## **CHAPTER 3**

## INPUT-OUTPUT TABLES - A BRIEF ANALYSIS

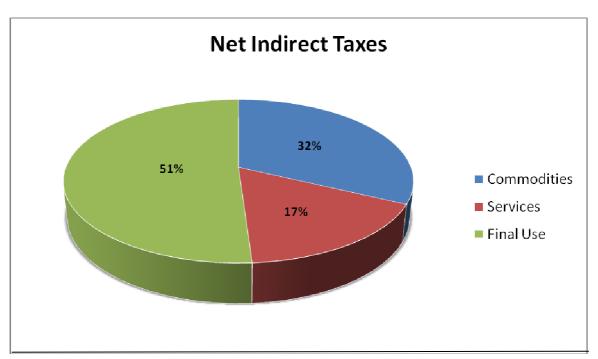
- 3.1 The IO Table can be viewed as an extensive disaggregation of the production account (goods and services account) within the System of National Accounts. The overall discrepancy in the NAS showing the difference between GDP and final expenditure has been absorbed in various categories of final demand while undertaking the manual balancing, for a balanced IO Table.
- 3.2 In the open Input Output system, the components of final demand are exogenous to the basic inter-industry matrix and the analysis technique is useful only under the assumption of constancy of technical coefficients. This assumption is justified unless there are major changes in the technology of production. During the periods 1968-69 to 2003-04, the input-output ratios have shown some marginal changes at the sectoral levels in the detailed as well as broad group level classification. It is, however, difficult to say definitely whether these changes are partially attributed to use of data, particularly the results of follow-up surveys of Economic Census and those of the manufacturing sectors or due to technological changes.
- 3.3 The intermediate consumption of industries accounts for 51 per cent of domestic output in 2007-08, whereas it was 48, 44, 45, 46, 44, 42, 38 and 37 per cent in the years 2003-04, 1998-99, 1993-94,1989-90, 1983-84, 1978-79, 1973-74 and 1968-69 respectively.

Table 3.0: Percentage Distribution of various components in total output

| Year    | Intermediate<br>Consumption | PFCE | GFCE | GFCF | Net<br>Exports |
|---------|-----------------------------|------|------|------|----------------|
| 1968-69 | 37                          | 47   | 6    | 10   | Neg.           |
| 1973-74 | 38                          | 46   | 6    | 10   | Neg.           |
| 1978-79 | 42                          | 41   | 6    | 11   | Neg.           |
| 1983-84 | 44                          | 40   | 6    | 10   | Neg.           |
| 1989-90 | 46                          | 35   | 7    | 12   | Neg.           |
| 1993-94 | 45                          | 37   | 6    | 12   | Neg.           |
| 1998-99 | 44                          | 38   | 7    | 12   | (-)1           |
| 2003-04 | 48                          | 32   | 6    | 14   | Neg            |
| 2007-08 | 51                          | 28   | 5    | 16   | (-)3           |

- 3.4 Of the final demand in total output in 2007-08, while the contribution of PFCE has come down to 28 per cent from 47 per cent in 1968-69 that of GFCF increased from 10 per cent in 1968-69 to 16 per cent in 2007-08. The contribution of GFCE has been nearly 6 per cent in 2003-04 has shown a marginal decline and remained at 5 percent. Net foreign trade is only 3 percent of the total output; however imports are more than the exports.
- 3.5 To analyse the situation prevailing in 2007-08, the 130 sector *commodity x industry* table has been summarised to show only two sectors in the economy viz., 'commodities' comprising sectors 1 to 108 and 'services' comprising sectors 109 to 130 (Tables 3.1 and 3.2). These tables give a comparative picture of percentage distribution of output dispositions and input structure of commodities and services for the years 1968-69, 1973-74, 1978-79, 1983-84, 1989-90, 1993-94, 1998-99, 2003-04 and 2007-08.

- 3.6 The eight IOTs compiled so far, reveal some deviation in the inter-industry utilization of output of various commodities and services. The commodities have utilised 48.5 per cent of commodity output for intermediate consumption in 2007-08 as against 45.7 in 2003-04, 41.2 in 1998-99, 40.3 per cent in 1993-94, 42.5 per cent in 1989-90, 40.3 per cent in 1983-84, 38 per cent 1978-79, 34.5 per cent in 1973-74 and 33.6 per cent in 1968-69. The services have utilised 13.1 per cent of service output for intermediate consumption in 2007-08, as against 12.8 percent in 2003-04, 13.2 per cent in 1998-99 11.7 per cent in 1993-94, 12.8 per cent in 1989-90, 13.1 per cent in 1983-84, 15.5 per cent in 1978-79, 9.4 per cent each in 1973-74 and 1968-69. The intermediate use of services in commodities has declined from 9.3 per cent in 2003-04 to 8.3 percent in 2007-08. The share of commodities in final use to total commodity output is 43.2 per cent in 2007-08, as against 45.0 in 2003-04, 50.9 per cent in 1998-99, 52.0 per cent in 1993-94, 51.4 per cent in 1989-90, 53.2 per cent in 1983-84, 56.1 per cent in 1978-79, 60.2 per cent in 1973-74, and 61.2 per cent in 1968-69. There is slight decrease in the share of services in final use to total output of services, which is, 59.8 in 2007-08 as compared to 62.6 percent in 2003-04, 63.2 per cent in 1998-99 and 61.5 per cent in 1993-94.
- 3.7 The net indirect taxes on commodities and services used as intermediate inputs in 2007-08 constitute 32.1 per cent and 16.8 per cent, respectively of the total net indirect taxes while the remaining 51.0 per cent is the share of indirect taxes on final use.



