

CHAPTER 3

INPUT-OUTPUT TRANSACTIONS - A BRIEF ANALYSIS

3.1 With the completion of present IOTT, seven IOTTs for the Indian economy with reference years as 1968-69, 1973-74, 1978-79, 1983-84, 1989-90, 1993-94 and 1998-99 are available. These IOTTs have complete coverage of the economy and are consistent with the NAS and are, therefore, comparable. The detailed IOTT of 1968-69 had 230 sectors whereas the 1973-74, 1978-79, 1983-84, 1989-90, 1993-94 and 1998-99 IOTTs have only 115 sectors. Thus the comparison is possible only at broad groups in the aggregated form of the tables at common 115 or 60-sector classification (Appendix III and Appendix IV). It may be mentioned that, though the number of sectors in 1973-74, 1978-79, 1983-84, 1989-90, 1993-94 and 1998-99 IOTTs is same, the sector classification of the first two and subsequent IOTTs is slightly different on account of the separation of electronic and communication equipment and merger of aircraft manufacturing with the miscellaneous manufacturing.

3.2 The IOTT can be viewed as an extensive dis-aggregation of the production account within the System of National Accounts. However, as has already been indicated, 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, to present a balanced IOTT.

3.3 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 consistency of technical coefficients. This assumption is justified unless there are major changes in the technology of production. During the periods 1968-69 to 1998-99, 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.

3.4 The proportion of imports in aggregate demand is slightly gone up from 5 per cent in 1989-90 to 6 per cent in 1993-94 and 8 per cent in 1998-99, as in these years 95 per cent, 94 per cent and 92 per cent of total demand had respectively been met by domestic output. The corresponding figures for 1968-69, 1973-74, 1978-79 and 1983-84 were 3.4 per cent, 3.2 per cent, 4.5 per cent, 5.0 per cent and 96.6 per cent, 96.8 per cent and 95.5 per cent and 95 per cent, respectively. However, the commodity-group composition of imports in the total supply shows some changes in 1993-94 and 1998-99. The agricultural crops (food, cash and others) and manufactured food items have contributed about 5.8 per cent of the total imports in 1998-99 as against 3.2 per cent in 1993-94, 3.8 per cent in 1989-90, 11 per cent in 1983-84, 12.3 per cent in 1978-79 and 23 per cent in 1973-74. The contribution of crude petroleum and natural gas, petroleum products including fertilizers, chemicals and chemical products in total imports have come down to 26.3 per cent in 1998-99 from 31.4 per cent in 1993-94, as against 32.2 per cent in 1989-90, 37.3 per cent in 1978-79 and 32.5 per cent in 1973-74. The share of iron and steel industries, basic metal industries, electrical and electronic machinery in the total supply of imports have increased to 28.2 per cent from 22.4 per cent in 1993-94 as against 29.5 per cent in 1983-84, 26 per cent in 1983-84, 24.5 per cent in 1978-79

and of 27.6 per cent in 1973-74. The demand of consumer items like beverages and tobacco products is met almost fully from domestic output, as their imports are negligible. However, there is a marked decrease in the import of motor vehicles from 7.9 per cent in 1993-94 to 0.5 per cent in 1998-99. The share of minerals and miscellaneous manufacturing in total imports is about 7.5 per cent and 8.0 per cent in 1998-99 respectively.

3.5 As regards the exports of commodities during 1998-99, the largest contribution of 14.2 per cent is from textile products, as against 13.0 per cent of 1993-94. The next largest contribution is from the miscellaneous manufacturing, which is about 9.0 per cent followed by the sector non-metallic mineral products, which is 6.4 per cent of the total exports.

3.6 The intermediate demand of industries accounts for nearly 44 per cent of domestic output in 1998-99, whereas it was 45, 46, 44, 42, 38 and 37 per cent in the years 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 Demand	PFCE	GFCE	GFCF	Net 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)

3.7 Of the final demand in total output in 1998-99, while the contribution of PFCE has come down to 38 per cent from 47 per cent in 1968-69 that of GFCF increased from 10 per cent in 1968-69 to 12 per cent in 1998-99. The contribution of GFCE has been nearly 7 per cent in 1998-99 and remained more or less at the same level of 6 percent, since 1968-69. Net foreign trade forms a negligible proportion of (-1) percent in total output.

