# Industry

9
CHAPTER

*Industrial growth in the country has, in terms of long run trend, remained aligned with the growth rate of gross domestic product (GDP). The long-term average annual growth of industries comprising mining, manufacturing, and electricity, during the post-reform period between 1991-2 and 2011-12, averaged 6.7 per cent as against GDP growth of 6.9 per cent. Inclusion of construction in industry raises this growth to 7.0 per cent. The share of industry, including construction, in GDP remained generally stable at around 28 per cent in the post-reform period. Standard deviation of the average share was very small and the coefficient of variation under 5 per cent validates this stability. The share of manufacturing, which is the most dominant sector within industry, also remained in the 14-16 per cent range during this period. The share is modest when compared to that of China (above 40 per cent) and some of the East Asian countries (above 30 per cent).*

9.2 Employment in the industrial sector increased from 64.6 million persons in 1999-2000 to 100.7 million persons in 2009-10. The share of industry in total employment increased from 16.2 per cent in 1999-2000 to 21.9 per cent in 2009-10. However, the increase was largely on account of expansion of employment opportunities in the construction sector, from 17.5 million in 1999-2000 to 44.2 million in 2009-10.

9.3 The near stability of the share of industry in GDP and, in fact, a small decline over the last one or two years indicates that the potential of this sector has not yet been fully exploited. The open international trade environment and rapid technological change, which characterize this sector, require the sector to be innovative and competitive. The linkages of the sector with raw materials and natural resources on the one hand and, intra-sectoral inter dependence on the other hand amongst intermediates, capital goods, and consumer goods are numerous, often with conflicting interests, requiring policies to blend more judiciously.

## Industrial Performance

9.4 The index of industrial production (IIP), released each month, is the key indicator of industrial performance. The new IIP series with 2004-5 as base was released in June 2011 replacing the earlier IIP series with base 1993-4 (see Box 9.1 for details). Since the IIP is a fixed weight and fixed base series, a dated base often has limitations in reflecting the industrial scenario. The new series not only has a more recent base, it has a larger and more representative product basket and weights that appropriately reflect the relative importance of the sectors, products, and product groups.

9.5 Recent industrial growth, measured in terms of IIP, shows fluctuating trends. Growth had reached 15.5 per cent in 2007-8 and then started decelerating. Initial deceleration in industrial growth was largely on account of the global economic meltdown. There was, however, a recovery in industrial growth from 2.5 per cent in 2008-9 to 5.3 per cent in 2009-10 and 8.2 per cent in 2010-11. Fragile economic recovery

## Box 9.1 : IIP (Base 2004-5=100)

1. The Central Statistics Office (CSO) of the Ministry of Statistics and Programme Implementation (MOSPI) released the new series of the IIP with 2004-5 as its new base on 10 June 2011, replacing the IIP series with 1993-4 as base.

2. Besides a more recent year as its base, the new series has an enlarged and more representative basket to better capture the industrial structure. The weighting diagram for the new series has also been redrawn in line with the sector-wise comparative position of a number of items/products in the existing 1993-4 and the revised 2004-5 series together with their weights as follows:

**Comparative Characteristics of Existing and Proposed IIP Series**

| | Number of items | | Number of item groups | | Weights | |
|---|---|---|---|---|---|---|
| | 1993-1994 | 2004-2005 | 1993-1994 | 2004-2005 | 1993-1994 | 2004-2005 |
| Mining | 64 | 61 | 1 | 1 | 104.73 | 141.57 |
| Manufacturing | 473 | 620 | 281 | 397 | 793.58 | 755.27 |
| Electricity | 1 | 1 | 1 | 1 | 101.69 | 103.16 |
| **Total** | **538** | **682** | **283** | **399** | **1000** | **1000** |

Some of the important items newly included in the series basket are milk (skimmed/pasteurized); rice; cattle and poultry feed; woollen carpets; apparels; writing and printing paper; newspapers; propylene; purified terephthalic acid; complex grade fertilizers; paraxylene; antibiotics and its preparations; polythene bags including HDPE and LDPE bags; glass sheets; refractory bricks; marble tiles/slabs; grinding wheels; aluminium; steel structures; heat exchangers; insulated cables/wires of all kinds; colour TV sets; lens of all kinds; wooden furniture; coir mats and matting; gems and jewellery; copper and copper products; poly vinyl chloride; polypropylene (including co-polymer); and molasses. On the other hand, certain obsolete/insignificant products such as typewriters and tape recorders, have been dropped.

in the US and European countries and subdued business sentiments at home affected the growth of the industrial sector in the current year. Overall growth during April-December 2011 was 3.6 per cent compared to 8.3 per cent in the corresponding period of the previous year. Growth of IIP in terms of its

## Table 9.1 : Growth in the IIP and its major components

(per cent)

| | | Financial year | | | April- December | | | |
|---|---|---|---|---|---|---|---|---|
| | Weight | 2008-2009 | 2009-2010 | 2010-2011 | 2008 | 2009 | 2010 | 2011 |
| Overall IIP | 100.0 | 2.5 | 5.3 | 8.2 | 5.7 | 2.4 | 8.3 | 3.6 |
| **In terms of structured national industrial classification** | | | | | | | | |
| Mining | 14.16 | 2.6 | 7.9 | 5.2 | 3.2 | 7.0 | 6.9 | -2.7 |
| Manufacturing | 75.53 | 2.5 | 4.8 | 9.0 | 6.3 | 1.4 | 9.0 | 3.9 |
| Electricity | 10.32 | 2.7 | 6.1 | 5.5 | 2.7 | 5.8 | 4.6 | 9.4 |
| **In terms of use-based classification** | | | | | | | | |
| Basic goods | 45.68 | 1.7 | 4.7 | 6.0 | 2.2 | 3.9 | 5.7 | 6.1 |
| Capital goods | 8.83 | 11.3 | 1.0 | 14.8 | 22.4 | -8.2 | 18.4 | -2.9 |
| Intermediates | 15.69 | 0.0 | 6.0 | 7.4 | 1.5 | 4.1 | 8.0 | -0.8 |
| Consumer Goods | 29.81 | 0.9 | 7.7 | 8.6 | 5.0 | 4.9 | 7.4 | 5.7 |
| Durables | 8.46 | 11.1 | 17.0 | 14.2 | 16.1 | 12.6 | 13.8 | 5.3 |
| Non-durables | 21.35 | -5.0 | 1.4 | 4.3 | -1.4 | -0.4 | 2.5 | 6.1 |

***Source*** **: MOSPI.**

**Figure 9.1 Growth (per cent) in the IIP and its major components**

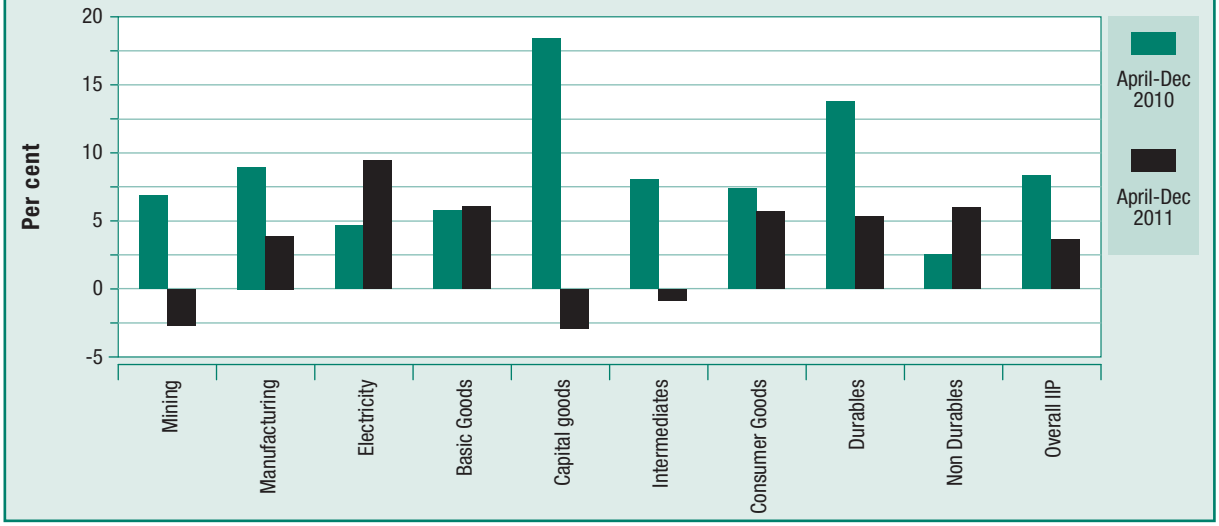



**Figure 9.2 Growth of IIP broad sectors**

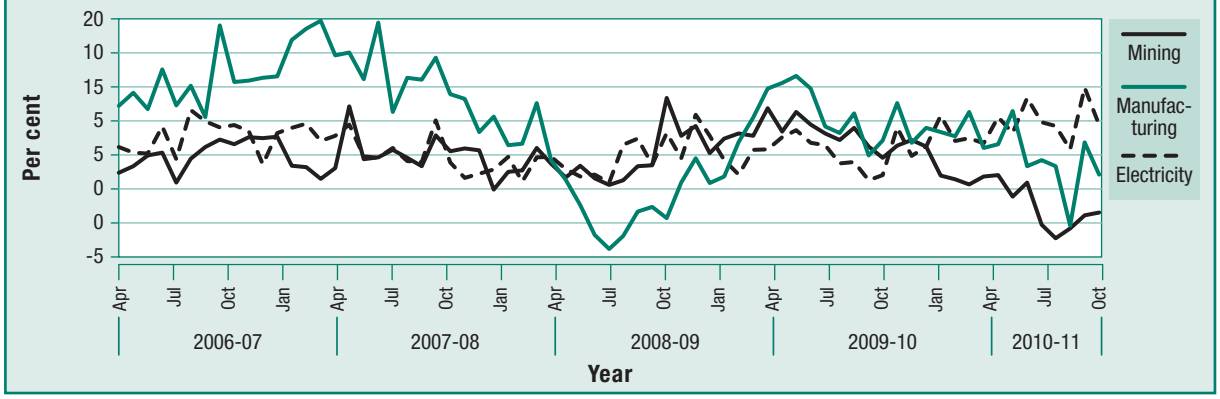
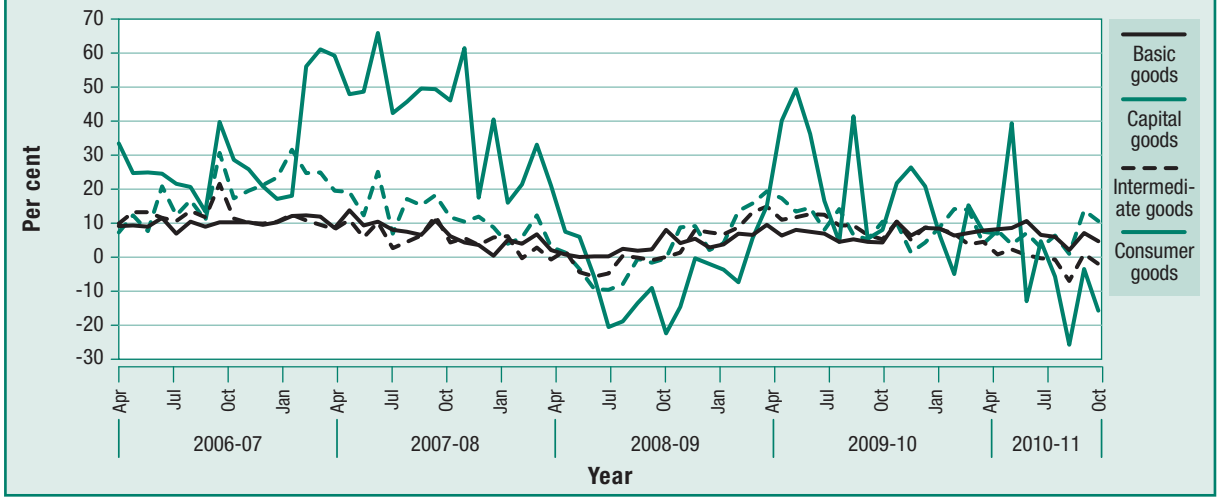



**Figure 9.3 Growth in terms of use based classification of IIP**




major components is indicated in Table 9.1 and Figure 9.1. IIP growth in terms of national industrial classification and use based classification for each month is indicated in Figure 9.2 and 9.3, respectively.

