# *Industrial Production in India: 2007-08**

This analysis is based on the data on Index of Industrial Production (IIP) for 2007-08 (April-March) and industry-wise detailed production data released by the Ministry of Statistics and Programme Implementation. A detailed examination of relevant data reveals the following:

## Highlights

- During the year 2007-08, the IIP registered healthy, but at 8.3 per cent lower growth than 11.5 per cent in 2006-07.
- The moderation in IIP growth during the year was on account of a host of factors which, *inter alia*, included deceleration in manufacturing sector growth at 8.7 per cent from 12.5 per cent in 2006-07 and the base effect. The pace of growth was lower for both mining and electricity sectors as well.
- The moderation in industrial growth was spread across the seventeen manufacturing groups with eleven industry groups accounting for 56.0 per cent weight in the IIP recording either decelerated or negative growth during 2007-08.
- As per use-based classification, the only exception was capital goods sector, which recorded double-digit growth for the sixth consecutive year abetted by sustained growth in investment demand. All other sectors, however, posted decelerated growth during the year, with the consumer durables segment experiencing negative growth.

* Prepared in the Division of Industrial and Services Studies, Department of Economic Analysis and Policy, Reserve Bank of India. Previous article was published in RBI Bulletin, September 2007 issue, covering the period 2006-07 (April-March).

## I. Performance of the Indian Industry

### *I.A. Broad-based Classification*

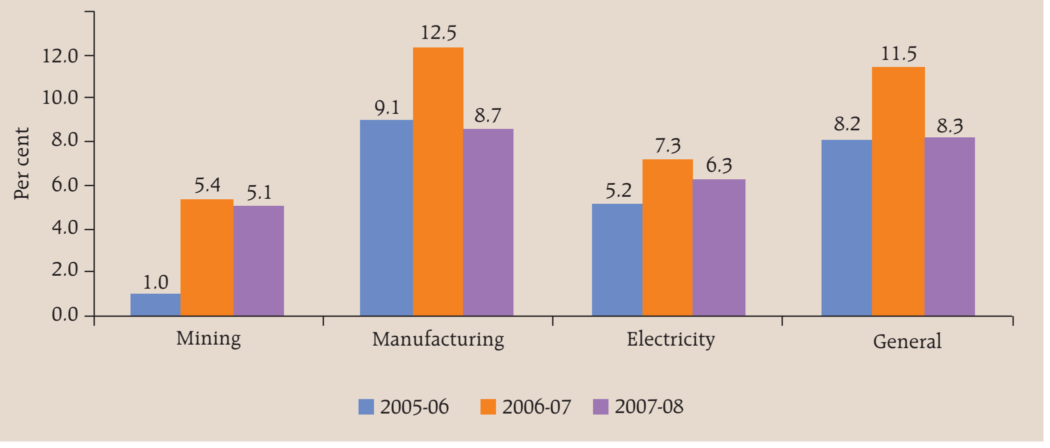
The overall moderation in economic growth during 2007-08 was also reflected in the industrial growth. After reaching a peak at 11.5 per cent during 2006-07 (the highest since 1995-96 in the base series 1993-94), the industrial growth decelerated to 8.3 per cent during 2007-08 (Chart 1 and Statement I).

The manufacturing sector, which has propelled the industrial growth in recent times lost some momentum and posted 8.7 per cent growth during 2007-08, lower than 12.5 per cent (which was the highest since 1995-96) during 2006-07 (Chart 2). Domestically, the sector faced several supply constraints emanating from strains in supply in sectors such as cement and steel, thereby restraining growth.

The electricity sector witnessed low growth in thermal, hydro and nuclear power plants. The unfavourable 'balance of plants'[1] situation specifically in the case of new units hampered the sector's performance. The secular decline in plant load factor in nuclear power plants due to shortage of uranium led to lower nuclear power generation. Further, the shortfall in targeted achievements and lower plant load factor in gas-based generation stations owing to shortage of gas fuels also contributed to sluggish performance of the electricity sector during 2007-08.