**Table 3.1: Percentage Distribution of Output** 

| Table 3.1: Percentage Distribution of Output |           |         |        |          |              |       |         |  |  |  |  |
|--|-----------|---------|--------|----------|--------------|-------|---------|--|--|--|--|
| CI   |           |         | C      |          | Intermediate | Final | Total   |  |  |  |  |
| Sl.  | Item      | Year    | Commo- | Services | Use          | Use   | Output  |  |  |  |  |
| No.  |           |         | dities |          | (4)+(5)      |       | (6)+(7) |  |  |  |  |
| (1)  | (2)       | (3)     | (4)    | (5)      | (6)          | (7)   | (8)     |  |  |  |  |
| (-/  | (-/       | 1968-69 | 33.6   | 5.2      | 38.8         | 61.2  | 100     |  |  |  |  |
|  |           | 1973-74 | 34.5   | 5.3      | 39.8         | 60.2  | 100     |  |  |  |  |
|  |           | 1978-79 | 38.0   | 5.9      | 43.9         | 56.1  | 100     |  |  |  |  |
|  | C         | 1983-84 | 40.3   | 6.5      | 46.8         | 53.2  | 100     |  |  |  |  |
| 1.   | Commo-    | 1989-90 | 42.5   | 6.2      | 48.6         | 51.4  | 100     |  |  |  |  |
|  | dities    | 1993-94 | 40.3   | 7.6      | 48.0         | 52.0  | 100     |  |  |  |  |
|  |           | 1998-99 | 41.2   | 7.9      | 49.1         | 50.9  | 100     |  |  |  |  |
|  |           | 2003-04 | 45.7   | 9.3      | 55.0         | 45.0  | 100     |  |  |  |  |
|  |           | 2007-08 | 48.5   | 8.3      | 56.8         | 43.2  | 100     |  |  |  |  |
|  |           | 1968-69 | 21.8   | 9.4      | 31.2         | 68.8  | 100     |  |  |  |  |
|  |           | 1973-74 | 21.2   | 9.4      | 30.6         | 69.4  | 100     |  |  |  |  |
|  |           | 1978-79 | 23.4   | 15.5     | 38.9         | 61.1  | 100     |  |  |  |  |
|  |           | 1983-84 | 24.4   | 13.1     | 37.5         | 62.5  | 100     |  |  |  |  |
| 2.   | Services  | 1989-90 | 27.8   | 12.8     | 40.6         | 59.4  | 100     |  |  |  |  |
|  |           | 1993-94 | 26.8   | 11.7     | 38.5         | 61.5  | 100     |  |  |  |  |
|  |           | 1998-99 | 23.6   | 13.2     | 36.8         | 63.2  | 100     |  |  |  |  |
|  |           | 2003-04 | 24.6   | 12.8     | 37.4         | 62.6  | 100     |  |  |  |  |
|  |           | 2007-08 | 27.1   | 13.1     | 40.2         | 59.8  | 100     |  |  |  |  |
|  |           | 1968-69 | 30.5   | 6.3      | 36.8         | 63.2  | 100     |  |  |  |  |
|  |           | 1973-74 | 31.2   | 6.4      | 37.6         | 62.4  | 100     |  |  |  |  |
|  |           | 1978-79 | 33.7   | 8.7      | 42.4         | 57.6  | 100     |  |  |  |  |
|  |           | 1983-84 | 35.5   | 8.5      | 44.0         | 56.0  | 100     |  |  |  |  |
| 3.   | Sub-total | 1989-90 | 37.9   | 8.2      | 46.2         | 53.8  | 100     |  |  |  |  |
|  |           | 1993-94 | 35.6   | 9.1      | 44.6         | 55.4  | 100     |  |  |  |  |
|  |           | 1998-99 | 34.5   | 9.9      | 44.4         | 55.6  | 100     |  |  |  |  |
|  |           | 2003-04 | 37.8   | 10.6     | 48.4         | 51.6  | 100     |  |  |  |  |
|  |           | 2007-08 | 40.7   | 10.0     | 50.8         | 49.2  | 100     |  |  |  |  |
|  |           | 1968-69 | 37.2   | 17.2     | 54.4         | 45.6  | 100     |  |  |  |  |
|  |           | 1973-74 | 46.3   | 11.9     | 58.2         | 41.8  | 100     |  |  |  |  |
|  |           | 1978-79 | 49.8   | 14.5     | 64.3         | 35.7  | 100     |  |  |  |  |
|  | Net       | 1983-84 | 48.5   | 11.9     | 60.4         | 39.6  | 100     |  |  |  |  |
| 4.   | Indirect  | 1989-90 | 54.0   | 10.6     | 64.5         | 36.5  | 100     |  |  |  |  |
|  | taxes     | 1993-94 | 23.3   | 17.1     | 40.4         | 59.6  | 100     |  |  |  |  |
|  |           | 1998-99 | 29.2   | 18.1     | 47.4         | 52.6  | 100     |  |  |  |  |
|  |           | 2003-04 | 31.1   | 14.7     | 45.8         | 54.2  | 100     |  |  |  |  |
|  |           | 2007-08 | 32.1   | 16.8     | 49.0         | 51.0  | 100     |  |  |  |  |
|  |           | 1968-69 | 69.3   | 30.7     |              |       |         |  |  |  |  |
|  |           | 1973-74 | 70.1   | 29.9     |              |       |         |  |  |  |  |
|  | Gross     | 1978-79 | 63.3   | 36.7     |              |       |         |  |  |  |  |
| _  | Gross     | 1983-84 | 63.0   | 37.0     |              |       |         |  |  |  |  |
| 5.   | Value     | 1989-90 | 71.2   | 28.8     |              |       |         |  |  |  |  |
|  | Added     | 1993-94 | 56.1   | 43.9     |              |       |         |  |  |  |  |
|  |           | 1998-99 | 54.2   | 45.8     |              |       |         |  |  |  |  |
|  |           | 2003-04 | 47.2   | 52.8     |              |       |         |  |  |  |  |
|  |           | 2007-08 | 47.3   | 52.7     |              |       |         |  |  |  |  |

Commodities: Sectors 1 to 108 of 130 x 130 Table Service: Sectors 109 to 130 of 130 x 130 Table

Fig. 1: Commodity wise Distribution of Output into Intermediate Use and Final Use