9.6 There was a contraction in production in the mining sector, particularly in the coal and natural gas segments in the current fiscal year (April-December). Contraction in output resulted in its

**Table 9.2 : Contribution to IIP Growth-April-December (per cent)**

| | Weight | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|
| Mining | 14.16 | 6.4 | 32.1 | 9.4 | -8.3 |
| Manufacturing | 75.53 | 89.4 | 46.8 | 85.6 | 85.6 |
| Electricity | 10.32 | 4.2 | 21.2 | 5.0 | 22.6 |
| **In terms of Use-based classification** | | | | | |
| Basic goods | 45.68 | 16.2 | 64.8 | 27.8 | 65.7 |
| Capital goods | 8.83 | 52.2 | -52.9 | 30.2 | -12.0 |
| Intermediates | 15.69 | 3.7 | 24.1 | 13.6 | -3.3 |
| Consumer Goods | 29.81 | 28.0 | 64.0 | 28.4 | 49.4 |
| Durables | 8.46 | 32.7 | 67.3 | 23.0 | 21.3 |
| Non Durables | 21.35 | -4.8 | -3.3 | 5.5 | 28.1 |

***Source*** **: Economic Division, Department of Economic Affairs.**

**Table 9.3 : Volatility of IIP Growth**

| | Mean growth | Standard deviation | Coefficient of variation |
|---|---|---|---|
| Overall IIP | 8.3 | 6.5 | 78.0 |
| Mining | 4.1 | 4.1 | 99.4 |
| Manufacturing | 9.3 | 8.0 | 85.6 |
| Electricity | 6.1 | 3.1 | 50.5 |
| **In terms of Use-based classification of industries** | | | |
| Basic goods | 6.1 | 3.3 | 54.2 |
| Capital goods | 18.0 | 23.2 | 128.6 |
| Intermediates | 5.6 | 5.7 | 101.4 |
| Consumer goods | 9.8 | 8.6 | 88.5 |

***Source*** **: Economic Division, Department of Economic Affairs.**

contribution to growth turning negative. The electricity sector witnessed an improvement in growth in the current year. This sector contributed 22.6 per cent to overall industrial growth, which was more than twice its weight in the IIP (Table 9.2). Growth also moderated in the manufacturing sector from 9.0 per cent in April-December 2010 to 3.9 per cent in April-December 2011.

9.7 In terms of use-based classification of the IIP, in the current year (April-December) basic goods with a growth of 6.1 per cent and consumer non-durables with a growth of 6.1 per cent had relatively better growth compared to the corresponding period of the previous year. There was moderation in growth in other segments of the IIP and negative growth was observed in the capital goods and intermediates segments. The highest contribution to growth in the current year was from the basic goods segment, which at 65.7 per cent exceeded its weight in the IIP. The contribution of consumer non-durables at 28.1 per cent also exceeded its weight in the IIP.

9.8 Volatility in growth has been seen across all the broad sectors of the IIP. IIP growth during April 2006 to December 2011 varied from - 7.2 to 20.0 per cent, with a mean growth of 8.3 per cent and standard deviation of 6.5. While different sectors had different volatility spectrums, capital goods and intermediates were the most volatile. In fact, volatility of the manufacturing sector was largely on account of extreme fluctuations in growth in the capital goods and intermediates segments. In case of capital goods, growth varied from - 26.5 per cent to 65.1 per cent, with a mean growth of 18.0 per cent and standard deviation of 23.2. (Table 9.3)

9.9 Within the manufacturing sector, the IIP separately provides growth rates for 22 sub groups, disaggregated at two-digit level of National Industrial Classification (NIC 2004) (see Table 9.4). Growth varied across the sub groups. In April-December, 2011, there were 7 manufacturing sub-groups with a 29.23 per cent weight in the IIP which recorded a growth in excess of 10 per cent, 9 sub-groups with a weight of 26.6 per cent which had positive growth below the 10 per cent level, and 6 sub groups with a weight of 19.7 per cent that had negative growth. In April-December 2010, 7 sub-groups with a weight of 16.8 per cent had growth exceeding 10 per cent, 11 sub-groups with a weight of 47.6 per cent had positive but below 10 per cent growth, and 4 sub-groups with a weight of 11.1 per cent that had negative growth. Though in the current year, sub-groups that recorded double-digit growth increased in terms of weights (relative importance of the sub-groups), a sharper moderation in other sectors resulted in a deceleration in aggregate growth.

## Corporate-sector performance

9.10 Corporate sector sales are another indicator of industrial performance. Abridged financial results of the listed manufacturing companies indicate robust sales growth (in nominal terms) during 2011-12. In the first three quarters of the current year, sales growth has varied between 20 and 25 per cent. Though sales growth has moderated from a peak of 34.9 per cent in the fourth quarter (Q4) of 2009-10, Q3 growth of 22.6 per cent in the current financial year is better than the growth of 19.0 per cent in the same period of the previous year. However, expenditure growth has outpaced revenue growth

**Table 9.4 : Rate of Growth of Manufacturing Sub-groups and Their Contribution to Growth (per cent)**

| | Rate of growth April-December | | | Contribution to growth April-December | | |
|---|---|---|---|---|---|---|
| | 2009 | 2010 | 2011 | 2009 | 2010 | 2011 |
| Food products and beverages | -6.5 | 3.6 | 17.4 | -17.9 | 2.5 | 27.0 |
| Tobacco products | -0.9 | 5.4 | 4.6 | -0.4 | 0.7 | 1.3 |
| Textiles | 6.8 | 5.9 | -2.7 | 14.5 | 3.8 | -3.9 |
| Wearing apparel | 1.6 | 4.0 | -4.8 | 1.7 | 1.2 | -3.1 |
| Luggage, footwear, and leather products | 0.6 | 6.8 | 4.9 | 0.1 | 0.3 | 0.5 |
| Wood and products of wood | -2.0 | -0.5 | 0.7 | -1.0 | -0.1 | 0.2 |
| Paper and paper products | 1.8 | 8.4 | 4.4 | 0.6 | 0.8 | 1.0 |
| Publishing, printing, & reproduction of recorded media | -9.8 | 11.2 | 20.4 | -4.5 | 1.3 | 5.5 |
| Coke, petroleum products, & nuclear fuel | -1.7 | -1.6 | 4.2 | -4.2 | -1.0 | 5.7 |
| Chemicals and chemical products | 5.3 | 0.2 | 0.2 | 17.9 | 0.2 | 0.4 |
| Rubber and plastics products | 15.0 | 14.1 | -1.7 | 12.4 | 3.7 | -1.1 |
| Other non-metallic mineral products | 6.9 | 4.5 | 4.5 | 11.5 | 2.2 | 4.9 |
| Basic metals | 1.1 | 7.6 | 10.7 | 5.8 | 11.1 | 35.5 |
| Fabricated metal products | 2.9 | 14.4 | 13.0 | 3.8 | 5.3 | 11.5 |
| Machinery and equipment n.e.c. | 5.8 | 31.3 | -2.5 | 10.7 | 17.0 | -3.7 |
| Office, accounting, & computing machinery | 3.1 | -12.3 | 6.2 | 0.4 | -0.5 | 0.4 |
| Electrical machinery & apparatus | -19.8 | 8.2 | -21.2 | -65.6 | 6.0 | -35.6 |
| Radio, TV, and communication equipment & apparatus | 6.3 | 13.7 | 7.7 | 13.5 | 8.8 | 11.9 |
| Medical, precision & optical instruments, watches and clocks | -10.6 | 5.6 | 11.2 | -1.9 | 0.3 | 1.1 |
| Motor vehicles, trailers, & semi-trailers | 19.6 | 33.5 | 11.6 | 32.0 | 18.2 | 17.8 |
| Other transport equipment | 20.8 | 25.7 | 15.3 | 14.7 | 6.1 | 9.7 |
| Furniture; other manufacturing | 2.0 | -6.4 | -1.7 | 2.6 | -2.3 | -1.2 |

***Source*** **: MOSPI.**

***Note*** **: N.e.c. = Not elsewher classified.**

leading to a lower growth in net profits which declined in the latest two quarters. Higher expenditure growth was initially led by high raw materials expenses, but interest expenses grew more sharply in Q2 and Q3 of 2011-12 (Table 9.5).

9.11 The net profit margin of manufacturing companies measured by the ratio of net profits to sales decelerated continuously from 8.1 per cent in Q2 of 2010-11 to 5.4 per cent in Q2 of 2011-12, which was the lowest in the last 12 quarters. There has been marginal improvement in net profit margin in Q3. Though Q3 data are based on a smaller sample of companies and should be interpreted cautiously, these indicate an improvement across all the major parameters of performance of listed manufacturing companies.

**Table 9.5 : Growth in Key Parameters of Listed Manufacturing Companies**

| Items | 2009-2010 | | | | 2010-2011 | | | | 2011-2012 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3* |
| No. of companies | 1885 | 1876 | 1901 | 1912 | 1900 | 1933 | 1961 | 1953 | 1935 | 1922 | 882 |
| Growth rates (in per cent) | | | | | | | | | | | |
| Sales | -2.7 | -0.4 | +28.7 | 34.9 | 28.8 | 21.2 | 19.0 | 23.3 | 24.9 | 19.7 | 22.6 |
| Raw material | -14.5 | -4.7 | 35.5 | 46.6 | 40.6 | 21.9 | 20.9 | 30.5 | 28.8 | 23.8 | 32.2 |
| Staff cost | 9.9 | 9.1 | 12.0 | 18.1 | 16.9 | 20.4 | 21.1 | 18.2 | 17.5 | 15.3 | 12.7 |
| Interest costs | 8.3 | -2.1 | -5.0 | 1.1 | 10.9 | 7.8 | 13.7 | 23.1 | 20.5 | 41.5 | 44.2 |
| Profits after tax (PAT) | 3.2 | 17.6 | 178.0 | 69.4 | 8.2 | 10.9 | 14.6 | 7.1 | 9.6 | -18.3 | -15.4 |
| PAT to sales | 9.2 | 9.0 | 8.0 | 8.6 | 8.0 | 8.1 | 7.7 | 7.4 | 6.8 | 5.4 | 6.2 |

***Source*** **: Reserve Bank of India (RBI) Studies on Corporate Performance of Private Corporate Business Sector.**

***Notes*** **: Provisional.**

## Industrial Investment

### Gross Capital Formation (GCF)

9.12 Investment and capacity additions are critical for sustained industrial growth. National accounts data clearly indicate a moderation in the growth of GCF in industry. The rate of growth of GCF in four broad sectors of industry comprising mining, manufacturing, electricity, and construction averaged 10.9 per cent during 2004-11, almost the same as the rate of growth of GCF in the economy as a whole. Unregistered manufacturing which largely covers the micro, small, and medium enterprises segment had the lowest medium-term growth of only 0.8 per cent during this period. In 2008-9, GCF had negative growth, but witnessed a sharp V-shaped recovery in 2009-10 before moderating to 7.0 per cent in 2010-11. The manufacturing GCF growth rate declined to 7.1 per cent in 2010-11 from 42 per cent in 2009-10. The share of GCF in industry as per cent to the overall GCF, after peaking to a level of 54.9 per cent in 2007-8, moderated to 48.3 per cent in 2010-11 (Table 9.6).