3.8 To analyse the situation prevailing in 1998-99, the 115 sector *commodity x industry* table has been summarised to show only two sectors in the economy viz., 'commodities' comprising sectors 1 to 102 and 'services' comprising sectors 103 to 115 (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 and 1998-99.

3.9 The seven IOTTs compiled so far, reveal some deviation in the inter-industry utilisation of output of various commodities and services. The commodities have utilised 41.2 per cent of commodity output for intermediate consumption in 1998-99 as against 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 13.2 per cent of service output for intermediate consumption in 1998-99, as against 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 have changed marginally in all the seven periods of study till 1998-99, except 1989-90 and 1993-94 where it remains more or less at the same level. The component of final use in the output shows the corresponding decline, but shows marginal increase in the years 1989-90 and 1993-94 and again slight decrease in 1998-99. Thus, the share of commodities in final use to total commodity output is 50.9 per cent in 1998-99, as against 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 increase in the share of services in final use to total output of services, which is 63.2 per cent in 1998-99 as compared to 61.5 per cent in 1993-94.

3.10 The net indirect taxes on commodities and services used as intermediate inputs in 1998-99 constitute 29.2 per cent and 18.2 per cent, respectively of the total net indirect taxes while the remaining 52.6 per cent is the share of indirect taxes on final use.

Table 3.1: Percentage Distribution of Output

Sl. No.	Item	Year	Commo- dities	Services	Intermediate Use (4)+(5)	Final Use	Total Output (6)+(7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1.	Commo- dities	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
		1983-84	40.3	6.5	46.8	53.2	100
		1989-90	42.5	6.2	48.6	51.4	100
		1993-94	40.3	7.6	48.0	52.0	100
		1998-99	41.2	7.9	49.1	50.9	100
2.	Services	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
		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
3.	Sub-total	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
		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
4.	Net Indirect taxes	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
		1983-84	48.5	11.9	60.4	39.6	100
		1989-90	54.0	10.6	64.5	36.5	100
		1993-94	23.3	17.1	40.4	59.6	100
		1998-99	29.2	18.1	47.4	52.6	100
5.	Gross Value Added	1968-69	69.3	30.7			
		1973-74	70.1	29.9			
		1978-79	63.3	36.7			
		1983-84	63.0	37.0			
		1989-90	71.2	28.8			
		1993-94	56.1	43.9			
		1998-99	54.2	45.8			

Commodities: Sectors 1 to 102 of 115 x 115 Table

Services : Sectors 103 to 115 of 115 x 115 Table

3.11 In the year 1998-99, 44.6 per cent of the total output of industries producing commodities forms GVA, 53.3 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', 'net indirect taxes on inputs' and 'intermediate inputs' form 69.4 per cent, 2.5 per cent and 28.2 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 marginally to 44.6 per cent in 1998-99 from 44.8 per cent in 1993-94. On the other hand, in the case of services producing industries, the GVA to output ratio is almost the same for 1998-99 and 1993-94, at 69.4 per cent and 70.1 per cent, respectively. The GVA to total output ratio of all industries are same for both the years of 1998-99 and 1993-94. The material inputs of commodities has increased from 39.1 per cent in 1993-94 to 39.5 per cent in 1998-99, whereas it is the reverse in the case of services at 14.2 per cent in 1993-94 and 13.8 per cent in 1998-99. The component of commodities as input in the service producing industries has declined from 14.8 per cent in 1993-94 to 14.0 in 1998-99. But there is a slight increase in the component of services as input in the service producing industries from 12.4 per cent in 1993-94 to 14.2 per cent in 1998-99.