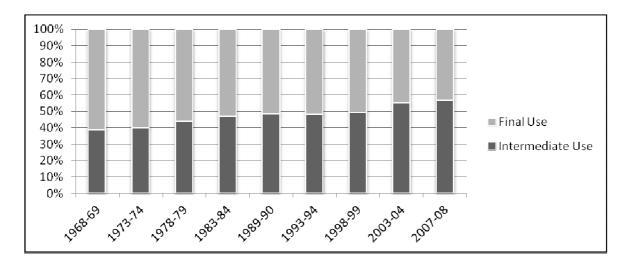
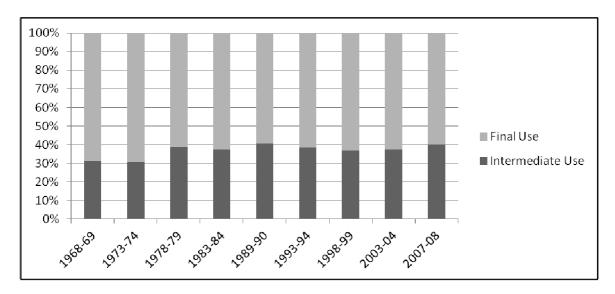


Fig. 2: Service Distribution into Intermediate Use and Final Use



In the year 2007-08, 34.7 per cent of the total output of industries producing 3.8 commodities forms GVA, 63.3 per cent intermediate inputs and the remaining 2.1 per cent net indirect taxes on inputs (Table 3.2). On the other hand, in case of services industries, the three components viz., 'gross value added', 'intermediate input' and 'net indirect taxes on inputs' form 69.8 per cent, 28.2 percent and 2.0 per cent respectively of these services industries sector output. Thus, the GVA to output ratio in case of the industries producing commodities has gone down to 34.7 per cent in 2007-08 from 37.5 per cent in 2003-04. On the other hand, in the case of services producing industries, the GVA to output ratio is almost the same for 2007-08, 2003-04.at 69.8, 70.0 per cent, respectively. The GVA to total output ratio of intermediate inputs for the year 2007-08 has marginally gone down to 47.2 as against 49.7 in 2003-04. The material inputs of commodities have increased from 45.5 per cent in 2003-04 to 48.1 percent in 2007-08, and in case of services the same is 14.9 per cent in 2007-08 as against 15.4 per cent in 2003-04. The component of commodities as input in the service producing industries has declined to 14.9 per cent in 2007-08 from 15.4 in 2003-04. But there is a slight increase in the component of services as input in the service producing industries from 12.9 per cent in 2003-04 to 13.3 per cent in 2007-08.

**Table 3.2: Percentage Distribution of Inputs** 

| Table 3.2: Percentage Distribution of Inputs |              |         |             |          |           |              |  |  |  |  |  |  |
|--|--------------|---------|-------------|----------|-----------|--------------|--|--|--|--|--|--|
| Sl.<br>No.                                   | Item         | Year    | Commodities | Services | Sub-Total | Final<br>Use |  |  |  |  |  |  |
| (1)  | (2)          | (3)     | (4)         | (5)      | (6)       | (7)          |  |  |  |  |  |  |
|  |              | 1968-69 | 33.6        | 15.2     | 28.8      | 69.2         |  |  |  |  |  |  |
|  |              | 1973-74 | 34.5        | 16.4     | 30.0      | 69.9         |  |  |  |  |  |  |
|  |              | 1978-79 | 38.0        | 14.1     | 31.0      | 66.3         |  |  |  |  |  |  |
|  |              | 1983-84 | 39.5        | 16.0     | 32.8      | 63.9         |  |  |  |  |  |  |
| 1.   | Commodities  | 1989-90 | 41.3        | 14.8     | 33.7      | 63.5         |  |  |  |  |  |  |
|  |              | 1993-94 | 39.1        | 14.8     | 31.0      | 57.6         |  |  |  |  |  |  |
|  |              | 1998-99 | 39.5        | 14.0     | 30.5      | 54.6         |  |  |  |  |  |  |
|  |              | 2003-04 | 45.5        | 15.4     | 34.2      | 52.6         |  |  |  |  |  |  |
|  |              | 2007-08 | 48.1        | 14.9     | 36.3      | 53.8         |  |  |  |  |  |  |
|  |              | 1968-69 | 7.5         | 9.4      | 8.0       | 27.1         |  |  |  |  |  |  |
|  |              | 1973-74 | 6.9         | 9.4      | 7.6       | 26.4         |  |  |  |  |  |  |
|  |              | 1978-79 | 9.7         | 15.5     | 11.4      | 29.9         |  |  |  |  |  |  |
|  |              | 1983-84 | 10.2        | 13.7     | 11.2      | 32.1         |  |  |  |  |  |  |
| 2.   | Services     | 1989-90 | 12.0        | 13.7     | 12.5      | 32.6         |  |  |  |  |  |  |
|  |              | 1993-94 | 14.2        | 12.4     | 13.6      | 37.1         |  |  |  |  |  |  |
|  |              | 1998-99 | 13.8        | 14.2     | 13.9      | 41.1         |  |  |  |  |  |  |
|  |              | 2003-04 | 14.9        | 12.9     | 14.1      | 43.0         |  |  |  |  |  |  |
|  |              | 2007-08 | 15.2        | 13.3     | 14.5      | 42.1         |  |  |  |  |  |  |
|  |              | 1968-69 | 41.1        | 24.6     | 36.8      | 96.3         |  |  |  |  |  |  |
|  |              | 1973-74 | 41.4        | 25.8     | 37.6      | 96.3         |  |  |  |  |  |  |
|  |              | 1978-79 | 47.7        | 29.6     | 42.4      | 96.2         |  |  |  |  |  |  |
|  |              | 1983-84 | 49.7        | 29.7     | 44.0      | 96.0         |  |  |  |  |  |  |
| 3.   | Sub-total    | 1989-90 | 53.3        | 28.5     | 46.2      | 96.0         |  |  |  |  |  |  |
|  |              | 1993-94 | 53.4        | 27.2     | 44.6      | 94.7         |  |  |  |  |  |  |
|  |              | 1998-99 | 53.3        | 28.2     | 44.4      | 95.7         |  |  |  |  |  |  |
|  |              | 2003-04 | 60.4        | 28.3     | 48.3      | 95.6         |  |  |  |  |  |  |
|  |              | 2007-08 | 63.3        | 28.2     | 50.8      | 95.9         |  |  |  |  |  |  |
|  |              | 1968-69 | 2.7         | 3.6      | 2.9       | 3.7          |  |  |  |  |  |  |
|  |              | 1973-74 | 3.5         | 2.7      | 3.3       | 3.7          |  |  |  |  |  |  |
|  |              | 1978-79 | 4.5         | 3.2      | 4.1       | 3.8          |  |  |  |  |  |  |
|  | NI T I       | 1983-84 | 4.0         | 2.4      | 3.6       | 4.0          |  |  |  |  |  |  |
| 4.   | Net Indirect | 1989-90 | 4.8         | 2.3      | 4.1       | 4.0          |  |  |  |  |  |  |
|  | taxes        | 1993-94 | 1.8         | 2.7      | 2.1       | 5.3          |  |  |  |  |  |  |
|  |              | 1998-99 | 2.1         | 2.5      | 2.3       | 4.3          |  |  |  |  |  |  |
|  |              | 2003-04 | 2.1         | 1.7      | 1.9       | 4.4          |  |  |  |  |  |  |
|  |              | 2007-08 | 2.1         | 2.0      | 2.0       | 4.1          |  |  |  |  |  |  |
|  |              | 1968-69 | 56.2        | 71.8     | 60.3      |              |  |  |  |  |  |  |
|  |              | 1973-74 | 55.1        | 71.5     | 59.1      |              |  |  |  |  |  |  |
|  |              | 1978-79 | 47.8        | 67.2     | 53.5      |              |  |  |  |  |  |  |
|  | Conses M.1   | 1983-84 | 46.3        | 67.9     | 52.4      |              |  |  |  |  |  |  |
| 5.   | Gross Value  | 1989-90 | 41.9        | 69.2     | 49.8      |              |  |  |  |  |  |  |
|  | Added        | 1993-94 | 44.8        | 70.1     | 53.3      |              |  |  |  |  |  |  |
|  |              | 1998-99 | 44.6        | 69.4     | 53.3      |              |  |  |  |  |  |  |
|  |              | 2003-04 | 37.5        | 70.0     | 49.7      |              |  |  |  |  |  |  |
|  |              | 2007-08 | 34.7        | 69.8     | 47.2      |              |  |  |  |  |  |  |
|  |              | 1968-69 | 100         | 100      | 100       | 100          |  |  |  |  |  |  |
|  |              | 1973-74 | 100         | 100      | 100       | 100          |  |  |  |  |  |  |
|  |              | 1978-79 | 100         | 100      | 100       | 100          |  |  |  |  |  |  |
|  |              | 1983-84 | 100         | 100      | 100       | 100          |  |  |  |  |  |  |
| 6.   | Total Output | 1989-90 | 100         | 100      | 100       | 100          |  |  |  |  |  |  |
|  | F            | 1993-94 | 100         | 100      | 100       | 100          |  |  |  |  |  |  |
|  |              | 1998-99 | 100         | 100      | 100       | 100          |  |  |  |  |  |  |
|  |              | 2003-04 | 100         | 100      | 100       | 100          |  |  |  |  |  |  |
|  |              | 2007-08 | 100         | 100      | 100       | 100          |  |  |  |  |  |  |
|  | I.           |         |             |          |           |              |  |  |  |  |  |  |