**Table 9.6 : GCF in Industry**

(₹ crore at 2004-05 prices)

| | 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | CAGR |
|---|---|---|---|---|---|---|---|---|
| Mining | 37322 | 52259 | 60456 | 68372 | 57045 | 65984 | 70389 | 11.2 |
| Manufacturing | 344517 | 404928 | 474405 | 611928 | 420506 | 598445 | 640982 | 10.9 |
| (i) Registered | 245984 | 342629 | 380403 | 521430 | 378044 | 497545 | 537676 | 13.9 |
| (ii) Unregistered | 98533 | 62298 | 94002 | 90498 | 42462 | 100900 | 103305 | 0.8 |
| Electricity | 53300 | 64673 | 76369 | 86007 | 98993 | 102278 | 103255 | 11.7 |
| Construction | 54445 | 57531 | 95799 | 115157 | 88523 | 86290 | 98426 | 10.4 |
| Total Industry | 489584 | 579391 | 707029 | 881464 | 665067 | 852999 | 913051 | 10.9 |
| Rate of Growth | | 18.3 | 22.0 | 24.7 | -24.5 | 28.3 | 7.0 | |
| Total GCF by Industry of use | 1011178 | 1183303 | 1364821 | 1606175 | 1566233 | 1720117 | 1890645 | 11.0 |
| Share of GCF in industry as % to total GCF | 48.4 | 49.0 | 51.8 | 54.9 | 42.5 | 49.6 | 48.3 | |

***Source*** **: Office of the Economic Adviser, Department of Industrial Promotion (DIPP) and CSO**

***Notes*** **: CAGR- compound annual growth rate.**

**Table 9.7 : Investment Indicated in Industrial Entrepreneur Memorandums (IEMs) Filed**

(₹ crore)

| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 (Jan.-Dec.) |
|---|---|---|---|---|---|---|
| Food | 62845 | 10531 | 15941 | 15637 | 19663 | 30848 |
| Fermentation industries | 8008 | 5171 | 8230 | 4566 | 3139 | 6644 |
| Textiles | 26325 | 24136 | 11244 | 9200 | 26566 | 26174 |
| Wood | - | 105 | 622 | 96 | 122 | 488 |
| Paper | 8199 | 4673 | 5849 | 6037 | 6272 | 5315 |
| Leather | 148 | 266 | 106 | 106 | 161 | 474 |
| Chemicals | 45722 | 36745 | 155767 | 27676 | 56173 | 57145 |
| Rubber | 2403 | 1197 | 3048 | 2118 | 5819 | 8292 |
| Cement | 42406 | 76946 | 125954 | 53742 | 101318 | 81406 |
| Metals | 144128 | 181818 | 365031 | 254285 | 391805 | 268895 |
| Machinery | 165227 | 375543 | 556715 | 503651 | 955091 | 815030 |
| Transport | 10688 | 11321 | 24890 | 5048 | 12290 | 9695 |
| Others | 48669 | 70697 | 208230 | 96354 | 84888 | 220747 |
| Fuel | 23782 | 35100 | 42225 | 61743 | 73015 | 8575 |
| **Total** | **588550** | **834249** | **1523852** | **1040259** | **1736322** | **1539728** |

***Source*** **: Office of the Economic Advisor, DIPP.**

## Investment Intentions

9.13 While GCF indicates actualization of investment, investment intentions indicated in the industrial entrepreneur memorandums (IEMs) filed are lead indicators of likely investment flow to industry and of entrepreneurs' perception. The investment intentions also provide the sectoral preferences of investors and shifts in these preferences over time. During 2001-10, overall investment indicated in the IEMs filed increased at an average annual rate of 38.7 per cent. After witnessing a decline in 2009, investment intentions increased in 2010 indicating a revival of business sentiments and an improvement in entrepreneurs' perception. In 2011(January-December), it has maintained the momentum, though at a slower pace. Metals, machinery, cement, chemicals, and the auto sector continue to dominate as the preferred industries (Table 9.7)

## Foreign Direct Investment (FDI)

9.14 FDI, being a non-debt capital flow, is a leading source of external financing, especially for the developing economies. It not only brings in capital and technical know-how but also increases the competitiveness of the economy. Overall it supplements domestic investment, much required for sustaining the high growth rate of the country. Since 2000, significant changes have been made in the FDI policy regime by the government to ensure that India becomes an increasingly attractive and investor-friendly destination.

9.15 The current phase of FDI policy is characterized by negative listing, permitting FDI freely except in a few sectors indicated through a negative list. Under the current policy regime, there are three broad entry options for foreign direct investors. In a few sectors, FDI is not permitted (negative list); in another small category of sectors, foreign investment is permitted only till a specified level of foreign equity participation; and the third category, comprising all the other sectors, is where foreign investment up to 100 per cent of equity participation is allowed. The third category has two subsets – one consisting of sectors where automatic approval is granted for FDI (often foreign equity participation less than 100 per cent) and the other consisting of sectors where prior approval from the Foreign Investment Approval Board (FIPB) is required. FDI policy changes increasingly reflect the requirements of industry and are based on stakeholders' consultation. Upfront listing of negative sectors has helped focus on reform areas, which are reflected in buoyant FDI inflows (Table 9.8).

**Table 9.8 : Growth in FDI inflows**

(US$ billion)

| Financial Year | As per International Practices* | Growth | FDI Equity Inflows# | Growth |
|---|---|---|---|---|
| 2003-04 | 4.32 | - 14% | 2.19 | - 19% |
| 2004-05 | 6.05 | + 40% | 3.22 | + 47% |
| 2005-06 | 8.96 | + 48% | 5.54 | + 72% |
| 2006-07 | 22.83 | + 146% | 12.49 | + 125% |
| 2007-08 | 34.84 | + 53% | 24.58 | + 97% |
| 2008-09 (P) | 41.87 | + 20% | 27.33 | + 11% |
| 2009-10 (P) | 37.75 | -10% | 25.83 | -5% |
| 2010-11 (P) | 32.90 | -13% | 19.43 | -25% |
| 2011-12 (April-Dec.) | 35.35 | | 24.19 | - |
| Apr. 2000-Dec. 2011 | 240.06 | | 157.97 | |

***Source*** **: Office of the Economic Adviser, DIPP.**
***Note*** **: * As per Reserve Bank of India (RBI) estimates. # As per DIPP estimates.**

9.16 Cumulative amount of FDI inflows from April 2000 to December 2011 stood at US$ 240.06 billion, out of which FDI equity inflows amounted to US$ 157.97 billion. FDI inflows declined globally in 2009 and 2010. While India was able to largely insulate itself from the decline in global inflows in 2009-10, FDI flows moderated in 2010-11. For India to maintain its momentum of GDP growth, it is vital to ensure that the robustness of its FDI inflows is also maintained. FDI inflows rose to US$ 24.19 billion during April-December 2011, an increase of 50.8 per cent compared to the corresponding period of the previous year. Box 9.2 contains some changes in FDI policy made by the government in 2011.

9.17 Services (financial and non-financial), telecom, construction, drugs & pharamaceuticals, metallurgical Industries and power were the sectors that attracted maximum FDI during the first nine months of 2011-12. Sector-wise FDI inflow into some key industrial and infrastructure sectors is given in Table 9.9.

## Industrial Credit

9.18 In the current year, the rate of growth of credit flow to industries moderated significantly. On year-on-year basis, credit growth to industry decelerated

**Box 9.2 : FDI POLICY CHANGES-2011**

- 'Circular 1 of 2011', effective from 1.4.2011 contained a number of significant policy changes, including: (i) pricing of convertible instruments upfront, on the basis of a conversion formula, instead of price (ii) inclusion of fresh items for issue of shares against non-cash considerations, including import of capital goods/ machinery/ equipment and pre-operative/ pre-incorporation expenses (iii) removal of the condition of prior approval in case of existing joint ventures/technical collaborations in the 'same field" (iv) simplification and rationalization of guidelines relating to down-stream investments and (v) development and production of seeds and planting material, without the stipulation of having to do so under 'controlled conditions'.
- Effective May 20, 2011, Government allowed FDI, in Limited Liability Partnerships, subject to specified conditions.
- 'Circular 2 of 2011', effective from 1.10.2011, further simplified FDI and included: (i) exemption of construction-development activities in the education sector and in old-age homes, from the general conditionalities in the construction-development sector (ii) inclusion of 'apiculture', under controlled conditions, under the agricultural activities permitted for FDI (iii) inclusion of 'basic and applied R&D on bio-technology pharmaceutical sciences/life sciences', as an 'industrial activity', under industrial parks (iv) notification of the revised limit of 26% for foreign investment in Terrestrial Broadcasting/ FM radio (v) liberalisation of conversion of imported capital goods/machinery and pre-operative/pre-incorporation expenses to equity instruments and (vi) introduction of provisions on 'pledging of shares' and opening of non-interest bearing escrow accounts, subject to specified conditions.
- Effective November 8, 2011, (to be reviewed after six months) Government reviewed the extant policy on FDI and decided that FDI, up to 100%, would be permitted for brownfield investments (i.e. investments in existing companies), in the pharmaceuticals sector, under the Government approval route.
- Effective January 10, 2012, Government liberalised the extant policy on FDI in single brand retail trading, in which FDI, up to 51% was permitted, subject to specified conditions, by allowing FDI, up to 100%, under the Government route, subject to the additional condition that, in respect of proposals involving FDI beyond 51%, mandatory sourcing of at least 30% of the value of products sold would have to be done from Indian 'small industries/ village and cottage industries, artisans and craftsmen'.