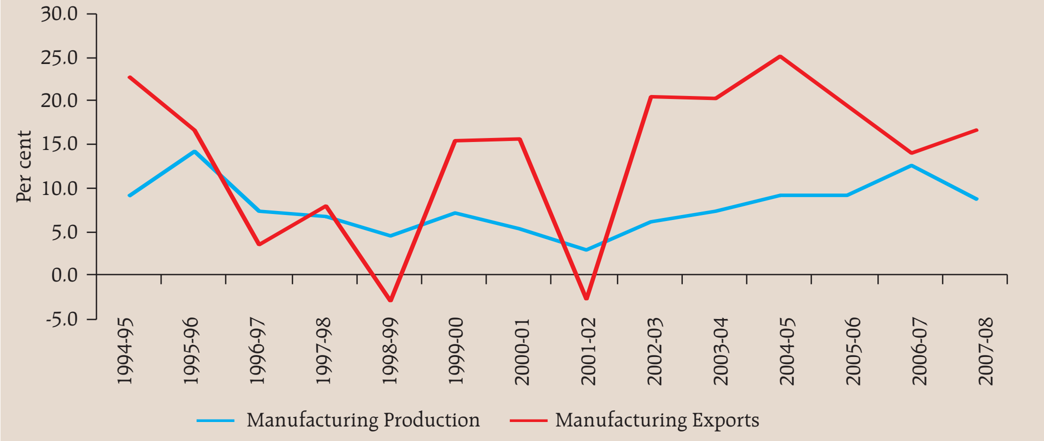
Growth in the mining sector was steady at 5.1 per cent during 2007-08, as recovery from lower growth of 1.0 per cent during 2005-06 to 5.4 per cent during 2006-07 had more or less been sustained. The relative contribution of mining to the IIP growth increased from 3.4 per cent in 2006-07 to 4.3 per cent in 2007-08

Chart 1: Growth Performance of Indian Industry: Sectoral Classification




[1] Balance of plants refers to readiness of auxiliary plants necessary for putting new thermal units into commercial operations. These auxiliary plants include coal handling, ash handling and pre-heating plants, *etc.*

Chart 2: Trend in Growth of Manufacturing Production and Exports

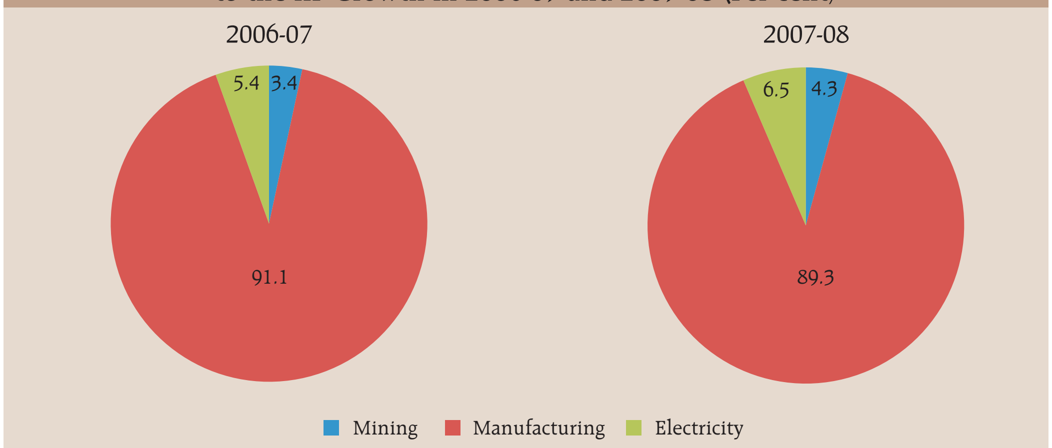



(Chart 3). The coal sector growth remained stable with new captive blocks adding to production levels. However, the crude oil production decelerated to 0.6 per cent during 2007-08 from 5.6 per cent during 2006-07, mainly on account of inadequate availability of developmental inputs, air injection problems in oil fields in the units of ONGC and less than anticipated gains from new wells.

## *I.B. Use-based Classification*

As per use-based classification, all the sectors recorded decelerated growth during the year on account of various factors including high base effect (Chart 4). Basic goods sector recorded lower growth at 7.0 per cent during 2007-08 as compared with 10.3 per cent during 2006-07. Within the basic goods sector, fertilisers, some steel products, soda ash, superior kerosene, benzene, methanol, *etc.*, recorded lower

Chart 3: Relative Contribution of Sectoral Classification of Industries to the IIP Growth in 2006-07 and 2007-08 (Per cent)



production during 2007-08 leading to its lower growth.

The intermediate goods sector growth at 12.0 per cent during 2006-07 was the highest since 1995-96. It, however, moderated to 8.8 per cent during 2007-08. The double-digit growth in production of PVC pipes and tubes, particle board, polyster fibre, viscose staple fibre, hessian, organic pigments, motor sprits, *etc.*, provided support to the growth performance of the intermediates.