Table 3.2: Percentage Distribution of Inputs

Sl. No.	Item	Year	Commodities	Services	Sub-Total	Final Use
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	Commodities	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
		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
2.	Services	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
		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
3.	Sub-total	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
		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
4.	Net Indirect taxes	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
		1983-84	4.0	2.4	3.6	4.0
		1989-90	4.8	2.3	4.1	4.0
		1993-94	1.8	2.7	2.1	5.3
		1998-99	2.1	2.5	2.3	4.3
5.	Gross Value Added	1968-69	56.2	71.8	60.3	
		1973-74	55.1	71.5	59.1	
		1978-79	47.8	67.2	53.5	
		1983-84	46.3	67.9	52.4	
		1989-90	41.9	69.2	49.8	
		1993-94	44.8	70.1	53.3	
		1998-99	44.6	69.4	53.3	
6.	Total Output	1968-69	100	100	100	100
		1973-74	100	100	100	100
		1978-79	100	100	100	100
		1983-84	100	100	100	100
		1989-90	100	100	100	100
		1993-94	100	100	100	100
		1998-99	100	100	100	100

3.12 Looking into the composition of final use, it is observed that of the total final use 54.6 per cent relates to commodities and 41.1 per cent to services (Table 3.2). The corresponding figures for 1993-94, 1989-90, 1983-84, 1978-79, 1973-74 and 1968-69 were 57.6 per cent and 37.1 per cent, 63.5 per cent and 32.6 per cent, 63.9 per cent and 32.1 per cent, 66.3 per cent and 29.9 per cent, 69.9 per cent and 26.4 per cent and 69.2 per cent and 27.1 per cent, respectively.

3.13 The IOTT 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 1998-99 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 and 1998-99, under similar classification. Consequently, sectors 1 to 32 of the IOTT are considered as belonging to 'primary' sector. 'secondary' sector corresponds to sectors 33 to 102; 'transport, communication & trade' comes under the sectors 103 to 108 and the rest covering sectors 109 to 114 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.

3.14 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. The sum of column (8) & column (9) gives the total supply in the economy.

Table 3.3: Inter-Industry Transactions, 1998-99

(Rs. in crore)

Sl. No.	Sector/Item	P	S	TR	OTH	PAD	Total II Use	Total Final Use	Total Output
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1.	P	67131	192415	15447	885	0	275878	333840	609718
2.	S	48646	459567	87119	44230	0	639562	615972	1255534
3.	TR	25665	157999	39777	18054	0	241495	312740	554235
4.	OTH	5425	78313	45342	46453	0	175533	303655	479188
5.	PAD	0	0	0	0	0	0	99567	99567
6.	Total	146867	888293	187685	109623	0	1332468	1665773	2998241
7.	NIT	-10980	52752	19515	6359	0	67647	75212	142858
8.	GVA	479622	386418	333379	299140	99567	1598127	1740985	
9.	Total Output	615509	1327463	540580	415122	99567	2998241		3141099

P: Primary, S: Secondary, TR: Trade, Hotel, Transport & Communication, OTH: Other Services including Financial Services, PAD: Public Administration & Defence.

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.

3.15. During the year 1998-99 the consumption of sectors' own output is 24.3 in the case of primary sectors and 71.9 per cent in the case of secondary sectors. The corresponding figures for the years 1968-69, 1973-74, 1978-79, 1983-84, 1989-90 and 1993-94 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 respectively. In the year 1998-99, 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 (69.7 per cent) and 'transport, communication and trade' sector (5.6 per cent) and the 'other services' sector (0.3 per cent). The use of secondary sector product by 'primary', 'transport, communication and trade' and 'other services' sectors in the year 1998-99 has been 7.6 per cent, 13.6 per cent and 6.9 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 65.4 per cent and 44.6 per cent respectively. The shares of 'transport, communication and trade services' used by primary, self and other services are 10.6 per cent, 16.5 per cent and 7.5 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 3.1 per cent, 25.8 per cent and 26.5 per cent, respectively.