***Source*** **: DIPP**

**Table 9.9 : Sector-wise FDI Flows into Industry and Infrastructure**

(US $ million)

| | 1991-2000 | 2000-10 | 2010-11 | 2010-11 (Apr.-Dec.) | 2011-12 Apr.-Dec.) | Growth (%) |
|---|---|---|---|---|---|---|
| Food products | 707.4 | 1237.3 | 246.9 | 170.7 | 190.8 | 11.8 |
| Fermentation industries | 24.0 | 770.1 | 57.7 | 18.0 | 53.2 | 195.0 |
| Textiles | 241.8 | 828.6 | 129.8 | 74.8 | 94.0 | 25.6 |
| Wood products | 0.0 | 18.8 | 1.6 | 1.1 | 11.6 | 1002.9 |
| Paper | 250.5 | 716.9 | 44.0 | 30.8 | 341.7 | 1008.6 |
| Leather | 33.5 | 42.6 | 9.3 | 0.4 | 5.6 | 1360.5 |
| Chemicals | 1480.9 | 4446.1 | 734.0 | 589.6 | 4001.7 | 578.7 |
| Rubber, plastic & petroleum products | 90.3 | 2953.6 | 573.6 | 555.0 | 323.6 | -41.7 |
| Non-metallic minerals | 261.1 | 2263.6 | 657.3 | 623.3 | 207.7 | -66.7 |
| Metals and metal products | 186.2 | 3143.2 | 1098.1 | 964.4 | 1495.3 | 55.0 |
| Machinery and equipment | 2043.1 | 15670.4 | 1846.7 | 1447.6 | 3279.0 | 126.5 |
| Transport equipments | 0.0 | 4603.2 | 1286.1 | 1048.0 | 609.6 | -41.8 |
| Other manufacturing | 1761.6 | 5705.6 | 1495.3 | 1249.7 | 706.2 | -43.5 |
| Mining (including mining services) | 0.0 | 730.9 | 79.5 | 75.9 | 136.6 | 80.0 |
| Power* | 1038.9 | 5220.9 | 1464.4 | 1072.0 | 1729.4 | 61.3 |
| Telecommunication | 1089.4 | 8915.9 | 1664.5 | 1326.7 | 1988.7 | 49.9 |
| **Total** | **16699.6** | **110289.3** | **19426.9** | **16039.2** | **24187.8** | **50.8** |

***Source*** **: Office of the Economic Adviser, DIPP.**

***Note*** **: Total excludes inflows to the services sector and other non-resident Indian (NRI) schemes.**

***includes non-conventional energy.**

to 19.8 per cent in December 2011 from 31.6 per cent in December 2010 (Table 9.10). Moderation in rate of growth of credit was particularly large for the infrastructure and manufacturing sectors. This moderation in the growth of credit was also associated with a period which witnessed a decline in the ratio of profit after tax to sales for the listed manufacturing companies.

9.19 Deceleration in the growth of credit to the industrial sector by commercial banks began in January 2011 and has continued since. There has, however, been a sharp pickup in credit flow in December 2011. Build-up of credit to industries until December from end March for the manufacturing sector has recorded a higher growth in the current fiscal year compared to 2010-11 (Figure 9.4).

9.20 Credit growth to industry in December 2011 was comparatively higher in paper products, vehicles, vehicle parts and transport equipment, gems and jewellery, petroleum, coal and nuclear products,

**Figure 9.4 Outstanding credit to industries and MOM growth**

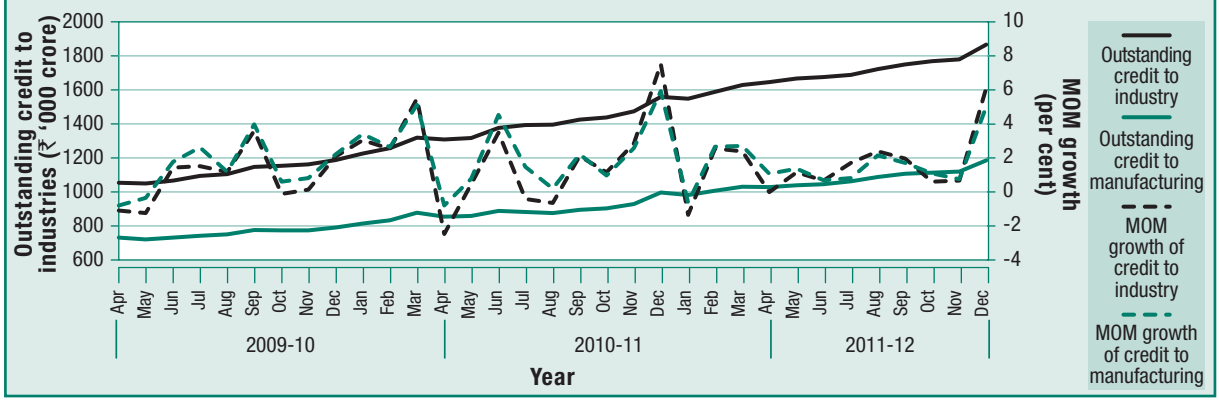


**Table 9.10 : Credit Flow to Industries**

| | Outstanding credit as on 30 Dec. 2011 | Rate of growth (per cent) | | | |
|---|---|---|---|---|---|
| | | Dec. 2010/ Dec. 2009 | Dec. 2011 Dec. 2010 | Dec. 2010 Mar. 2010 | Dec. 2011/ Mar. 2011 |
| | (₹ crore) | | | | |
| Industries | 1858500 | 31.6 | 19.8 | 18.3 | 14.7 |
| Construction | 54406 | 13.4 | 17.5 | 4.7 | 8.5 |
| Infrastructure | 596767 | 45.7 | 20.5 | 30.3 | 13.3 |
| Mining (incl. coal) | 29514 | 32.7 | 39.9 | 16.6 | 29.1 |
| Manufacturing | 1177813 | 26.4 | 19.2 | 13.7 | 15.3 |

***Source*** **: RBI**

beverages and tobacco. Other segments have had lower growth in gross credit deployment. The decline in gross credit deployment has been significant in some crucial sectors such as cement and cement products, chemicals and chemical products, food processing, textiles, basic metals and metal products, engineering, and leather and leather products (Figure 9.5).

9.21 In line with the deceleration in growth rate of non-food credit and the overall industry sector, on year-on-year basis, credit growth to micro and small industries decelerated to 7.2 per cent in December 2011 from 19.9 per cent in December 2010. The drop has been moderate in case of medium industries, i.e 25.5 per cent in December 2011 from 30.3 per cent in December 2010. As part of priority-sector lending on year-on-year basis, credit growth to micro and small enterprises (MSEs) decelerated to 11.1 per cent in December 2011 from 29.6 per cent in December 2010. The RBI has advised banks that the allocation of 60 per cent of MSE advances to micro enterprises is to be achieved in stages, namely 50 per cent in the year 2010-11, 55 per cent in the year 2011-12, and 60 per cent in the year 2012-13. Further, banks have been advised to achieve 10 per cent annual growth in the number of micro enterprise accounts. The share of micro enterprises in MSE advances from scheduled commercial banks has come down from 40.1 per cent at the end of March 2010 to 38.7 per cent at the end of March 2011. The growth in number of micro-enterprise accounts has also come down significantly from 65.3 per cent in 2009-10 to 6.8 per cent in 2010-11, falling short of the stipulated target of 10 per cent. Micro enterprises play a vital role in employment generation and inclusive growth and, therefore, need to be encouraged.

**Figure 9.5 Relative share of manufacturing industry groups in credit flow**

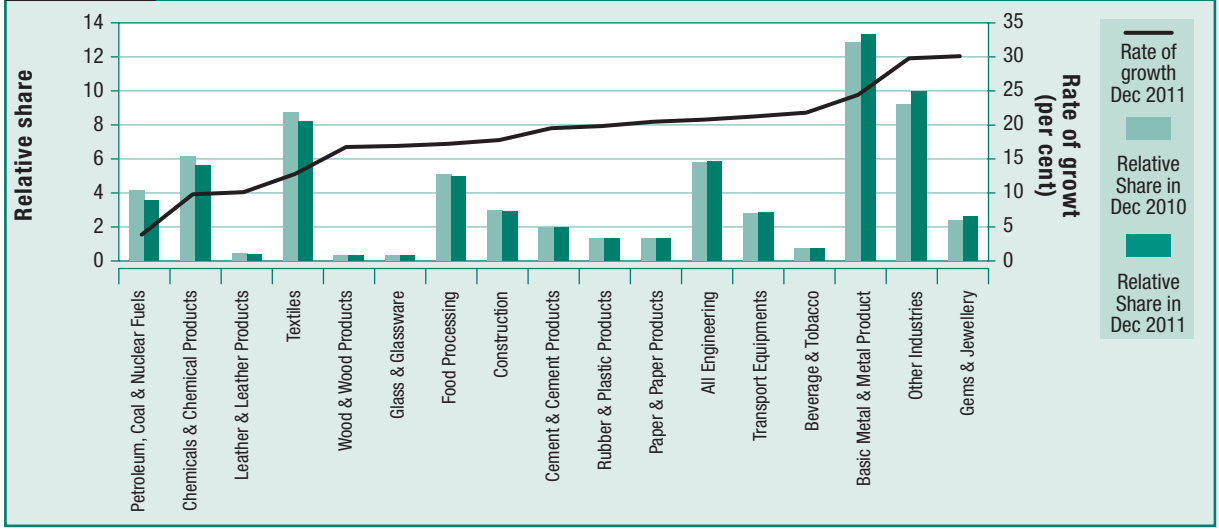


**Table 9.11 : Employment in the Industrial Sector**

| | Persons employed (million) | | | Share in employment (%) | | | Share in GDP (%) | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1999-2000 | 2004-2005 | 2009-2010 | 1999-2000 | 2004-2005 | 2009-2010 | 1999-2000 | 2004-2005 | 2009-2010 |
| Mining | 2.3 | 2.6 | 2.9 | 0.6 | 0.6 | 0.6 | 3.0 | 2.9 | 2.3 |
| Manufacturing | 43.8 | 56.1 | 52.4 | 11.0 | 12.2 | 11.4 | 15.1 | 15.3 | 16.0 |
| Electricity | 1.0 | 1.2 | 1.3 | 0.3 | 0.3 | 0.3 | 2.3 | 2.1 | 2.0 |
| Construction | 17.5 | 26.1 | 44.2 | 4.4 | 5.7 | 9.6 | 6.5 | 7.7 | 7.9 |
| Industry | 64.6 | 85.9 | 100.7 | 16.2 | 18.7 | 21.9 | 26.9 | 27.9 | 28.1 |

***Source*** **: The numbers have been derived applying NSSO segment-wise workers population ratios and Labour force participation rates to the population.**

***Note*** **: Employment as per usual principal and subsidiary status (UPSS) basis.**

## Employment and Labour Relations

9.22 With economic reforms it had been expected that the industrial sector would emerge as the key to additional employment opportunities for the labour force. There has been significant increase in employment opportunities in the industrial sector, though most of these additional opportunities have been created in the construction sector. In 2009-10, the construction sector employed 9.6 per cent of the workforce as against a 7.9 per cent share in GDP. There has also been an increase in employment opportunities in the mining sector. However, in the manufacturing sector, overall employment opportunities have declined in 2009-10 compared to 2004-5 (Table 9.11).