Fig. 3: Percentage Distribution of Services and Commodities in Final Use

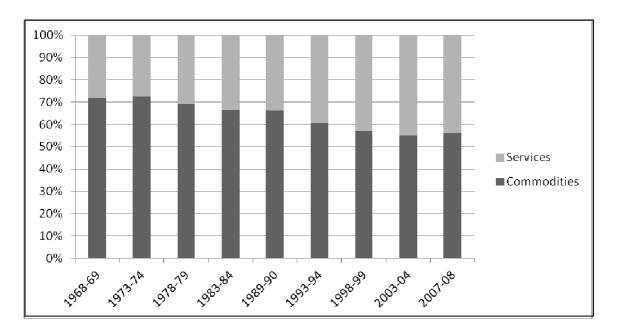
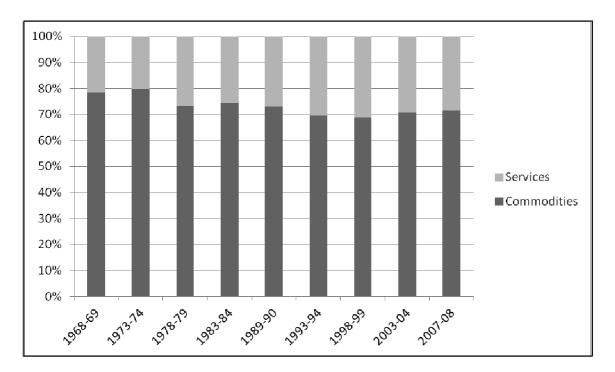


Fig. 4: Percentage Distribution of Services and Commodities in Intermediate Use



3.9 The IOT has also been aggregated broadly to correspond to the classification of gross domestic product by industry of origin (Table 3.3). This table gives the actual level in 2007-08 whereas Table 3.4 gives a comparative picture of the first quadrant of inter-industry transactions for the years 1968-69, 1973-74, 1978-79, 1983-84, 1989-90, 1993-94, 1998-99, 2003-04 and 2007-08 under similar classification. Consequently, sectors 1 to 37 of the IOT are considered as belonging to 'primary' sector'. 'Secondary' sector corresponds to sectors 38 to 108. 'Transport, communication & trade' comes under the sectors 109 to 117 excluding sector 114, and the rest covering sectors 114, 118 to 129 as 'other services', leaving 'public administration and defence' (PAD) but including 'banking, insurance and real estate'. PAD has been kept as a separate sector in the Table 3.3.

3.10 In Table 3.3, the sum of column (8) & (9) gives supply in the economy while final demand appears in column (9). The basic inter-industry matrix consists of column (3) to (7) and rows (1) to (5). PAD sector has no entry in the basic matrix, as its entire output is allocated to itself for final consumption. Further, it has no intermediate input implying that the total output is equal to its GVA. The diagonal elements of the basic inter-industry matrix show the output of goods and services, produced and consumed by the same sector.

