of the Department of Industrial Policy & Promotion (www.dipp.nic.in) more user-friendly with online chat facility. About 4,500 investment-related queries have been replied during 2007-08.

Industrial credit

8.77 The overall industrial credit, which slackened in the first half of 2007-08, is now showing signs of recovery. During April-August 2007, the outstanding gross deployment of bank credit increased only by 2.8 per cent from end-March 2007, while the corresponding increase stood at 8.5 per cent during 2006. However, the gap between the rates of credit growth between April-November 2006 and April-November 2007 has substantially narrowed (Table 8.24).

8.78 Table 8.24 further shows that there is a strong sectoral pattern to the growth of industrial credit. Among sectors that experienced high rates of production growth during April-November 2007, credit growth also has been robust for jute textiles, leather and leather products, basic metals, and engineering goods. The slackening of the credit growth in mining and quarrying and wood products has occurred over a high base achieved by end-March 2007. Encouragingly, the outstanding credit to "transport equipments" group, which has witnessed a slowdown in production, has grown significantly from end-March 2007. Besides, the near-doubling of the rate of credit growth to infrastructure augurs well for many infrastructure-dependent industrial groups and for the economy as a whole.

Industrial relations

8.79 The continued decline in the number of strikes and lockouts indicates improved industrial relations. The number of strikes and lockouts,

Table 8.24 Industry-wise deployment of gross bank credit

Industry	Outstanding as on				Growth (per cent) from end-March	
	March 31, 2006	March 31, 2007	Nov 24, 2006	Nov 23, 2007	Nov 2006	Nov 2007
Food processing	30,946	39,999	33,117	42,966	7.0	7.4
Beverage & tobacco	4,002	4,774	3,868	4,813	-3.3	0.8
Cotton textiles	29,781	38,051	31,805	40,218	6.8	5.7
Jute textiles	1,053	967	1,456	1,085	38.3	12.2
Man-made textiles	3,062	4,178	3,490	3,864	14.0	-7.5
Other textiles	24,577	35,775	30,260	38,311	23.1	7.1
Leather & leather products	4,486	4,774	4,498	5,275	0.3	10.5
Wood and wood products	1,497	2,887	1,889	2,607	26.2	-9.7
Paper & paper products	9,148	11,588	10,342	12,262	13.1	5.8
Chemicals and chemical products	48,638	55,774	51,020	56,284	4.9	0.9
Rubber, plastic & their products	7,250	9,250	7,527	9,266	3.8	0.2
Basic metals and metal products	65,896	83,870	76,527	97,516	16.1	16.3
Other metal and metal products	14,905	19,993	19,103	21,149	28.2	5.8
All engineering	34,878	44,026	37,712	48,500	8.1	10.2
Infrastructure	1,12,853	1,42,975	1,21,486	1,63,754	7.6	14.5
Transport equipments	18,628	20,922	18,840	26,091	1.1	24.7
Industry (small, medium and large)	5,50,444	6,97,334	6,03,623	7,55,440	9.7	8.3

Source: Reserve Bank of India.

Table 8.25 Strikes and lockouts (man days lost: in million)

Year	Strikes		Lockouts		Total	
	Number	Man days lost	Number	Man days lost	Number	Man days lost
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	227	10.81	229	18.86	456	29.66
2006 (P)	243	5.32	187	15.01	430	20.32
2007(P)[a]	143	2.20	142	3.43	285	5.64

Source: Labour Bureau, Shimla.

P: Provisional. [a] (January to November).

Note: Total may not necessarily tally due to rounding off figures.

taken together, was down by 5.7 per cent in 2006 (Table 8.25).

8.80 As per the available information, during the current year till November 2007, West Bengal experienced the maximum instances of strikes and lockouts followed by Tamil Nadu and Gujarat. Industrial disturbances were concentrated mainly in textiles, financial intermediaries (excluding insurance and pension fund), engineering and chemical industries.

Industrial sickness

8.81 The Board for Industrial and Financial Reconstruction has so far received 7,158 references under the Sick Industrial Companies (Special Provisions) Act (SICA), 1985. These references include 297 from Central and State public sector undertakings (CPSUs & SPSUs). Out of the total references received, 5,471 were registered under Section 15 of the SICA, 1,857 references were dismissed as non-maintainable under the Act, 825 rehabilitation schemes, including 13 by AAIFR/ Supreme Court, were sanctioned and 1,337 companies were recommended to be wound up. Of the 297 references for public sector undertakings, the references of 92 CPSUs and 122 SPSUs were registered up to December 31, 2007.

Table 8.26

Projects appraised for environmental clearance during April-Dec. 2007

Nature of project	Proposals received	Proposals accorded clearance	Projects closed / rejected/ exempted
Industry	46	371	22
Thermal power	87	92	4
River valley and hydroelectric	21	22	2
Mining	280	335	48
Infrastructure and miscellaneous	174	107	15
Construction projects	873	500	172
Total	**1,481**	**1,427**	**263**

Source: Ministry of Environment & Forests.