The noticeable performance of capital goods sector in maintaining double- digit growth for six successive years confirms that industries have continued to enhance their production capacities. The growth of capital goods at 16.9 per cent during 2007-08, though lower than 18.2 per cent recorded in 2006-07 underlines the unabated expansionary phase of the sector. The contribution of capital goods sector to the IIP growth increased significantly from 17.6 per cent in 2006-07 to 24.0 per cent in 2007-08 (Chart 5). Robust performance of capital goods sector was abetted by strong growth in the segments, namely, diesel engines, well/off shore platform, industrial machinery, laboratory and scientific instruments, protection system/switch boards, computer system and its peripherals, process control instruments, telecommunication cables, and boilers, *etc.*

After recording double-digit growth for three successive years, the consumer goods sector witnessed marked moderation in growth at 5.9 per cent during 2007-08 from 10.1 per cent in 2006-07, primarily due to decline in production of consumer durables and some moderation in consumer non-durables sector. Consequently, the sector's contribution to the IIP growth fell from 28.5 per cent in 2006-07 to 22.8 per cent in 2007-08. The consumer durables production plummeted on account of decline in production of telephone instruments, T.V. receivers, wrist watches, motor cycles, alarm time pieces, metal utencils, single/poly phase air

Chart 4: Performance of Industry: Use-Based Classification

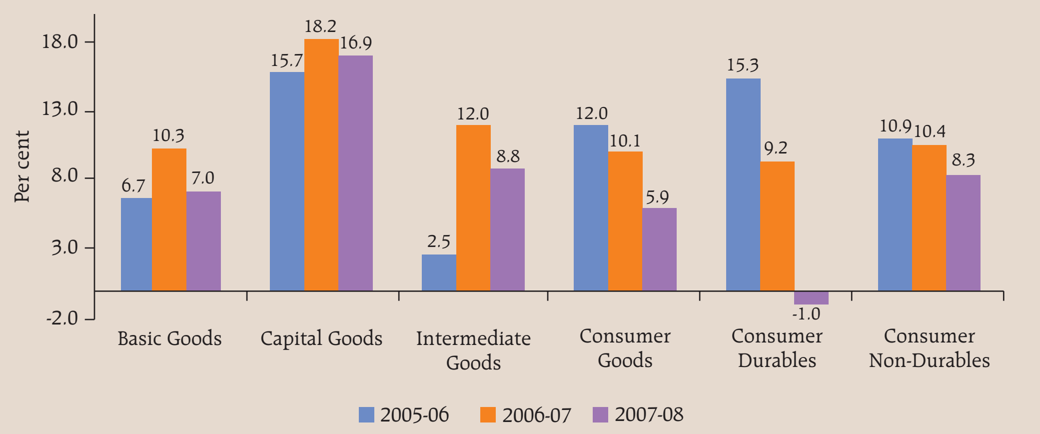
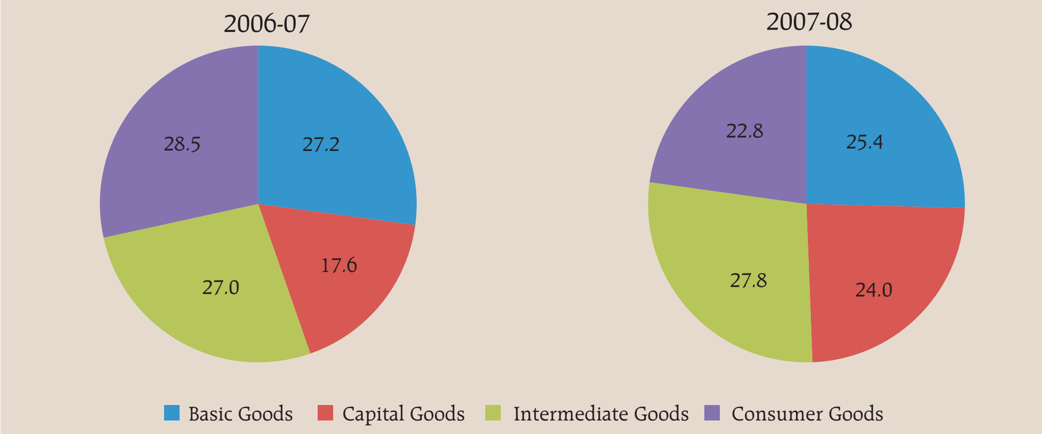


Chart 5: Relative Contribution of Use-Based Classification of Industries to the IIP Growth in 2006-07 and 2007-08 (Per cent)




conditioners and tractor tyres, *etc.* Lower growth in consumer non-durables segment was due to continued decline in production of wheat flour/maida, vitamin C, soaps, cotton seed oil, tea, vitamin A, mustard oil/rape seed oil, writing instruments, and leather garments, *etc.*

## II. Key Indicators of Industrial Activity

In line with moderation in growth, most of the key indicators of industrial activity also exhibited decelerated trend (Table 1). However, the capital goods imports remained firm during 2007-08 indicating continued focus of industry on capacity additions. On the other hand, the slowdown in consumer goods with durables recording negative growth during 2007-08 raised concerns about sustenance of the growth momentum of the industrial sector. An analysis of 26 consumer durables items in the IIP basket reveals that ten items, accounting for the weight of 2.2 per cent in the IIP and nearly 41 per cent of the weight in consumer durables recorded decline in production during 2007-08 (Table 2). Further, the increasing availability of multi-use products and replacement by newer products may have led to obsolescence and caused setback to production and demand of durables such as telephone instruments, T.V. receivers, tape recorders and typewriters, *etc.*