Table 3.3: Inter-Industry Transactions, 2007-08

(Rs. in crores)

| SI.<br>No. | Sector/I<br>tem | Р       | S       | TR      | ОТН     | PAD    | Total II<br>Use | Total<br>Final<br>Use | Total<br>Output |
|------------|-----------------|---------|---------|---------|---------|--------|-----------------|-----------------------|-----------------|
| (1.)       | (2.)            | (3.)    | (4.)    | (5.)    | (6.)    | (7.)   | (8.)            | (9.)                  | (10.)           |
| 1          | Р               | 240400  | 726274  | 71836   | 1508    | 0      | 1040018         | 373281                | 1413299         |
| 2          | S               | 115783  | 1923335 | 346190  | 95368   | 0      | 2480675         | 2308246               | 4788921         |
| 3          | TR              | 96499   | 623578  | 223484  | 67650   | 0      | 1011212         | 964146                | 1975358         |
| 4          | ОТН             | 18299   | 211833  | 81335   | 88046   | 0      | 399513          | 899024                | 1298537         |
| 5          | PAD             | 0       | 0       | 0       | 0       | 0      | 0               | 234992                | 234992          |
| 6          | Total           | 470894  | 3485020 | 721477  | 253941  | 0      | 4931333         | 4779689               | 9711022         |
| 7          | NIT             | -29926  | 160073  | 57040   | 11079   | 0      | 198267          | 206738                | 405005          |
| 8          | GVA             | 977196  | 1189598 | 1146658 | 1032978 | 234992 | 4581422         | 0                     | 4581422         |
| 9          | Total<br>Output | 1418165 | 4834691 | 1925175 | 1297998 | 234992 | 9711022         | 4986427               | 14697449        |

P: Primary, S: Secondary, TR: Trade, Hotel, Transport & Communication, OTH: Other Services including. Financial Services, PAD: Public Administration & Defence. II: Inter Industry Use Note: The figures in col. (10) and row (9) of P, S, TR, OTH & PAD do not tally as the columns represent industries whereas rows represent commodities.

As per Table 3.4, during the year, the consumption of sectors' own output is 23.1 per cent in the case of primary sectors and 77.5 per cent in the case of secondary sectors. The corresponding figures for the years 1968-69, 1973-74, 1978-79, 1983-84, 1989-90, 1993-94, 1998-99 and 2003-04 were 54.5 per cent and 68.5 per cent, 44.4 per cent and 69.0 per cent, 43.1 per cent and 71.8 per cent, 39.2 per cent and 70.4 per cent and 34.3 per cent and 74.2 per cent, 32.1 per cent and 70.5 per cent 24.3 per cent and 71.9 per cent, 29.0 percent and 72.2 percent respectively. In the year 2007-08, rest of the intermediate use of primary sector (other than what has been used by the primary sector) has been shared by the secondary sector (69.8 per cent) and 'transport, communication and trade' sector (6.9 per cent) and the 'other services' sector (0.1 per cent). The use of secondary sector product by 'primary', 'transport, communication and trade' and 'other services' sectors in the year 2007-08 has been 4.7 per cent, 13.9 per cent and 3.9 per cent respectively. Intermediate supply of 'transport, communication & trade' and 'other services' sectors has been largely to secondary sector, which is of the order of 61.7 per cent and 53.0 per cent respectively. The shares of 'transport, communication and trade services' used by primary, self and other services are 9.5 per cent, 22.1 per cent and 6.7 per cent respectively. The output of 'other services' has been used by primary, 'transport, communication and trade' and self, having shares of total intermediate use as 4.6 per cent, 20.4 per cent and 22.0 per cent, respectively.

**Table 3.4: Inter-Industry Transactions:** 

(Percentages)