9.23 Due to the constant endeavour of industrial relations machineries of both the centre and states, the industrial relations climate has generally remained peaceful and cordial. While the number of incidences of strikes and lockouts reported during 2006 were 430, this figure stood at 135 (provisional) up to October 2011 and has exhibited a declining trend over the period. Similarly, the figures for man days lost were 20.32 million in 2006 and 4.19 million (provisional) up to October 2011 (Table 9.12). As regards spatial / industry-wise dispersions of incidences of strikes, lockouts, there are widespread variations among states / union territories (UTs). Wages and allowance, bonus, personnel, indiscipline and violence, and financial stringency have been stated to be the major reasons for these strikes and lockouts.

**Table 9.12 : Strikes and Lockouts (man-days lost )**

| Year | Strikes | Lockouts | Total Man-days lost |
|---|---|---|---|
| 2006 | 243 | 187 | 20324378 |
| 2007 | 210 | 179 | 27166752 |
| 2008(P) | 240 | 181 | 17433721 |
| 2009(P) | 205 | 187 | 13364757 |
| 2010(P) | 262 | 165 | 18025733 |
| 2011(P)(Jan.-Oct.) | 106 | 29 | 4194651 |

***Source*** **: Labour Bureau, Ministry of Labour.**
***Note*** **: P – Provisional**

## Industry - Environment Linkages

9.24 The development of a diversified industrial structure in India, based on a combination of large- and small-scale industries, and growing urban and rural population have produced pressures on the environment as reflected in the growing incidence of air, water, and land degradation. Industrial pollution is concentrated in industries like petroleum refineries, textiles, pulp and paper, industrial chemicals, iron and steel, and non-metallic mineral products. Small-scale industries, especially foundries, chemical manufacturing, and brick making, are also significant polluters. In the power sector, thermal power, which constitutes the bulk of installed capacity for electricity generation, is an important source of air pollution. Choice of policies and investment has, therefore, to be such which encourages more efficient use of resources, substitution away from scarce resources, and adoption of technologies and practices that minimize environmental impact.

## State of Industrial Pollution

9.25 Analysis of long-term trends (1995-2009) of air pollutants shows that while $SO_2$ has been under control, NOx has exceeded permissible levels in 11-23 per cent cities during last the 15 years. Discharge of untreated or partially treated industrial emissions and effluents is the main cause of industrial pollution. Industrial effluents comprising organic pollutants, chemicals, and heavy metals and run-off from land-based activities such as mining are a major source of water pollution. The major water-polluting industries include fertilizers, refineries, pulp and paper, leather, metal plating, and other chemical industries.

9.26 Continued monitoring of water quality of aquatic resources has revealed that organic pollution continues to be the predominant pollutant of aquatic resources. It has also been estimated that 75 per cent of the water pollution is on account of disposal of untreated/partially treated sewage by local bodies. It is estimated that against sewage generation of about 38,254 million litres per day (mld) from Class I cities (498) and Class II towns (410) of the country, the available treatment capacity is for 11,787 mld, indicating a wide gap between sewage generated and treatment capacity created. The problem of water quality has further been aggravated because of diminishing water flow in rivers. The Central Pollution Control Board (CPCB) is monitoring water quality of rivers at 980 locations covering 353 rivers in terms of Dissolved Oxygen (DO), Bio-chemical Oxygen Demand (BOD), and fecal coliforms. One hundred and fifty stretches on 105 rivers have been identified as polluted.

9.27 It is estimated that around 57 million tonnes per annum of municipal solid waste (MSW) is presently generated in the country. Based on its physico-chemical characteristics, the MSW generated in Indian cities is suitable for composting. However, presently the country has a rated capacity of processing around 6,000 tonnes per day of mixed waste into compost. Generation of hazardous waste is estimated at 7.66 million metric tons (MT) annually, of which landfillable waste is 3.39 million MT (44.26 per cent), incinerable 0.65 million MT (8.50 per cent), and recyclable hazardous waste 3.61 million MT (47.13 per cent). Lack of proper enforcement for disposal of hazardous waste results in abandoned hazardous waste dumps, some of which bio-accumulate through the food chain, thereby posing long-term health risks.

9.28 Further, it is estimated that approximately 15,722 tonnes of plastic waste is generated in the country per day, only 60 per cent of which is recycled due to low collection efficiency. Fly ash, phospogypsum, and iron and steel slags are the major forms of industrial solid wastes. It is estimated that around 160 million tonnes per annum of fly ash is generated, only 91.2 million tonnes per annum of which is utilized by cement plants, road embankments, fly ash bricks, and back filling of mines, etc.

## Current Programmes and Policy

9.29 The government has put into place necessary legislative and regulatory measures, both preventive and promotional, for protection, conservation, and development of the environment. Effective implementation of these measures is expected to harmonize the demands of development and environment.

9.30 Emission and effluent standards have been notified for relevant pollutants for 74 categories of processes and industries, including 17 categories of highly polluting industries, under the Environment (Protection) Act 1986. The concerned State Pollution Control Boards/ Authorities along with the CPCB have identified 'red' and 'orange' categories of industries and consents are granted on condition of complying with these standards. A total of 2,608 units have been identified under these 17 categories, out of which 1,924 have set up pollution control facilities to comply with standards, 345 are defaulting, and 339 have been closed.

9.31 A time-bound action plan has been prepared for restoration of ambient environment in respect of 17 categories of highly polluting industries. Based on a comprehensive environmental pollution index, 43 critically polluted industrial clusters in different states have been identified to improve environmental quality and prevent further increase of pollution load in these areas. To check industrial pollution, source-specific environmental standards have been notified by the government. To strengthen the compliance mechanism, the Corporate Responsibility for Environment Protection recommendations have been reviewed. In order to monitor the progress of compliance by each sector, it is purposed to constitute national task forces. Other regulatory measures undertaken by Ministry of Environment and Forests towards effective control of pollution include random inspection of industries through the Environment Surveillance Squad programme and issuing directions to defaulting units.

9.32 The government is also encouraging industries to adopt clean technologies to minimize discharge of effluents on to land or into water bodies and to achieve zero liquid discharge to tackle water pollution. For zero liquid discharge, sector-specific innovative technologies are demonstrated that include preservation of hides and skin through lyophilization; utilization of hazardous and non-hazardous incinerable waste in cement kilns; and in situ bioremediation of sewage. The stipulated guidelines prescribe best practices at various levels such as manufacturer's and consumer's levels. The discharge of industrial effluents is regulated as per Sections 25 and 26 of the Water (Prevention and Control of Pollution) Act 1974. Existing pollution abatement infrastructure in the country provides adequate treatment facilities to various streams of pollution generated by industries and domestic effluents.

## Technology and Energy efficiency in manufacturing

9.33 The Annual Survey of Industries (ASI) provides information on the organized factory sector (employing 10 or more workers if using power) in terms of a variety of parameters. Technological depth of organized manufacturing, defined in terms of increase in share of value added, indicates a worsening trend in organized manufacturing during the post-reform period. The share of inputs as per cent to output actually increased from 77.2 per cent during 1981-91 to 77.3 per cent during 1991-2001 and further to over 80 per cent in the last decade. This indicates that the growth of Indian industry in general, particularly the organized manufacturing sector, was largely driven by increase in use of inputs. There has, however, been significant improvement in use of energy. The ratio of expenditure on fuel to output declined from 8.2 per cent during 1981-91 to 7.0 per cent during 1991-2001 and further to 4.3 per cent in 2009-10. Industry is becoming increasingly conscious of energy efficiency (Table 9.13).

9.34 The number of persons engaged in organized manufacturing also increased from an average of 7.95 million in 1981-91 to an average of 8.98 million during 1991-2001 and further to 11.79 million in 2009-10. This is in contrast to a decline in workforce in manufacturing as a whole, covering both the organized and unorganized sectors. However, the ratio of total emoluments to output declined from 8.75 per cent during 1981-91 to 3.95 per cent in 2009-10, the most recent year for which ASI data is available. There has been an increase in profitability in organized manufacturing, with the ratio of profit to output increasing from 3.52 per cent in 1981-91 to 10.72 per cent in 2007-8. However, thereafter there has been a moderation in the ratio of profit to output to 8.67 per cent in 2009-10. Profitability of organized manufacturing seems to be considerably dependent on the rate of interest on its outstanding credit (Figure 9.6) and emoluments paid to workers. A trend of moderating interest rate from 1998-9 until 2007-8 resulted in the ratio of profit to output increasing from 6 per cent to 10.7 per cent. Hardening of interest rates in 2008-9 substantially reduced the ratio of profit to output. The decline in rate of interest, however, did not result in any improvement in profit/output ratio in 2009-10.

**Table 9.13 : Some Key Parameters of Organized Manufacturing in India**

| CHARACTERISTICS | 1981-1991 | 1991-2001 | 2001-2006 | 2006-2007 | 2007-2008 | 2008-2009 | 2009-2010 |
|---|---|---|---|---|---|---|---|
| Number of factories | 101905 | 127431 | 132419 | 144710 | 146385 | 155321 | 158877 |
| Value of output (₹ billion) | 1450 | 6469 | 13923 | 24085 | 27757 | 32728 | 37228 |
| In per cent | | | | | | | |
| Input/ output | 77.20 | 77.26 | 81.04 | 80.89 | 80.09 | 81.32 | 81.54 |
| Fuel/output | 8.21 | 7.01 | 5.76 | 4.99 | 4.67 | 4.65 | 4.34 |
| Capital invested/labour (₹ '000) | 133 | 498 | 872 | 1037 | 1225 | 1355 | 1638 |
| Emoluments/output | 8.75 | 6.18 | 4.35 | 3.68 | 3.80 | 3.96 | 3.95 |
| Profit/output | 3.52 | 5.58 | 7.44 | 10.02 | 10.72 | 9.07 | 8.67 |
| Interest Rate of Interest | 11.90 | 15.31 | 11.96 | 9.64 | 11.34 | 12.80 | 11.06 |

***Source*** **: MOSPI**

**Figure 9.6 Rate of interest and ratio of profit to output of manufacturing sector**




## Industrial Policy

### National Manufacturing Policy (NMP)

9.35 The report of the Prime Minister's Group, constituted to look into the measures for ensuring growth of the manufacturing sector, submitted in 2008 had recommended the putting in place a well structured manufacturing-sector policy to attain sustained 12-14 per cent growth in this sector. The government released the NMP on 4 November 2011 for bringing about a quantitative and qualitative change with the objectives to (i) increase manufacturing-sector growth to 12-14 per cent over the medium term; (ii) enable manufacturing to contribute at least 25 per cent of GDP by 2022; (iii) create 100 million additional jobs in the manufacturing sector by 2022; (iv) create appropriate skill sets among the rural migrant and urban poor for their easy absorption in manufacturing; (v) increase domestic value addition and technological depth in manufacturing; and (vi) enhance global competitiveness of Indian manufacturing.

9.36 The NMP was finalized after extensive consultations with the stakeholders and inputs from industry, state governments, and experts in the field of manufacturing, technology development, and business environment. The NMP envisages simplification of business regulations without diluting their intent. Recognizing the importance of small and medium enterprises (SMEs) in the country's economy, the policy contains dedicated interventions for SMEs in addition to other interventions for manufacturing industry generally. These interventions relate primarily to technology upgradation; adoption of environment-friendly technology; and equity investments. Skill development, to make young people employable, has been given high priority in the policy through fiscal incentives for the private sector and government schemes. National investment and manufacturing zones (NIMZs) are also provided for on lands which are degraded and uncultivable. NIMZs are envisaged as integrated industrial townships with world class physical and social infrastructure (Box 9.3). The NMP, which is the first such dedicated policy measure for the manufacturing sector in the country, is expected to change the manufacturing landscape of the Indian economy through increased capital formation; industrial infrastructure of global standards; technology upgradation; creation of innovation and vocational skill development infrastructure; and industry, worker, and environment-friendly regulations.