**Table 1: Key Indicators of Industrial Activity - Growth**

(Per cent)

| | 2006-07 | 2007-08 |
|---|---|---|
| Capital Goods Production | 18.2 | 16.9 |
| Capital Goods Imports | 32.6 * | 36.5 * |
| Production of Commercial Vehicles | 33.0 | 4.8 |
| Revenue Earning Freight Traffic of Railways | 9.2 | 9.0 |
| Cargo Handled at Major Ports | 9.5 | 11.9 |
| Cement Production | 9.1 | 8.1 |
| Finished Steel Production | 13.1 | 5.1 |
| Manufacturing Exports | 18.7 * | 19.2 * |
| Non-food credit of SCBs | 28.5 | 23.0 |

* : April-February.
**Source** : Government of India and the RBI.

**Table 2: Trends in Growth of Consumer Durables**

(Per cent)

| | Items | Weight | 2006-07 | 2007-08 |
|---|---|---|---|---|
| 1 | Telephone instruments | 6.21 | 16.5 | -22.6 |
| 2 | T.V. receivers | 4.97 | -3.4 | -1.2 |
| 3 | Wrist watches | 3.87 | -22.2 | -9.6 |
| 4 | Motor cycles | 3.80 | 14.7 | -8.6 |
| 5 | Alarm time pieces | 2.73 | -5.4 | -4.0 |
| 6 | Metalic utencils excl. pressure cookers | 1.88 | 0.3 | -4.0 |
| 7 | A.C. single phase house service meters | 1.14 | 92.3 | -7.9 |
| 8 | A.C. poly phase house service meters | 0.96 | 92.9 | -40.5 |
| 9 | Tractor tyres/ A.D.V. tyres | 0.61 | 15.5 | -8.4 |
| 10 | Tape recorders | 0.35 | -59.3 | -72.8 |
| 11 | Typewriters | 0.28 | 14.5 | -6.0 |

**Source**: Ministry of Statistics and Programme Implementation, Government of India.

The number of industry groups posting high and double-digit growth at the 4-digit level of classification was much lower in 2007-08 than that in 2006-07 (Table 3). The industrial sector faced several supply constraints emanating from shortages in cement and steel during 2007-08. Also, the prices of these commodities rose sharply during the year.

## III. Growth of 17 Manufacturing Groups (2-digit level Classification)

Moderation was witnessed across seventeen manufacturing groups with eleven industry groups accounting for 56.0 per cent weight in the IIP recording decelerated/negative growth during 2007-08 (Statement II). The growth of the manufacturing sector during the year was primarily propelled by accelerated growth in 'wood and wood products, furniture and fixtures'; 'leather and leather and fur products'; 'chemicals and chemical products'; and 'other manufacturing industries', which along with 'jute and other vegetable fibre textiles' contributed nearly 45.5 per cent to the manufacturing sector growth.

'Wood and wood products' posted impressive and accelerated growth at 38.9 per cent in 2007-08, on top of 29.1 per cent in 2006-07. Growth in this sector, however, remained negative for the last three months of 2007-08 (Chart 6). The accelerated growth in production of particle board and the turnaround in commercial plywood production

**Table 3: Frequency Distribution of Growth : 4-Digit Level**

| Growth Distribution | 2006-07 | | 2007-08 | |
|---|---|---|---|---|
| | No. of Industries | Weight | No. of Industries | Weight |
| More than 20 per cent Growth | 60 | 17.7 | 41 | 12.5 |
| Between 10-20 per cent | 59 | 26.5 | 48 | 12.6 |
| Between 5-10 per cent | 33 | 29.8 | 43 | 21.1 |
| Between 0-5 per cent | 53 | 8.2 | 81 | 32.9 |
| Negative Growth | 92 | 17.6 | 84 | 20.8 |
| Total | 297 | 99.9 | 297 | 99.9 |