| _       | (Percei        |         |                    |       |            |            |              |
|---------|----------------|---------|--------------------|-------|------------|------------|--------------|
| Sl. No. | Sector/ Item   | Year    | P                  | S     | TR         | OTH        | Total II USE |
| (1)     | (2)            | (3)     | <b>(4)</b>         | (5)   | <b>(6)</b> | (7)        | (8)          |
|         |                | 1968-69 | 54.5               | 41.5  | 3.8        | 0.2        | 100          |
|         |                | 1973-74 | 44.4               | 47.6  | 7.9        | 0.1        | 100          |
|         |                | 1978-79 | 43.1               | 50.3  | 6.3        | 0.3        | 100          |
|         |                | 1983-84 | 39.2               | 54.8  | 5.6        | 0.4        | 100          |
| 1.      | Primary        | 1989-90 | 34.3               | 60.0  | 5.1        | 0.6        | 100          |
| 1.      | 1 minut y      | 1993-94 | 32.1               | 61.4  | 6.0        | 0.5        | 100          |
|         |                | 1998-99 | 24.3               | 69.7  | 5.6        | 0.3        | 100          |
|         |                | 2003-04 | 29.0               | 64.4  | 6.4        | 0.2        | 100          |
|         |                | 2007-08 | 23.1               | 69.8  | 6.9        | 0.2        | 100          |
|         |                | 1968-69 | 10.4               | 68.5  | 11.0       | 10.1       | 100          |
|         |                | 1908-09 | 12.4               | 69.0  | 9.6        | 9.0        | 100          |
|         |                | 1973-74 |                    |       | 11.7       | 5.6        |              |
|         |                |         | 10.9               | 71.8  |            |            | 100          |
| 2       | 0 1            | 1983-84 | 11.0               | 70.4  | 11.8       | 6.8        | 100          |
| 2.      | Secondary      | 1989-90 | 9.9                | 74.2  | 10.9       | 5.0        | 100          |
|         |                | 1993-94 | 9.3                | 70.5  | 15.2       | 5.1        | 100          |
|         |                | 1998-99 | 7.6                | 71.9  | 13.6       | 6.9        | 100          |
|         |                | 2003-04 | 6.6                | 72.2  | 16.3       | 4.9        | 100          |
|         |                | 2007-08 | 4.7                | 77.5  | 13.9       | 3.9        | 100          |
|         |                | 1968-69 | 8.1                | 67.4  | 16.8       | 7.7        | 100          |
|         |                | 1973-74 | 9.4                | 59.9  | 24.2       | 6.5        | 100          |
|         |                | 1978-79 | 10.9               | 52.3  | 32.6       | 4.2        | 100          |
|         | Transport,     | 1983-84 | 12.4               | 57.1  | 26.0       | 4.5        | 100          |
| 3.      | Communication  | 1989-90 | 11.0               | 63.0  | 21.5       | 4.5        | 100          |
|         | and Trade      | 1993-94 | 13.2               | 67.7  | 15.0       | 4.0        | 100          |
|         |                | 1998-99 | 10.6               | 65.4  | 16.5       | 7.5        | 100          |
|         |                | 2003-04 | 10.9               | 61.3  | 20.7       | 7.1        | 100          |
|         |                | 2007-08 | 9.5                | 61.7  | 22.1       | 6.7        | 100          |
|         |                | 1968-69 | 14.9               | 37.6  | 36.8       | 10.7       | 100          |
|         |                | 1973-74 | 8.9                | 60.7  | 20.2       | 10.2       | 100          |
|         |                | 1978-79 | 5.5                | 45.6  | 33.0       | 15.9       | 100          |
|         | Other Services | 1983-84 | 6.5                | 48.5  | 33.3       | 11.7       | 100          |
| 4.      | including      | 1989-90 | 6.3                | 51.9  | 28.4       | 13.5       | 100          |
| 7.      | Financial      | 1993-94 | 4.8                | 41.3  | 40.5       | 13.3       | 100          |
|         | Services       | 1993-94 | 3.1                | 44.6  | 25.8       | 26.5       | 100          |
|         |                | 2003-04 | 3.6                |       |            |            |              |
|         |                |         |                    | 48.9  | 21.5       | 26.0       | 100          |
|         |                | 2007-08 | 4.6                | 53.0  | 20.4       | 22.0       | 100          |
|         |                | 1968-69 | 25.7               | 57.1  | 10.9       | 6.3        | 100          |
|         |                | 1973-74 | 24.2               | 58.9  | 11.7       | 5.2        | 100          |
|         |                | 1978-79 | 19.3               | 60.3  | 15.9       | 4.5        | 100          |
|         |                | 1983-84 | 18.6               | 62.1  | 14.3       | 5.0        | 100          |
| 5.      | Total input    | 1989-90 | 15.4               | 66.8  | 13.1       | 4.7        | 100          |
|         |                | 1993-94 | 14.7               | 65.0  | 15.6       | 4.7        | 100          |
|         |                | 1998-99 | 11.0               | 66.7  | 14.1       | 8.2        | 100          |
|         |                | 2003-04 | 11.9               | 66.2  | 15.6       | 6.3        | 100          |
|         |                | 2007-08 | 9.5                | 70.7  | 14.6       | 5.1        | 100          |
|         |                | 1968-69 | 7.1                | 61.2  | 27.3       | 4.4        | 100          |
|         |                | 1973-74 | 8.3                | 71.3  | 16.2       | 4.2        | 100          |
|         |                | 1978-79 | 6.0                | 71.4  | 19.2       | 3.4        | 100          |
|         |                | 1983-84 | (-)6.1             | 86.1  | 14.5       | 5.1        | 100          |
| 6.      | Net Indirect   | 1989-90 | (-)7.5             | 91.1  | 13.6       | 2.8        | 100          |
| J.      | Taxes          | 1993-94 | (-)33.2            | 90.8  | 37.4       | 4.9        | 100          |
|         |                | 1998-99 | (-)16.2            | 78.0  | 28.8       | 9.4        | 100          |
|         |                | 2003-04 | (-)16.2<br>(-)44.9 | 112.8 | 26.0       | 9.4<br>6.1 | 100          |
|         |                | 2003-04 |                    |       | 28.8       | 5.6        | 100          |
|         |                | 2007-08 | (-)15.1            | 80.7  | ۷٥.٥       | 5.0        | 100          |

3.12 Table 3.5 depicts the input structure of different sectors. The input requirements of primary sector have declined from 34.3 per cent in 2003-04 to 33.2 per cent in 2007-08 mainly due to the increase in the consumption of products of primary and secondary sectors.

 Table 3.5: Percentage Distribution of Inputs in Different Sectors

(Percentages)