9.37 In order to ensure effective implementation of the NMP, manufacturing policy review mechanisms will be instituted. The NMP also provides for constitution of a high-level Manufacturing Industry Promotion Board (MIPB) to ensure coordination amongst central ministries and state governments.

### Draft National Policy on Electronics 2011 (NPE 2011)

9.38 The draft National Policy on Electronics, which was released on 3rd October 2011, provides a roadmap for the development of the sector in the country. The draft policy envisions creating a globally competitive electronics system design and manufacturing (ESDM) industry including nano-electronics to meet the country's needs and serve the international market. The salient points of the draft NPE 2011 include the following:

- **Multi-fold growth in production, investment, and employment:** For achieving a turnover of

**Box 9.3 : NIMZs**

- The NMP provides for the development of NIMZs as integrated industrial townships with state-of-the-art infrastructure and land use on the basis of zoning; clean and energy-efficient technology; necessary social infrastructure; and skill development facilities to provide a productive environment to persons transiting from the primary sector to the secondary and tertiary sectors. Key features of the proposed NIMZs are as follows:
- The state government would be responsible for selection of suitable land having an area of 5,000 ha in size
- At least 30 per cent of the total area proposed under NIMZs will be utilized for location of manufacturing units
- An special purpose vehicle (SPV) will be constituted to discharge the affairs of the NIMZ
- The state government would facilitate the provisioning of water, power connectivity, and other infrastructure and utilities linkages.
- The central government will bear the cost of master planning and will improve/provide external physical infrastructure linkages to NIMZs including rail, road (national highways), airports, and telecommunications in a time-bound manner.
- The central government will provide financial support in the form of viability gap funding (VGF) not exceeding 20 per cent of project costs.
- Soft loans from multilateral financial institutions will be explored and the developers of NIMZs will be allowed to raise external commercial borrowings (ECBs) for developing internal infrastructure of the NIMZs.

about US $ 400 billion by 2020 involving an investment of about US $ 100 billion and employment opportunities to around 28 million people in the ESDM sector, the following specific initiatives are proposed:

- Setting up of semiconductor wafer fabs for manufacture of semiconductor chips.
  - A Modified Special Incentive Package Scheme providing for the disabilities in manufacturing in the sector.
  - An Electronic Manufacturing Clusters Scheme for about 200 clusters with world class infrastructure.
  - Preferential market access for domestically manufactured electronic goods to address strategic and security concerns and consistent with international commitments.
  - Provide for 10-year stable tax regime.
- **Semiconductor chip design industry:** Building on the emerging chip design and embedded software industry to achieve global leadership and a turnover of US$ 55 billion by 2020.
- **Multi-fold growth in Export:** To increase export from US$ 5.5 billion to US$ 80 billion by 2020.
- **Human resource development:** Significantly enhancing availability of skilled manpower, in scale and scope, including in emerging technology areas, by active participation of the private sector and thrust on higher education. It includes creation of about 2,500 PhDs annually by 2020.
- **Standards:** Developing and mandating standards for electronic products.
- **Security Eco-system:** Creating a completely secure cyber eco-system in the strategic use of electronics.
- **Sourcing for strategic sectors:** Creating long-term partnerships between the ESDM industry and strategic sectors like defence, space, and atomic energy.
- **Research and Development (R&D) and Innovation:** To become a global leader in creating intellectual property in the ESDM sector by increasing fund flow for R&D seed capital and venture capital for start-ups in the ESDM and nano-electronics sectors.
- **To develop core competencies in identified sectors such as** automotive electronics, avionics, LED, industrial electronics, medical electronics, solar photovoltaic and information and broadcasting through use of ESDM.
- **National Electronic Mission (NEM):** A NEM will be set up with industry participation, as an institutional mechanism to formulate policy, implement approved policy, and promote 'Brand India' in electronics.

## Micro, Small, and Medium Enterprises (MSME) Sector

9.39 The MSME is a dynamic and vibrant sector that nurtures entrepreneurial talent besides meeting social objectives including that of providing employment to millions of people across the country. Some major initiatives that have been taken by the government in 2011-12 to revitalize the MSME sector are as follows:

(i) The government has recently approved the public procurement policy for goods produced and services rendered by MSEs by the central ministries/departments/public-sector undertakings (PSUs). The policy envisages that every central ministry/PSU shall set an annual goal for procurement from the MSE sector at the beginning of the year, with the objective of achieving an overall procurement goal of minimum 20 per cent of total annual purchases of products or services from MSEs in a period of three years. A sub-target of 4 per cent is also to be earmarked for procurement from MSEs owned by scheduled caste/scheduled tribe (SC/ST) entrepreneurs.

(ii) The Securities and Exchange Board of India (SEBI) has permitted setting up of a stock exchange / trading platform for SMEs by a recognized stock exchange having nationwide trading terminals and also issued guidelines and necessary amendments to the SEBI Regulations. The Bombay Stock Exchange (BSE) and National Stock Exchange (NSE) have been given final approval for launching SME platforms on 27 September 2011 and 14 October 2011 respectively. With the operationalization of SME exchanges / platforms, Indian SMEs would find an opportunity to raise funds from capital markets.

(iii) In line with the overall target set by the Prime Minister's National Council on Skill Development, the Ministry of MSME and the agencies under it will conduct skill development programmes for 4.78 lakh persons during 2011-12. Further, the Ministry aims to train 5.72 lakh persons in the year 2012-13 through its various programmes for development of self-employment opportunities as well as wage employment opportunities in the country.

(iv) The government has adopted the cluster approach as a key strategy for enhancing the productivity and competitiveness as well as capacity building of MSEs and their collectives in the country. During the year 2011-12 (up to 31 January 2012), 8 new clusters were taken up for diagnostic study, 5 for soft interventions, and 4 for setting up of common facility centres (CFCs). With this, a total of 477 clusters have so far been taken up for diagnostic study, soft interventions, and hard interventions. Apart from these clusters, 134 infrastructure development projects have also been undertaken.

## Cental Public-sector Enterprises (CPSEs)

9.40 Policy developments for CPSEs mainly relate to increased delegation of financial and operational powers and revival of CPSEs. With a view to delegating enhanced financial and operational powers to CPSEs, the government introduced the Navratna Scheme in July 1997. In December 2010, the Government introduced the Maharatna Scheme enhancing financial delegation to CPSEs. Coal India Limited and Neyveli Lignite Corporation Limited were conferred Maharatna and Navratna status respectively in 2011 and the number of CPSEs under these categories increased to 5 and 16 respectively. In December 2004, the government established a Board for Reconstruction of Public Sector Enterprises (BRPSE) to advise on revival / restructuring of sick and loss-making CPSEs. The BRPSE has made recommendations in respect of 62 CPSEs until 31 October 2011. The government, in turn, has approved proposals for revival of 43 CPSEs and closure of two. The total assistance approved by the government in this regard up to 31 October 2011 is ₹ 25,104 crore (₹ 3,873.86 crore as cash assistance and ₹ 21,230.67 crore as non-cash assistance). Out of the 43 CPSEs approved for revival by the government, 13 turnaround CPSEs have posted profit before tax (PBT) consecutively for three or more years.

## Industrial Growth By Sectors

### Textile-sector production

9.41 The textile sector has so far remained subdued during the current financial year. The total cloth production has declined by 4.74 per cent during April-December 2011. The decline in production has

**Table 9.14 : Production of Fabrics/Cloth (million sq. m)**

| Sector | 2007-2008 | 2008-2009 | 2009-2010 | 2010-2011(P) | April - December | |
|---|---|---|---|---|---|---|
| | | | | | 2010-2011(P) | 2011-2012(P) |
| Mill sector | 1781 | 1796 | 2016 | 2205 | 1643 | 1656 |
| | (2.00) | (0.84) | (12.25) | (9.38) | | (0.79) |
| Handloom | 6947 | 6677 | 6806 | 6949 | 5100 | 5178 |
| | (6.30) | (-3.90) | (1.93) | (2.10) | | (1.53) |
| Power loom | 34725 | 33648 | 36997 | 37929 | 28566 | 27841 |
| | (5.60) | (-3.10) | (9.95) | (2.52) | | (-2.54) |
| Hosiery | 11804 | 12077 | 13702 | 14647 | 11055 | 9464 |
| | (2.60) | (2.30) | (13.46) | (6.90) | | (-14.39) |
| Others | 768 | 768 | 812 | 812 | 599 | 599 |
| | (6.10) | (0.00) | (5.73) | (0.00) | | (0.00) |
| Total cloth production | 56025 | 54966 | 60333 | 62542 | 46963 | 44738 |
| | (4.94) | (-1.89) | (9.76) | (3.66) | | (-4.74) |

***Source*** **: Office of the Textile Commissioner, Mumbai.**
***Notes*** **: P - Provisional, Figures in brackets indicate percentage change.**

been due to two major segments, namely power loom (-2.54 per cent) and hosiery (-14.89 per cent). Cloth production by the mill and handloom sectors increased by 1 per cent and 2 per cent respectively during the period (Table 9.14) During April – December 2011, man-made fibre production and filament yarn production recorded a decrease of about 2 per cent and 7 per cent respectively. Production of cotton yarn decreased by 13 per cent during this period. However, blended and 100 per cent non-cotton yarn production increased by 5 per cent .

## Exports

9.42 Textiles and clothing worth US $26.82 billion were exported during 2010-11 as against US$ 22.41 billion during 2009-10, registering an increase of about 19.66 per cent. During April-November 2011, exports of textiles & clothing were of the order of US$ 19.78 billion as against US$15.86 billion during the same period of 2010, registering a considerable growth of 24.73 per cent. In respect of global exports of clothing, India ranked sixth largest exporter as per the World trade Organization (WTO) (2010 release), trailing Turkey, Bangladesh, Hong Kong, EU-27, and China. In respect of global exports of textiles, India ranked third, trailing EU-27 and China.

9.43 In view of the recessionary trend in the textiles sector, the government has been supporting the textiles sector exports through various policy initiatives to enable the sector to increase market share in the global textiles markets. Government has introduced several export promotion measures in the Union Budget 2011-12 as well as through schemes of the Foreign Trade Policy 2009-14, including incentives under the Focus Market Scheme and Focus Product Scheme; enhancing the coverage of the Market Linked Focus Product Scheme for textile products; and extension of the Market Linked Focus Product Scheme to increase India's market share in various countries.

## Chemicals, petrochemicals, and fertilizers

### *Chemicals*

9.44 Major chemicals undergo several stages of processing to be converted into downstream chemicals. These processed chemicals are used in agriculture and industry as auxiliary materials such as adhesives, unprocessed plastics, dyes, and fertilizers. Chemicals are also directly used by consumers in the form of pharmaceuticals, cosmetics, household products, paints, etc. Alkali chemicals, inorganic chemicals, and organic chemicals constitute the major segments of the chemicals industry. Production of major chemicals during April-November 2011 has been comparatively higher except for pesticides and insecticides and dyes and dyestuff. Total output for the sector is higher by 1.77 per cent (Table 9.15).