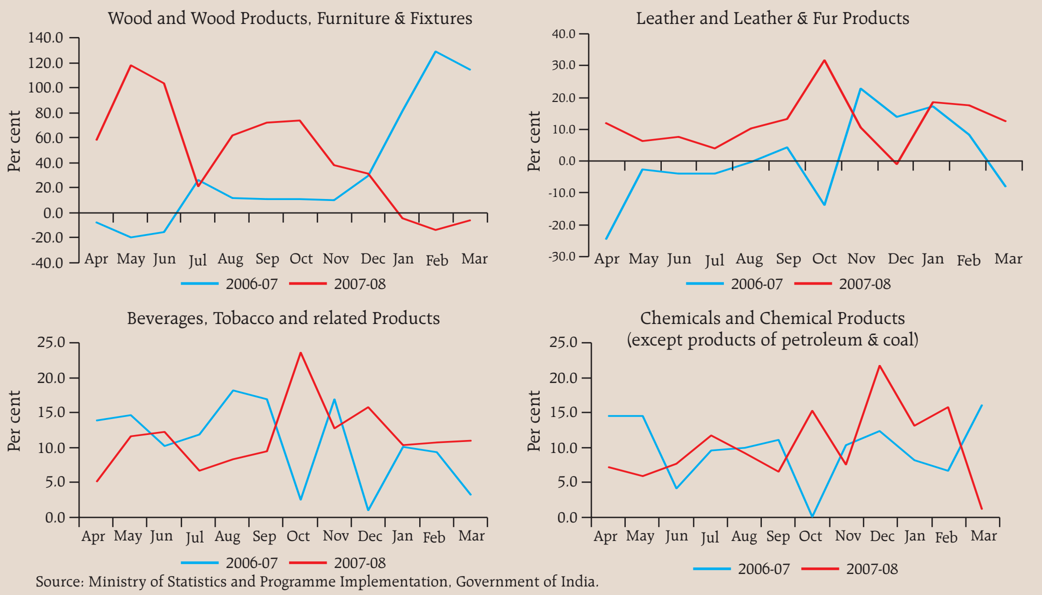
**Note** : Two industries have not been included due to data discrepancy.

**Source** : Prepared from the Production Data provided by the Central Statistical Organisation.

provided a fillip to this segment. 'Leather and leather and fur products' witnessed positive growth during the year except in December 2007, when it posted negative growth. Growth in this segment was led by a turnaround in the production of finished leather, leather footwear Indian type, shoe upper and leather garments. 'Beverages, tobacco and related products' recorded higher growth during the year mainly on account of higher production of country liquor and a turnaround in production of rectified spirit, soft drinks and soda. 'Chemical and chemical products', the dominant segment of the manufacturing industry (14.0 per cent weight in the IIP), posted double-digit growth at 10.5 per cent during 2007-08 on top of 9.6 per cent in 2006-07. The segment benefitted from higher production of polyster fibre, viscose staple fibre, endosulfan technical, metallised bopp films, hair oil/ ayurvedic hair oil, and sulpha drugs, *etc.*

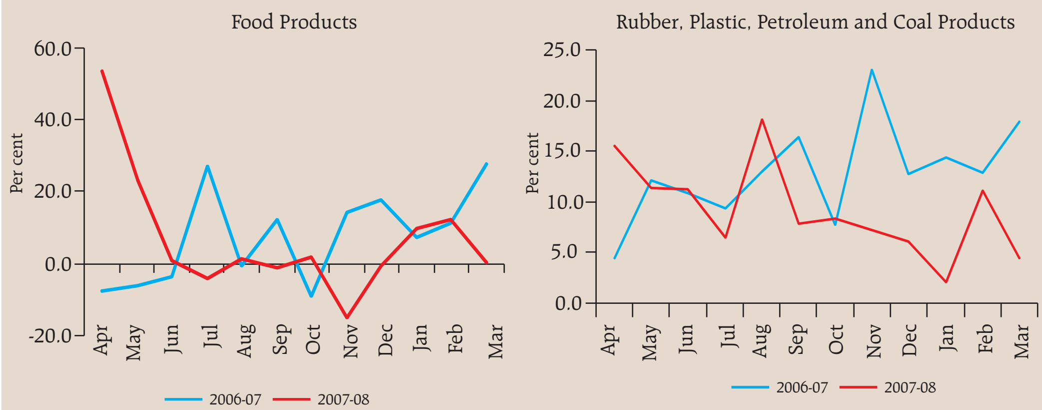
Two industry groups, namely 'rubber, plastic, petroleum and coal products', and 'food products' (with weights of 5.7 per and 9.1 per cent, respectively in the IIP), which had recorded significant acceleration during 2006-07, witnessed some moderation from 12.9 per cent and 8.5 per cent to 8.9 per cent and 6.0 per cent, respectively, during 2007-08 (Chart 7). The double-digit growth in production of sugar and coconut oil aided the food products, though decline in production of high weight items such as wheat/flour maida, mustard oil/rape seed oil and biscuits, *etc.*, caused moderation in growth. Further, double-digit growth in production of PVC pipes/tubes/sheets, motor spirits, aviation turbine fuel, *etc.*, provided support to growth of 'rubber,

Chart 6: Trends in Monthly Growth of Select Manufacturing Industry Groups which recorded accelerated growth during 2007-08




Source: Ministry of Statistics and Programme Implementation, Government of India.