| _      | 1                     |                    | 1            | 1            | ı            | 1            | (Percentages) |
|--------|-----------------------|--------------------|--------------|--------------|--------------|--------------|---------------|
| S. No. | Sector/ Item          | Year               | P            | S            | TR           | ОТН          | Total II USE  |
| (1)    | (2)                   | (3)                | (4)          | (5)          | (6)          | (7)          | (8)           |
|        | ` ′                   | 1968-69            | 17.8         | 15.4         | 3.5          | 0.3          | 12.9          |
|        |                       | 1973-74            | 16.5         | 19.4         | 8.1          | 0.2          | 14.6          |
|        |                       | 1978-79            | 16.7         | 14.2         | 4.1          | 0.4          | 11.5          |
|        |                       | 1983-84            | 16.7         | 15.4         | 4.2          | 0.4          | 12.1          |
| 1.     | Primary               | 1989-90            | 15.4         | 13.6         | 3.3          | 0.7          | 10.7          |
| 1.     | 1 minury              | 1993-94            | 13.5         | 14.0         | 3.1          | 0.3          | 9.9           |
|        |                       | 1998-99            | 10.9         | 14.5         | 2.9          | 0.2          | 9.2           |
|        |                       | 2003-04            | 17.6         | 14.4         | 3.3          | 0.1          | 10.2          |
|        |                       | 2007-08            | 17.0         | 15.0         | 3.7          | 0.1          | 10.7          |
|        |                       | 1968-69            | 4.1          | 31.2         | 12.4         | 18.1         | 15.9          |
|        |                       |                    |              |              |              |              |               |
|        |                       | 1973-74            | 4.8          | 29.5         | 10.3         | 17.6         | 15.4          |
|        |                       | 1978-79<br>1983-84 | 7.1<br>8.0   | 34.1<br>33.9 | 12.8<br>15.2 | 12.1<br>11.1 | 19.5<br>20.7  |
| 2.     | Casandami             | 1989-90            | 9.5          | 36.0         | 15.2         | 12.7         | 22.9          |
| ۷.     | Secondary             | 1989-90            | 9.3<br>8.4   | 34.5         |              | 7.5          | 21.2          |
|        |                       | 1993-94<br>1998-99 | 7.9          | 34.3         | 16.9<br>16.1 | 10.7         | 21.2          |
|        |                       |                    |              |              |              |              |               |
|        |                       | 2003-04            | 9.5          | 37.9         | 19.7<br>17.9 | 8.0<br>7.5   | 24.0<br>25.5  |
|        |                       | 2007-08            | 8.2          | 39.8         |              |              |               |
|        |                       | 1968-69            | 1.2          | 11.7         | 7.1          | 5.2          | 6.0           |
|        |                       | 1973-74            | 1.5          | 10.1         | 10.2         | 5.0          | 6.1           |
|        | Transport,            | 1978-79            | 3.2          | 11.0         | 15.7         | 4.1          | 8.6           |
| _      | Communi-              | 1983-84            | 3.4          | 10.4         | 12.7         | 2.8          | 7.8           |
| 3.     | cation and            | 1989-90            | 3.7          | 10.8         | 10.4         | 4.0          | 8.1           |
|        | Trade                 | 1993-94            | 5.2          | 14.4         | 7.2          | 2.6          | 9.2           |
|        | TTAUC                 | 1998-99            | 4.2          | 11.9         | 7.4          | 4.3          | 8.1           |
|        |                       | 2003-04            | 6.2          | 12.8         | 9.9          | 4.6          | 9.5           |
|        |                       | 2007-08            | 6.8          | 12.9         | 11.6         | 5.2          | 10.4          |
|        |                       | 1968-69            | 0.8          | 2.3          | 5.3          | 2.5          | 2.0           |
|        |                       | 1973-74            | 0.3          | 2.5          | 2.1          | 1.9          | 1.5           |
|        | Other Services        | 1978-79            | 0.5          | 3.1          | 5.2          | 4.9          | 2.8           |
|        | include.              | 1983-84            | 0.8          | 3.9          | 7.1          | 3.2          | 3.4           |
| 4.     |                       | 1989-90            | 1.2          | 4.8          | 7.5          | 6.6          | 4.4           |
|        | Financial<br>Services | 1993-94            | 0.9          | 4.2          | 9.4          | 4.1          | 4.4           |
|        |                       | 1998-99            | 0.9          | 5.9          | 8.4          | 11.2         | 5.9           |
|        |                       | 2003-04            | 1.0          | 4.9          | 5.0          | 8.3          | 4.6           |
|        |                       | 2007-08            | 1.3          | 4.4          | 4.2          | 6.8          | 4.1           |
|        |                       | 1968-69            | 23.9         | 60.6         | 28.3         | 26.1         | 36.8          |
|        |                       | 1973-74            | 23.1         | 61.5         | 30.7         | 24.7         | 37.6          |
|        |                       | 1978-79            | 27.5         | 62.4         | 37.8         | 21.5         | 42.4          |
|        |                       | 1983-84            | 28.9         | 63.6         | 39.2         | 17.5         | 44.0          |
| 5.     | Total input           | 1989-90            | 29.7         | 65.2         | 36.1         | 24.0         | 46.2          |
|        |                       | 1993-94            | 27.9         | 67.2         | 36.7         | 14.6         | 44.6          |
|        |                       | 1998-99            | 23.9         | 66.9         | 34.8         | 26.4         | 44.5          |
|        |                       | 2003-04            | 34.3         | 70.0         | 37.9         | 21.0         | 48.3          |
|        |                       | 2007-08            | 33.2         | 72.1         | 37.5         | 19.6         | 50.8          |
|        |                       | 1968-69            | 0.5          | 5.1          | 5.6          | 1.4          | 2.9           |
|        |                       | 1973-74            | 0.3          | 6.6          | 3.7          | 1.4          | 3.3           |
|        |                       | 1978-79            | 0.7          | 7.1          | 4.4          | 1.5          | 4.1           |
|        |                       | 1983-84            | (-)0.8       | 7.1          | 3.2          | 1.5          | 3.6           |
| 6.     | Net Indirect          | 1989-90            | (-)1.3       | 7.8          | 3.3          | 1.3          | 4.1           |
| J.     | Taxes                 | 1993-94            | (-)3.0       | 4.4          | 4.1          | 0.7          | 2.1           |
|        |                       | 1998-99            | (-)1.8       | 4.0          | 3.6          | 1.5          | 2.3           |
|        |                       | 2003-04            | (-)5.2       | 4.8          | 2.5          | 0.8          | 1.9           |
|        |                       | 2007-08            | (-)2.1       | 3.3          | 3.0          | 0.9          | 2.0           |
|        |                       | 1968-69            | 75.6         | 34.3         | 66.1         | 72.5         | 60.3          |
|        |                       | 1908-69            | 75.6<br>76.2 | 34.3         | 65.6         | 72.5         | 59.1          |
|        |                       |                    |              | 31.9         |              |              | 53.5          |
|        |                       | 1978-79            | 71.7         |              | 57.6         | 77.0         | 53.5<br>52.4  |
| 7.     | Gross Value           | 1983-84            | 71.9         | 29.2         | 57.6<br>60.6 | 81.1         |               |
| /.     | Added                 | 1989-90            | 71.5         | 27.0         | 60.6         | 74.7         | 49.8          |
|        |                       | 1993-94            | 75.0         | 28.4         | 59.2         | 84.7         | 53.3          |
|        |                       | 1998-99            | 77.9         | 29.1         | 61.7         | 72.1         | 53.3          |
|        |                       | 2003-04            | 70.9         | 25.2         | 59.6         | 78.2         | 49.8          |
|        |                       | 2007-08            | 68.9         | 24.6         | 59.6         | 79.6         | 47.2          |
|        |                       | 1968-69            | 100          | 100          | 100          | 100          | 100           |
|        |                       | 1973-74            | 100          | 100          | 100          | 100          | 100           |
|        |                       | 1978-79            | 100          | 100          | 100          | 100          | 100           |
|        |                       | 1983-84            | 100          | 100          | 100          | 100          | 100           |
| 8.     | Total Output          | 1989-90            | 100          | 100          | 100          | 100          | 100           |
|        |                       | 1993-94            | 100          | 100          | 100          | 100          | 100           |
|        |                       | 1998-99            | 100          | 100          | 100          | 100          | 100           |
|        |                       | 2003-04            | 100          | 100          | 100          | 100          | 100           |
|        |                       | 2007-08            | 100          | 100          | 100          | 100          | 100           |
|        |                       | -                  |              | -            |              |              |               |

In 2007-08, the GVA in primary sector is 68.9 per cent of the total output, which is less than the corresponding figure of 70.9 per cent in 2003-04. The GVA output ratios in the primary, secondary sectors have gone down during 2007-08 in comparison to 2003-04 from 70.9 per cent to 68.9 per cent, 25.2 per cent to 24.6 per cent respectively, whereas in transport, communication & trade it has remained at the level of 59.6 per cent. However, in other services has gone up from 78.2 per cent to 79.6 per cent. The intermediate inputs of 'transport, communication and trade' sector for 2007-08 have marginally declined to 37.5 from 37.9 per cent during 2003-04. The input requirement is minimum in other services sector and maximum in secondary sector.