### *Petrochemicals*

9.45 Petrochemicals include synthetic fibres, polymers, elastomers, synthetic detergents, and performance plastics, apart from their intermediates such as synthetic fibre intermediates, synthetic

**Table 9.15 : Production of Major Chemicals**

(000' MT)

| Years | Alkali chemicals | Inorganic chemicals | Organic chemicals | Pesticides & insecticides | Dyes & dyestuffs | Total major chemicals |
|---|---|---|---|---|---|---|
| 2008-09 | 5427 | 513 | 1,254 | 85 | 32 | 7311 |
| 2009-10 | 5602 | 518 | 1,281 | 82 | 42 | 7525 |
| 2010-11 | 5981 | 572 | 1,342 | 85 | 47 | 8027 |
| 2010-11 (Apr-Nov) | 3876 | 365 | 867 | 56 | 32 | 5196 |
| 2011-12 (Apr-Nov) | 3944 | 374 | 892 | 49 | 28 | 5288 |

***Source*** **: Department of Chemicals and Petrochemicals.**
***Note*** **: MT= metric tonne.**

**Table 9.16 : Production of Major Petrochemicals**

(000' MT)

| Years | Synthetic fibers | Polymers | Elastomers | Synthetic detergent intermediates | Perfor-mance plastics | Total major Petro-chemicals |
|---|---|---|---|---|---|---|
| 2008-9 | 2343 | 5060 | 96 | 552 | 141 | 8193 |
| 2009-10 | 2601 | 4791 | 106 | 618 | 172 | 8287 |
| 2010-11 | 2791 | 5292 | 95 | 638 | 191 | 9007 |
| 2010-11(Apr.-Nov.) | 1824 | 3450 | 65 | 422 | 124 | 5915 |
| 2011-12(Apr.-Nov.) | 1780 | 3724 | 58 | 414 | 114 | 6090 |

***Source*** **: Department of Chemicals and Petrochemicals.**

detergent intermediates, olefins, and aromatics. The main sources of feedstock and fuel for petrochemicals are natural gas and naphtha. Petrochemical products cover the entire spectrum of daily-use items ranging from clothing, housing, construction, furniture, automobiles, household items, toys, agriculture, horticulture, irrigation, and packaging to medical appliances. The production of major petrochemicals in primary form from 2008-9 onwards is given in Table 9.16. During April-November 2011-12 major petrochemicals have increased by 2.95 per cent. The production of synthetic fibers, which is the second largest segment of the petrochemicals sector, has declined during the current year.

## *Fertilizers*

9.46 India is meeting 80 per cent of its urea requirement through indigenous production but is largely import dependent for its requirements of phosphatic and potassic (P & K) fertilizers either as finished fertilizers or raw materials. Its entire potash requirement, about 90 per cent of phosphatic requirement, and 20 per cent urea requirement is met through imports. In addition to urea, 25 grades of P & K fertilizers namely di ammonium phosphate (DAP), muriate of potash (MOP), mono-ammonium phosphate (MAP), triple super phosphate (TSP), ammonium sulphate (AS), single super phosphate (SSP) and 18 grades of NPKS complex fertilizers are provided to farmers at subsidized prices under the Nutrient Based Subsidy (NBS) Policy. Farmers pay only 50 per cent of delivered cost of P & K fertilizers, the rest is borne by the Government of India in the form of subsidy. The Government has also included seven new grades of NPKS complex fertilizers under the NBS Policy. At present 25 grades of P & K fertilizers are under the NBS Policy.

9.47 The domestic production of urea in the year 2010-11 was 218.80 lakh MT as compared to 211.12 lakh MT in 2009-10. The production of DAP decreased sharply in 2010-11 to 35.37 lakh MT as

**Table 9.17 : Production and Imports of Fertilizers**

(lakh MT)

| Year | Production | | | Imports | | |
|---|---|---|---|---|---|---|
| | 2009-2010 | 2010-2011 | 2011-2012* | 2009-2010 | 2010-2011 | 2011-2012* |
| Urea | 211.12 | 218.80 | 222.88 | 52.09 | 66.09 | 56.43 |
| DAP | 42.46 | 35.37 | 39.41 | 58.89 | 74.09 | 53.00 |
| Complex fertilizers | 80.38 | 87.27 | 90.69 | - | - | - |
| MOP | Nil | Nil | Nil | 52.86 | 63.57 | 24.91 |

**Source : Department of Chemicals and Petrochemicals.**
***Note* : * Estimated.**

compared to 42.46 lakh MT in 2009-10. The estimated production of urea is projected at 222.88 lakh MT and that of DAP and complexes at 39.41 lakh MT and 90.69 lakh MT respectively in 2011-12. Availability of raw materials/intermediates has been a major bottleneck towards increase in production. The Department of Fertilizers has arranged timely imports of urea and other fertilizes to ensure timely availability of fertilizers in required quantity. The production and imports of urea, DAP, and complex fertilizers during 2009-10 to 2011-12 is given in Table 9.17.

## Food Processing

9.48 Food processing is one of the most heterogeneous sectors of manufacturing covering marine products, dairy products, grain, meat products, fruits and vegetables, sugar, edible oils and beverages. This sector has, however, been one of the fastest-growing segments in manufacturing in the current year contributing 27 per cent to average industrial growth, more than three times its weight in the IIP. Growth rates of some of the important products in this group are indicated in table 9.18.

9.49 A vibrant agrarian and rural economy requires establishing forward linkages in the form of the food-processing industries. Such linkages improve the income levels of the producers and help reduce wastages, which are crucial for food and livelihood security. A recent study by the Central Institute for Post Harvest Engineering Technology (CIPHET) in 2010 has assessed that the post harvest losses of agricultural products amount to around ₹ 44,000 crore annually. The Ministry of Food Processing Industries formulates appropriate policies and implements targeted schemes to reduce wastage and increase

**Table 9.18 : Rate of Growth of Output of Key Processed Food Products**

(Per cent)

| | 2006-2007 | 2007-2008 | 2008-2009 | 2009-2010 | 2010-2011 | 2011-2012 (Apr.-Dec.) |
|---|---|---|---|---|---|---|
| Sugar | 30.8 | 15.2 | -33.9 | -6.0 | 30.2 | 38.3 |
| Fruit pulp | -22.4 | 87.0 | -2.0 | 5.0 | 35.1 | 30.4 |
| Fruit juices | 26.6 | 20.9 | 41.0 | 46.6 | 16.8 | 26.0 |
| Cashew kernels | 64.8 | 8.4 | -4.2 | -0.9 | -7.9 | 22.2 |
| Instant food mixes | 24.3 | 30.8 | 19.4 | 20.8 | 10.6 | 17.9 |
| Mineral water | 21.0 | 29.4 | 6.9 | 28.3 | 19.9 | 15.4 |
| Chocolate | 28.4 | 8.9 | 24.2 | 11.3 | 13.7 | 13.3 |
| Malted foods | 6.1 | 8.5 | -36.8 | -8.8 | 8.4 | 6.4 |
| Butter | -6.2 | 4.8 | 3.4 | -22.7 | -4.7 | 0.1 |
| Biscuits | 14.1 | -0.9 | 29.2 | 10.4 | -1.4 | -1.6 |
| Frozen meat | -39.6 | -12.9 | 76.8 | 27.4 | -21.8 | -1.7 |

***Source* : MOSPI**

**Box 9.4 : Major Schemes Implemented by the Ministry of Food Processing Industries**

**I. Infrastructure development**

**Mega food parks (MFPs)**

- Ten MFPs were approved in the first phase
- Five MFPs were approved in the second phase
- Proposals have been invited for additional 15 MFPs
- Each of these MFPs is likely to consist of 30-40 food-producing units in the cluster.

**Cold chain, value addition and preservation infrastructure**

- Eight of the 10 projects approved in the first phase in 2008-9 have started commercial production.
- Thirty-nine projects approved in the second phase in 2011-12.
- Likely to reduce wastage especially among perishable food products.

**Modernization and setting up of abattoirs**

- Ten projects assisted so far with a grant assistance of ₹ 35.74 as on 31.01.2012.
- Two projects completed so far as on 31.01.2012.
- Focuses on hygienic and more humane slaughtering of animals.

**II. Technology upgradation, establishment/ modernization of FPIs**

- 852 units have been assisted with a grant of ₹ 135.87 crore during 2011-12 (April-January).

**III. Quality assurance, codexsStandards, R&D, and promotional activities in 2011-12**

- Five projects for setting up /upgradation of food-testing labs approved.
- Two proposal for implementation of HACCP/ISO certification of units approved.
- Eight Proposals for R&D approved.

**IV. Human resources development during 2011-12**

- One proposal for creation of infrastructure facilities,
- Twenty-five proposals for setting up of Food Processing Training Centres (FPTCs)
- One hundred and thirty-two Entrepreneurship Development Programmes have been held

**V. Strengthening of institutions as Centres of Excellence The following institutions have been strengthened**

- Indian Institute of Crop Processing Technology, Thanjavur
- National Institute of Food Technology and Entrepreneurship Management, Kundli, Haryana
- Indian Grape Processing Board
- National Meat and Poultry Processing Board

value addition in the food chain. By catalysing investment in this sector, the Ministry has helped create employment opportunities and upgraded human capital formation in the rural sector. Consumers are also benefitted by getting a wider and healthier choice of food products at affordable prices.

## Steel

9.50 India ranked as the fourth largest producer of crude steel in the world during January-November 2011 after China, Japan, and the USA. After a sharp increase in world consumption of finished steel in 2010 (15 per cent), the consumption is estimated to slow down to 6.5 per cent for 2011 and 5.4 per cent in 2012 as per World Steel Association estimates. The country has also been the largest sponge iron producer in the world since 2002. Domestic crude steel production grew at a compounded annual growth rate (CAGR) of 8.4 per cent during 2006-7 to 2010-11 (Table 9.19). The increase in production is driven by 8.8 per cent growth in crude steel capacity mainly in the private-sector plants and high utilization rates during this period.