Chart 7: Trends in Monthly Growth of Select Manufacturing Industry Groups which recorded decelerated but significant growth during 2007-08



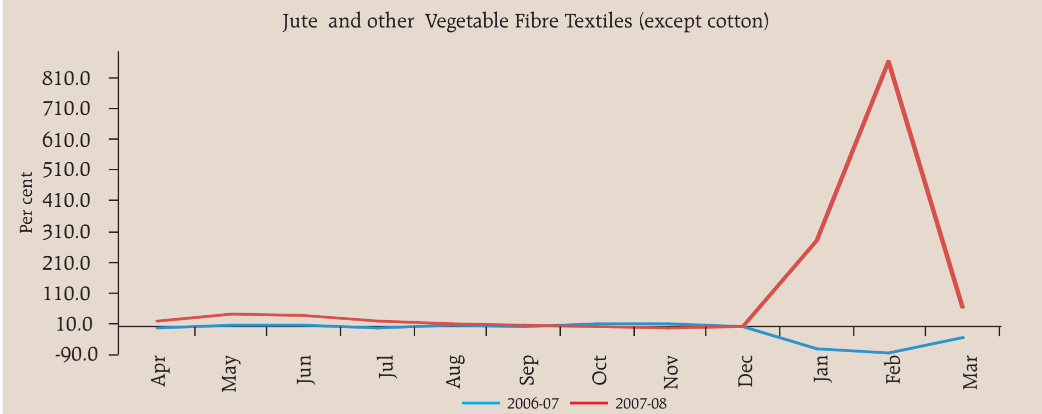

Source: Ministry of Statistics and Programme Implementation, Government of India.

plastic, petroleum and coal products.' However, decline of production of naptha, benzene, superior kerosene oil, *etc.*, slowed down the growth momentum of the group.

Only one industry group, *viz.*, 'jute and other vegetable fibre textiles' made a turnaround from negative growth in 2006-07 to positive growth in 2007-08 with exceptionally high growth in first and last quarters of the year (Chart 8). The improved production of hessian, sacking and yarn varieties was responsible for the impressive performance, which was facilitated by the Government directives for use of jute varieties for packaging of the agricultural produce.

The textiles industry exhibited dull performance during 2007-08. The 'cotton textile' industry growth decelerated sharply from 14.8 per cent in 2006-07 to 4.3 per cent during 2007-08 with a secular

Chart 8 : Trends in Monthly Growth of the Manufacturing Industry Group, which made a turnaround in 2007-08




Source: Ministry of Statistics and Programme Implementation, Government of India.

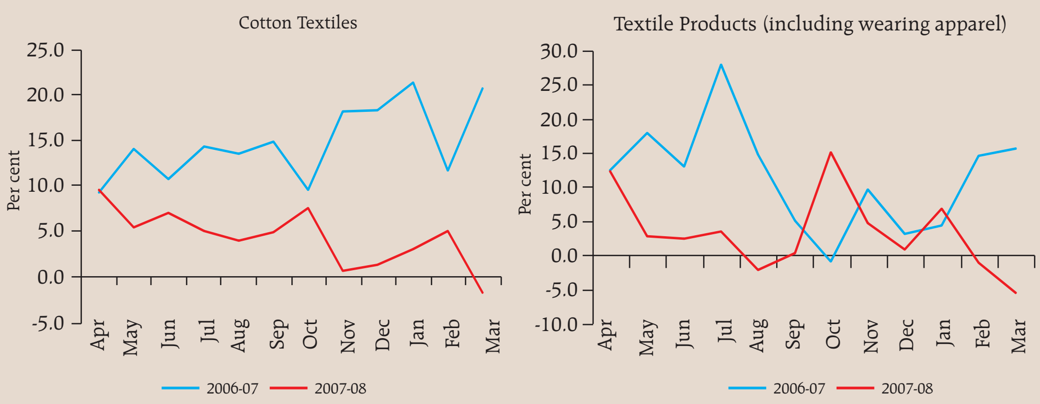
monthly decline (Chart 9). Marked deceleration in production of cotton yarn and cotton cloth contributed to this weak performance.

The four industry groups, *viz.*, 'basic metal and alloy industries'; 'non-metallic mineral products'; 'machinery and equipment other than transport equipment'; and 'transport equipment and parts' with combined weight of 25.4 per cent in the IIP, have been the mainstay of robust manufacturing growth in recent years. This is also reflected in the combined contribution of these segments to the industrial growth, which stood at 52.0 per cent in 2005-06 and 49.6 per cent in 2006-07. During 2007-08, however, these four groups recorded deceleration in the later half of 2007-08 and their contribution to growth declined to 39.4 per cent, which resulted in moderation in the overall manufacturing growth (Chart 10).