Note: This includes proposals which were accorded environment clearance as per provisions of the EIA Notification, 2007.

Environmental issues

8.82 The development of a diversified industrial structure, based on a combination of large and small-scale industries, along with growing population has led to growing incidence of air, water and land degradation. Industrial effluents are a major source of water pollution. As regards solid wastes, flyash, phospho-gypsum and iron and steel slag are the main forms of solid wastes generated. Out of 2,744 industries identified under the 17 categories of polluting industries, 1,991 units have set up pollution control devices to comply with the standards, 339 units have been closed, and action has been taken against the 414 defaulting units up to June 2007.

Policy initiatives

- Following the recommendations of the Swaminathan Committee and on reviewing the Coastal Regulation Zone (CRZ) notification so as to enable environmentally sustainable use of coastal resources, pilot studies on drawing up the vulnerability line for CRZ were initiated and are continuing.
- Prime Minister's Council on Climate Change was constituted in June 2007 to coordinate national action for assessment, adaptation

and mitigation of climate change. An Expert Committee on impact of climate change has also been set up to study the impact of anthropogenic climate change and to identify measures required therein.

- Under the Clean Development Mechanism (CDM), set up under the Kyoto Protocol, India has registered 283 (so far the highest by any country) out of 812 total projects registered by the CDM Board till October 2007.

CHALLENGES AND OUTLOOK

8.83 The industrial sector recorded a robust rate of growth in excess of 8 per cent during 2004-05 and 2005-06 and scaled an appreciable 11.6 per cent growth during 2006-07. The current fiscal till November 2007 sustained the momentum, albeit with a slight moderation in certain sectors. While industrial groups like food products, jute textiles, wood products, leather products, chemicals and chemical products and "other manufacturing" have grown at an accelerated pace, compared to 2006-07, industries like non-metallic mineral products, cotton textiles and textile products, automobiles, paper products and metal products have suffered from a significant slackening in growth. It is the visible downslide in the production of consumer durables that has been subjected to anxious commentaries from different quarters. If the consumer goods sector had grown at the pace at which it had grown during 2006-07, the overall industrial growth till November in the current year would have closed in on that of the previous year.

8.84 The growth of textiles, with very low import intensity, may have been affected adversely by the recent appreciation of the rupee against US dollar. The Government has promptly taken measures to mitigate the incidence of the slowdown. The downslide in consumer durables can partly be attributed to the constrained demand conditions arising from adjustments in policy variables like interest rates. Yet, it needs to be appreciated that the automobile segments including passenger cars, jeeps, scooters and mopeds have buoyed during the current fiscal. Besides, the current series of the Index of Industrial Production based on the product baskets and weights assigned in 1993-94 has serious limitations in fully capturing the post-reform dynamics of the consumer durables sector. This IIP series is under revision. In short, the slowdown, shown by the available data on consumer durables, may not in itself be a cause of serious concern in the long run, provided the overall buoyancy in growth and income is maintained.

8.85 There are a number of positive developments that brighten the industrial outlook in the medium term. First, there has been a commendable growth in the capital goods sector, especially in industrial machinery, which, along with strong imports of capital goods, augurs well for the much required industrial capacity addition. Secondly, the inherent strength of industrial corporates, manifested in the increase in profits and profitability and strong investment plans, confirms the strength of the growth prospects in the medium term. Thirdly, the high investment plans made for infrastructure during the Eleventh Five Year Plan are expected to gradually alleviate the infrastructural constraints to industrial development. Moreover, the bourgeoning direct investment inflows in the liberalized investment regime supplements the domestic investment to a great extent.

8.86 The real challenge lies in strengthening the foundations for sustained industrial growth. One of the biggest challenges to sustaining and stepping up industrial growth lies in removing the infrastructural impediments in road — both rural and urban — rail, air and sea transport and power. Growth in infrastructure not only alleviates the supply side constraints in industrial production, but also stimulates additional domestic demand required for industrial growth. Another issue in industrial growth is the swiftness and efficacy with which the skill deficit felt in many areas of manufacturing is bridged. This will facilitate research and development and technological innovations, which are urgently called for in important industries like chemicals, automotives and pharmaceuticals.

8.87 Further, there is an imperative need to facilitate the growth of labour intensive industries, especially by reviewing labour laws and labour market regulations. This is particularly important in reversing the current, not-so-encouraging manufacturing employment trends. Besides, the growth in many industries is constrained by the acute scarcity/depleting reserves of important raw materials like coal, iron ore, natural gas and forest resources. The Eleventh Five Year Plan has placed its focus on these challenges. While the strategies for industrial development set out by the Eleventh Five Year Plan document are broadly tailored to address these issues, sectorally differentiated initiatives may be required for skill upgradation, supply augmentation of inputs and promotion of research and development.