**Table 3.6: Purpose-wise Percentage Distribution of Final Use of Output** 

(Percentages)

| Sl.<br>No. | Sector/ Item                                 | Year                          | PFCE                 | GFCE                    | GFCF                 | CIS                | EXP                  | Total FUSE              |
|------------|--|-------------------------------|----------------------|-------------------------|----------------------|--------------------|----------------------|-------------------------|
| (1)        | (2)  | (3)                           | (4)                  | (5)                     | (6)                  | (7)                | (8)                  | (9)                     |
| 1.         | Primary                                      | 1998-99<br>2003-04<br>2007-08 | 94.0<br>89.0<br>87.8 | 0.5<br>0.6<br>1.4       | 0.5<br>0.3<br>0.3    | 0.1<br>0.9<br>-0.8 | 4.9<br>9.2<br>11.2   | 100.0<br>100.0<br>100.0 |
| 2.         | Secondary                                    | 1998-99<br>2003-04<br>2007-08 | 38.5<br>32.2<br>24.1 | 4.7<br>3.4<br>3.3       | 42.6<br>47.1<br>50.0 | -0.3<br>1.3<br>8.7 | 14.5<br>15.9<br>13.9 | 100.0<br>100.0<br>100.0 |
| 3.         | Transport, Communication and Trade           | 1998-99<br>2003-04<br>2007-08 | 75.2<br>78.0<br>70.5 | 4.1<br>2.9<br>4.7       | 6.9<br>6.8<br>7.3    | 0.0<br>0.0<br>0.0  | 13.8<br>12.4<br>17.5 | 100.0<br>100.0<br>100.0 |
| 4.         | Other Services include. Financial Services   | 1998-99<br>2003-04<br>2007-08 | 73.5<br>67.5<br>61.7 | 17.9<br>15.7<br>10.4    | 1.5<br>1.9<br>0.9    | 0.0<br>0.0<br>0.0  | 7.1<br>14.8<br>26.9  | 100.0<br>100.0<br>100.0 |
| 5.         | Public<br>Administra-<br>tion and<br>Defence | 1998-99<br>2003-04<br>2007-08 | 0.0<br>0.0<br>0.0    | 100.0<br>100.0<br>100.0 | 0.0<br>0.0<br>0.0    | 0.0<br>0.0<br>0.0  | 0.0<br>0.0<br>0.0    | 100.0<br>100.0<br>100.0 |
| 6.         | Total Input                                  | 1998-99<br>2003-04<br>2007-08 | 59.7<br>53.5<br>45.4 | 11.0<br>9.8<br>8.3      | 19.0<br>22.7<br>26.2 | -0.1<br>0.7<br>4.2 | 10.5<br>13.3<br>15.9 | 100.0<br>100.0<br>100.0 |

- 3.14 The PFCE primary has gone down to 87.8 percent of the final use in 2007-08 from 89.0 in 2003-04. Similar trend of decline is observed in the ratio PFCE of secondary, 'transport, communication and trade' and other services. The ratio of GFCF has registered a marginal increase in the secondary and transport sectors, whereas it has remained the same for the primary sector. As regards Exports, the ratio to the final use has increased in the primary, transport and other services, whereas it has declined from 15.9 percent in 2003-04 to 13.9 percent in 2007-08 in the secondary sector.
- 3.15 The above analysis is on the basis of *absorption* matrix. Other matrix, which also provides basic information to input-output system, is the *make* matrix. Analysis of *make matrix* can be through the *product-mix* and *market share* matrices, which show the coefficients of the *make* matrix depicting the pattern of industries and commodities respectively.

3.16 The basic input-output table is a commodity x industry table recording the inputs of commodities into industries. Most of these inputs are required to produce the characteristic product of the industry but some are required to produce its subsidiary products. The construction of pure table's viz., commodity x commodity or industry x industry table from the basic data involves transfers of inputs and outputs between sectors and such transfers are in fact possible by suitably combining the make matrix and the absorption matrix under the appropriate assumptions.

## **Product Mix Matrix**

- 3.17 In the product mix matrix, (usually, denoted by C) whose column entries show the proportions in which a particular industry produces various commodities, the diagonal elements give the proportion of the main product in the output of the industry while the off-diagonal elements indicate the subsidiary products and by-products.
- 3.18 For all industries relating to primary and service activities and large number of manufacturing industries, the main product of the industry practically accounts for the total output.
- 3.19 In the case of manufacturing industries, the contribution of the by-products and secondary products is, however, significant. In some cases, the proportion of all the by-products taken together is over 50 percent. The number of secondary products and by-products of an industry is generally small, with a few exceptions.
- 3.20 Out of the 68 industries listed under manufacturing, 12 industries share proportion of by-products less than 10 per cent, 19 industries share between 10-20 per cent and rest account for more than 20 per cent. For the rest of the industries relating to services, the share of by-products or subsidiary products is less than 5 per cent.

## **Market Share Matrix**

- 3.21 The market share matrix (D), column entries present the proportions in which the various industries produce the total output of a particular commodity, the diagonal elements give the proportions of the output of various commodities produced as main products and the off-diagonal elements show the proportions of the commodities produced as subsidiary products in other industries.
- 3.22 As expected, it is only in the manufacturing sector that the off diagonal elements are significant as compared to primary and tertiary sectors. In other words, in case of manufactured goods each commodity is produced by relatively large number of industries as a subsidiary product or by-product. More than 90 per cent of the output is produced as main product in the case of 19 commodity groups and less than 80 percent of the output is for 36 commodity groups belonging to manufacturing sectors.