## IV. Summing Up

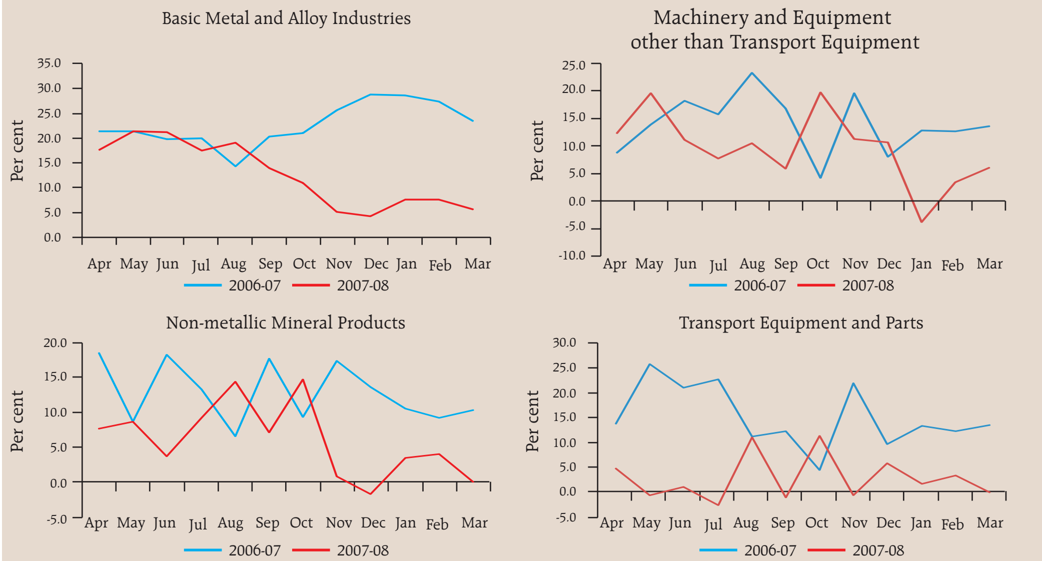
The growth in Indian industry during 2007-08 remained healthy, *albeit* with marked moderation in the second half of the fiscal on account of a host of factors including the base effect. Among the broad-based sectors, there was deceleration in manufacturing sector with both mining and electricity sectors also recording lower growth. Within the manufacturing sector, moderation in growth was spread across seventeen manufacturing groups with eleven industry groups posting either decelerated growth or decline in production. The industrial growth during 2007-08, in backdrop of exceptional growth during 2006-07, however, remains impressive. This is in view of the fact that favourable factors which characterised economic conditions in 2006-07, *viz.*, higher global growth, stable international financial markets, benign inflation conditions, record level of foreign direct

Chart 9: Trends in Monthly Growth of 'Cotton Textiles' and 'Textiles products' Industry Groups in 2007-08




Source: Ministry of Statistics and Programme Implementation, Government of India.

Chart 10: Trends in Monthly Growth of Select Manufacturing Industry Groups which recorded decelerated growth during 2007-08




Source: Ministry of Statistics and Programme Implementation, Government of India.

investment, stable currency, relatively cheaper availability of key industrial inputs, relatively higher un-exhausted capacity, *etc.*, gave way to unfavourable conditions in 2007-08 with highly turbulent international financial markets leading to a general slowdown in the advanced economies and thus limiting global demand for exports. The spike in international crude oil and other commodity prices exerted pressure on input costs of the industry.

**Statement I. Group-wise Index Numbers of Industrial Production**

(Base : 1993-94 = 100)

| Industry | Weight | Index | | | Growth (Per cent) | | | Relative Contribution # (Per cent) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 2005-06 | 2006-07 | 2007-08 P | 2005-06 | 2006-07 | 2007-08 P | 2005-06 | 2006-07 | 2007-08 P |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| **Broad-based Classification** | | | | | | | | | | |
| Mining & Quarrying | 10.5 | 154.9 | 163.2 | 171.5 | 1.0 | 5.4 | 5.1 | 1.0 | 3.4 | 4.3 |
| Manufacturing | 79.4 | 234.2 | 263.5 | 286.5 | 9.1 | 12.5 | 8.7 | 93.2 | 91.1 | 89.3 |
| Electricity | 10.2 | 190.9 | 204.7 | 217.7 | 5.2 | 7.3 | 6.3 | 5.7 | 5.5 | 6.5 |
| General | 100.0 | 221.5 | 247.1 | 267.5 | 8.2 | 11.5 | 8.3 | 100.1 | 100.2 | 100.0 |
| **Use-based Classification** | | | | | | | | | | |
| Basic Goods | 35.6 | 189.8 | 209.3 | 223.9 | 6.7 | 10.3 | 7.0 | 25.4 | 27.2 | 25.4 |
| Capital Goods | 9.3 | 265.8 | 314.2 | 367.3 | 15.7 | 18.2 | 16.9 | 20.0 | 17.6 | 24.0 |
| Intermediate Goods | 26.5 | 216.4 | 242.4 | 263.8 | 2.5 | 12.0 | 8.8 | 8.4 | 27.0 | 27.8 |
| Consumer Goods | 28.7 | 251.4 | 276.8 | 293.1 | 12.0 | 10.1 | 5.9 | 46.3 | 28.5 | 22.8 |
| Consumer Durables | 5.4 | 349.9 | 382.0 | 378.0 | 15.3 | 9.2 | -1.0 | 14.9 | 6.7 | -1.0 |
| Consumer Non-Durables | 23.3 | 228.8 | 252.6 | 273.5 | 10.9 | 10.4 | 8.3 | 31.4 | 21.8 | 23.9 |