9.51 The Indian steel industry has diversified its product mix to include sophisticated value-added steel used in the automotive sector, heavy machinery, and physical infrastructure. Despite the softening of

**Table : 9.19 Production, Consumption, Import, and Export of Total Finished Steel and Pig Iron**

**(million tonnes)**

| | Item | 2006-2007- | 2007-2008- | 2008-2009- | 2009-2010- | 2010-2011 | Change over 2009-2010* |
|---|---|---|---|---|---|---|---|
| Production for sale | TFS | 52.53 | 56.07 | 57.16 | 60.62 | 66.01 | 8.98 |
| | PI | 4.93 | 5.28 | 6.21 | 5.88 | 5.54 | - 5.78 |
| Import | TFS | 4.93 | 7.03 | 5.84 | 7.38 | 6.79 | -7.99 |
| | PI | 0.03 | 0.11 | 0.08 | 0.11 | 0.09 | -18.00 |
| Export | TFS | 5.24 | 5.08 | 4.44 | 3.25 | 3.46 | 6.45 |
| | PI | 0.71 | 0.56 | 0.35 | 0.36 | 0.36 | 0 |
| Real consumption** | TFS | 46.78 | 52.12 | 52.35 | 59.34 | 65.61 | 10.6 |
| | PI | 4.33 | 4.62 | 5.87 | 5.53 | 5.15 | -6.87 |

***Source*** **: Joint Plant Committee, Ministry of Steel.**

***Notes*** **: TFS = total finished steel (both alloy and non-alloy);**

**PI = pig iron; * Provisional; **Adjusted for stock variation and double counting.**

industrial demand as reflected in a 4.4 per cent growth in real consumption of total finished steel during April–December, 2011 over the same period of last year, the overall April-December 2011 performance of the Indian steel industry is optimistic. In 2011, it was faced with stiff challenges posed by rising inflationary pressures at home and deteriorating global growth conditions. The multiple hikes in interest rates by the central bank also impacted the industry's growth directly and indirectly through their effect on the growth of key user industries. Raw material security (e.g. getting iron ore mining lease), infrastructure (affecting logistics and transport), quality of coking coal, and uncertainties in land acquisition have emerged as bottlenecks to setting up new steel plants.

## Heavy industries

9.52 The Department of Heavy Industry monitors the performance of the automotive sector, heavy electrical engineering, heavy engineering equipments and machine tools industry. As per the Society of Indian Automobile Manufacturers (SIAM) actual production of passenger vehicles was 2.9 per cent higher during April-November 2011 as compared to the same period in the previous year. Likewise production of commercial vehicles was higher by 25.9 per cent. Overall automotive-sector output increased by 15.5 per cent during April-November 2011. While domestic sales of passenger vehicles contracted by 0.5 per cent, commercial vehicles sales increased by a robust 20.0 per cent. Exports of all categories of vehicles covering passenger vehicles, commercial vehicles, and others increased by 21 per cent, 26 per cent, and 33 per cent respectively during April-November 2011.

9.53 The heavy electrical engineering industry is an important manufacturing sector, catering to the needs of the power sector and other industrial sectors. Major equipment like boilers, turbo generators, turbines, transformers, condensers, switch gears and relays, and related accessories is manufactured by this sector. The performance of this industry is closely linked to the power generation capacity addition programme of the country. Manufacturers of heavy electrical equipment have absorbed sub-critical technology up to a unit capacity of 600 MW and are gearing up to adopt super-critical technology for unit size of 660/800MW and above for thermal sets.

## Electronics hardware

9.54 Indian electronics hardware production increased from ₹ 1,10,720 crore in 2009-10 to ₹ 1,21,760 crore in 2010-11 (estimated), registering a growth of 10 per cent. During the year 2010-11 exports of electronics hardware are estimated to have registered a growth of 56 per cent in rupee terms (62.42 per cent in US dollars) over the preceding year. In value terms, exports of electronics hardware are estimated to be ₹ 40,400 crore (US$ 8.9 billion)

**Table 9.20 : Performance of CPSEs during 2010-11**

(₹ crore)

| Sl. No. | Particulars | 2010-11 | 2009-10 | % change over previous year |
|---|---|---|---|---|
| 1. | Investment | 666848 | 580784 | 14.82 |
| 2. | Capital employed | 950449 | 909285 | 4.53 |
| 3. | Total turnover | 1473319 | 1244805 | 18.36 |
| 4. | Profit of profit-making CPSEs | 113770 | 108434 | 4.92 |
| 5. | Loss of loss-making CPSEs | 21693 | 16231 | 33.65 |
| 6. | Net worth | 723128 | 659437 | 9.66 |
| 7. | Dividend declared | 35681 | 33223 | 7.40 |
| 8. | Corporate tax | 43369 | 38133 | 13.73 |
| 9. | Interest paid | 38998 | 36060 | 8.15 |
| 10. | Contribution to central exchequer | 156124 | 139918 | 11.58 |
| 11. | Foreign exchange earnings | 97004 | 84224 | 15.17 |
| 12. | Foreign exchange outgo | 522577 | 424207 | 23.19 |

***Source*** **: Department of Public Enterprises.**

during of the year 2010-11, up from the ₹ 25,900 crore (US$ 5.5 billion) estimated in 2009-10. Electronics hardware production is expected to be US$ 33 billion in 2011-12. It is projected that electronics hardware exports will cross US$ 10 billion in 2011-12 as against US$ 8.86 billion in 2010-11, an expected growth of about 12.8 per cent.

## CPSEs

9.55 There were altogether 248 CPSEs under the administrative control of various ministries/ departments as on 31 March 2011. Out of these, 220 were in operation and 28 were under construction. The share of cumulative investment (paid-up capital plus long-term loans) in all the CPSEs stood at ₹ 6,66,848 crore as on 31 March 2011,showing an increase of 14.8 per cent over 2009-10. The share of manufacturing in gross block, during 2010-11, was 27.8 per cent. The share of mining, electricity, and services in total investment, in terms of gross block, was 23.0 per cent, 25.2 per cent, and 23.2 per cent respectively. The net profit of (158) profit- making CPSEs stood at ₹ 1,13,770 crore in 2010-11. The net loss of (62) loss-making enterprises, on the other hand, stood at ₹ 21,693 crore during the same period (Table 9.20). The year also witnessed severe financial 'under-recoveries' by public-sector oil marketing companies (OMCs) as they had to keep the prices of petroleum products low in the domestic market despite high input prices of crude oil. Foreign exchange earnings of the CPSEs amounted to ₹ 97,004 crore during 2010-11, which was less than the total foreign exchange outgo of ₹ 5,22,577 crore.

## Challenges And Outlook

9.56 Industrial-sector growth during the current financial year is expected to be between 4 and 5 per cent. At this rate, the annual growth would be less than the annual growth rates achieved in the recent past and far below the potential growth rate. The challenge in the short term would, therefore, be to shore up business sentiment, spur investment in productive activities, and identify bottlenecks that can be removed in a reasonably short period of time. The government has already made some quick moves to clear bottlenecks in some critical sectors such as coal and power and is also pushing forward project implementation in some key infrastructure sectors. With the easing of headline inflation, moderation in commodities prices in the international market, and revival of manufacturing performance in recent months in the major economies, India's industrial sector is expected to rebound during the next financial year.

9.57 In the medium to long term several challenges remain. In its approach paper to the Twelfth Five Year Plan, the Planning Commission has projected growth

rates of 9.8 per cent and 11.5 per cent in the manufacturing sector required to achieve 9 per cent and 9.5 per cent economic growth respectively. The NMP, as discussed in earlier sections, has envisaged even higher growth of 14 per cent per annum so as to take the share of manufacturing in GDP to 25 per cent and increase the absorption of labour in this sector from around 50 million as of today to more than 150 million by 2022.

9.58 For the NMP to successfully meet the objective of 25 per cent share for the manufacturing sector in GDP certain specific measures are required, some of which form part of India's overall development priorities and strategies. There are several policy measures, briefly discussed here, that would have to be pursued simultaneously.

- First, there is need to resolve the issue of availability of land for industrial and infrastructure use. NIMZs are a key tool for facilitating the growth of manufacturing sector, which cannot take off in the absence of a well-thought-out and standardized approach to land acquisition. Allocation of agricultural land for manufacturing is crucially linked with the issue of agricultural productivity and food security. The situation could turn into a win-win one for both manufacturing and agriculture if agriculture productivity increases to levels where both less land and labour were required in this sector for food security.
- Second, both forward and backward linkages of the manufacturing sector will need to be strengthened for making progress on the objectives laid out in the NMP. The growth of the services sector (as distinct from the real sectors) depends considerably on the growth of manufacturing. Likewise, the growth of the services sector with quality benchmarking could contribute to productivity improvements in the manufacturing sector. Banking, insurance, trade, transport, communication, and skill development are some of the sectors where growth will be driven by a competitive and vibrant manufacturing sector. Unlike this strong forward linkage with the services sector, the backward linkage is of the weak nature with the agriculture sector due to the inadequate pace of development of agro-based industries. And as a result, the employment-generation potential of the manufacturing sector has not been fully harnessed in India.
- Third, within manufacturing, there is a need to shift structurally in favour of high value-addition industries. Specific policy thrust is required in high-precision machinery, pharmaceuticals, biotechnology, shipbuilding, defence production, and the aero-space industry, which are some of the areas that provide scope for diversification. Considerable and growing domestic demand in many of these sectors has to be leveraged for locating production facilities in the country by bringing in suitable foreign collaborators. It can provide depth to Indian manufacturing while increasing value addition from this sector. Acquiring depth in manufacturing is important not only for improving the competitiveness of manufacturing but for diversifying the industrial base.
- Fourth, investment requirements in India will continue to exceed the availability of resources from domestic savings. The investment-savings gap during 2005-11 was 1.7 per cent of GDP. The best way of covering this gap is through FDI. Though our FDI policy regime is now more open and transparent and has an institutional review mechanism, there are several sectoral issues that need to be addressed and continuously fine tuned.
- Fifth, with the implementation of the direct tax code (DTC), it would become difficult to incentivize industry through tax exemptions. In exports, the duty entitlement pass book (DEPB) scheme will get phased out. The new incentive mechanism will need to rely on providing non-tradable infrastructure services at global prices and in keeping with global standards. These would be more supply-centric and would considerably reduce the relative cost disadvantages of the domestic manufacturing sector, thereby giving a fillip to its growth.
- Sixth, the new manufacturing sector will need to be environment-friendly. Environment issues encompass exploration, excavation, and use of resources and their pricing. The resource needs of manufacturing would require a certain balancing, consistent with sustainable

protection of the environment. A more transparent policy framework for pricing and allocation of natural resources would be a natural starting point in this regard.

9.59 Lack of consolidated information and absence of a unified online service delivery platform in the current system of approvals for starting a business has made this process laborious, time-consuming, and expensive. In order to enable businesses and investors to save time and costs and in order to improve the business environment, an online single window has been conceptualized in the form of the eBiz Mission Mode Project under the National e-Governance Plan. The core value of this transformational project lies in a radical shift in the governments' service delivery approach from being department-centric to customer-centric. eBiz can not only create a 24x7 facility for information and services, but may also offer joined-up services where a single application submitted by a customer, for a number of permissions, clearances, approvals, and registrations, will be routed automatically across multiple governmental agencies in a logical manner. An inbuilt payment gateway may also add value by allowing all payments to be collected at one point and then apportioned appropriately. There is need to scale up and accelerate implementation of this initiative.

9.60 Industrial establishments have a variety of statutory obligations to discharge. The Employees Provident Fund Act; Employees State Insurance Act; Payment of Gratuity Act; Personal Injuries (Compensation Insurance) Act; Workmen's Compensation Act; etc. are some of the major laws that require not only the regular payouts by industrial units but also involve filing of periodic returns and maintenance of registers and records. This not only adds to the transaction cost of industry, it in many ways puts off a potential investor. It might be worthwhile considering an alternate mechanism, which could address the issues of SMEs' limited manpower and resources. The costly way of compliances, which is often unsatisfactory for the bigger players, for meeting statutory obligations in a more efficient and economical manner and serving the interests of both the employers and employees.