# : Due to rounding-off, figures may not add to 100. P: Provisional.

**Source :** Ministry of Statistics and Programme Implementation, Government of India.

**Statement II. Seventeen Major Industry Groups of Manufacturing Sector**

(Base : 1993-94 = 100)

| Industry | Weight | Index | | | Growth (Per cent) | | | Relative Contribution # (Per cent) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 2005-06 | 2006-07 | 2007-08 P | 2005-06 | 2006-07 | 2007-08 P | 2005-06 | 2006-07 | 2007-08 P |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| ***Acceleration*** | | | | | | | | | | |
| 1. Wood and wood products, furniture & fixtures | 2.7 | 70.5 | 91.0 | 126.4 | -5.7 | 29.1 | 38.9 | -0.7 | 2.4 | 5.2 |
| 2. Jute and other vegetable fibre textiles (except cotton) | 0.6 | 107.7 | 90.7 | 120.7 | 0.5 | -15.8 | 33.0 | 0.0 | -0.4 | 1.0 |
| 3. Other manufacturing industries | 2.6 | 276.9 | 298.4 | 357.4 | 25.2 | 7.7 | 19.8 | 9.1 | 2.4 | 8.3 |
| 4. Beverages, tobacco and related products | 2.4 | 400.3 | 444.5 | 497.1 | 15.7 | 11.1 | 11.8 | 8.3 | 4.5 | 6.9 |
| 5. Leather and leather & fur products | 1.1 | 149.3 | 150.2 | 167.8 | -4.8 | 0.6 | 11.7 | -0.6 | 0.0 | 1.1 |
| 6. Chemicals and chemical products (except products of petroleum & coal | 14.0 | 258.5 | 283.4 | 313.3 | 8.3 | 9.6 | 10.5 | 17.9 | 15.0 | 22.9 |
| ***Deceleration*** | | | | | | | | | | |
| 7. Basic metal and alloy Industries | 7.5 | 227.0 | 278.9 | 312.7 | 15.8 | 22.8 | 12.1 | 14.8 | 16.6 | 13.8 |
| 8. Machinery and equipment other than transport equipment | 9.6 | 312.8 | 357.1 | 390.9 | 11.9 | 14.2 | 9.5 | 20.5 | 18.2 | 17.8 |
| 9. Rubber, plastic, petroleum and coal products | 5.7 | 200.5 | 226.3 | 246.3 | 4.3 | 12.9 | 8.9 | 3.0 | 6.4 | 6.3 |
| 10. Food products | 9.1 | 170.6 | 185.2 | 196.9 | 2.0 | 8.5 | 6.4 | 1.9 | 5.7 | 5.9 |
| 11. Non-metallic mineral products | 4.4 | 271.1 | 305.8 | 323.4 | 11.0 | 12.8 | 5.7 | 7.6 | 6.6 | 4.2 |
| 12. Cotton textiles | 5.5 | 137.0 | 157.3 | 164.0 | 8.5 | 14.8 | 4.3 | 3.8 | 4.8 | 2.0 |
| 13. Wool, silk and man-made fibre textiles | 2.3 | 248.9 | 268.4 | 280.8 | 0.0 | 7.8 | 4.6 | 0.0 | 1.9 | 1.5 |
| 14. Textile products (including wearing apparel) | 2.5 | 255.5 | 285.0 | 295.4 | 16.4 | 11.5 | 3.6 | 5.8 | 3.2 | 1.4 |
| 15. Transport equipment and parts | 4.0 | 319.7 | 367.7 | 378.1 | 12.7 | 15.0 | 2.8 | 9.2 | 8.2 | 2.3 |
| 16. Paper and paper products and printing, publishing and allied industries | 2.7 | 228.6 | 248.6 | 255.3 | -0.9 | 8.7 | 2.7 | -0.3 | 2.3 | 1.0 |
| ***Negative*** | | | | | | | | | | |
| 17. Metal products and parts (except machinery and equipment) | 2.8 | 164.4 | 183.2 | 172.9 | -1.2 | 11.4 | -5.6 | -0.4 | 2.3 | -1.6 |

# : Due to rounding-off, figures may not add to 100. P: Provisional.

**Source** : Ministry of Statistics and Programme Implementation, Government of India.