Table 3.4: Inter-Industry Transactions:

(Percentages)

Sl. No.	Sector/ Item	Year	P	S	TR	OTH	Total II USE
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1.	Primary	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
		1989-90	34.3	60.0	5.1	0.6	100
		1993-94	32.1	61.4	6.0	0.5	100
		1998-99	24.3	69.7	5.6	0.3	100
2.	Secondary	1968-69	10.4	68.5	11.0	10.1	100
		1973-74	12.4	69.0	9.6	9.0	100
		1978-79	10.9	71.8	11.7	5.6	100
		1983-84	11.0	70.4	11.8	6.8	100
		1989-90	9.9	74.2	10.9	5.0	100
		1993-94	9.3	70.5	15.2	5.1	100
		1998-9	7.6	71.9	13.6	6.9	100
3.	Transport, Communication and Trade	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
		1983-84	12.4	57.1	26.0	4.5	100
		1989-90	11.0	63.0	21.5	4.5	100
		1993-94	13.2	67.7	15.0	4.0	100
		1998-99	10.6	65.4	16.5	7.5	100
4.	Other Services including Financial Services	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
		1983-84	6.5	48.5	33.3	11.7	100
		1989-90	6.3	51.9	28.4	13.5	100
		1993-94	4.8	41.3	40.5	13.3	100
		1998-99	3.1	44.6	25.8	26.5	100
5.	Total input	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
		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
6.	Net Indirect Taxes	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
		1989-90	(-7.5)	91.1	13.6	2.8	100
		1993-94	(-33.2)	90.8	37.4	4.9	100
		1998-99	(-16.2)	78.0	28.8	9.4	100

3.16 Table 3.5 depicts the input structure of different sectors. The input requirements of primary sector have gone down from 27.9 per cent in 1993-94 to 23.9 per cent in 1998-99 mainly due to the decrease in the consumption of products of primary and secondary sectors.

Table 3.5: Percentage Distribution of Inputs in Different Sectors
(Percentages)

S. No.	Sector/ Item	Year	P	S	TR	OTH	Total II USE
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1.	Primary	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
		1989-90	15.4	13.6	3.3	0.7	10.7
		1993-94	13.5	14.0	3.1	0.3	9.9
		1998-99	10.9	14.5	2.9	0.2	9.2
2.	Secondary	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	7.1	34.1	12.8	12.1	19.5
		1983-84	8.0	33.9	15.2	11.1	20.7
		1989-90	9.5	36.0	15.0	12.7	22.9
		1993-94	8.4	34.5	16.9	7.5	21.2
		1998-99	7.9	34.6	16.1	10.7	21.3
3.	Transport, Communi- cation and Trade	1968-69	1.2	11.7	7.1	5.2	6.0
		1973-74	1.5	10.1	10.2	5.0	6.1
		1978-79	3.2	11.0	15.7	4.1	8.6
		1983-84	3.4	10.4	12.7	2.8	7.8
		1989-90	3.7	10.8	10.4	4.0	8.1
		1993-94	5.2	14.4	7.2	2.6	9.2
		1998-99	4.2	11.9	7.4	4.3	8.1
4.	Other Services include. Financial Services	1968-69	0.8	2.3	5.3	2.5	2.0
		1973-74	0.3	2.5	2.1	1.9	1.5
		1978-79	0.5	3.1	5.2	4.9	2.8
		1983-84	0.8	3.9	7.1	3.2	3.4
		1989-90	1.2	4.8	7.5	6.6	4.4
		1993-94	0.9	4.2	9.4	4.1	4.4
		1998-99	0.9	5.9	8.4	11.2	5.9
5.	Total input	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
		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
6.	Net Indirect Taxes	1968-69	0.5	5.1	5.6	1.4	2.9
		1973-74	0.7	6.6	3.7	1.8	3.3
		1978-79	0.8	7.1	4.4	1.5	4.1
		1983-84	(-)0.8	7.2	3.2	1.5	3.6
		1989-90	(-)1.3	7.8	3.3	1.3	4.1
		1993-94	(-)3.0	4.4	4.1	0.7	2.1
		1998-99	(-)1.8	4.0	3.6	1.5	2.3
7.	Gross Value Added	1968-69	75.6	34.3	66.1	72.5	60.3
		1973-74	76.2	31.9	65.6	73.5	59.1
		1978-79	71.7	30.5	57.6	77.0	53.5
		1983-84	71.9	29.2	57.6	81.1	52.4
		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
8.	Total Output	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
		1989-90	100	100	100	100	100
		1993-94	100	100	100	100	100
		1998-99	100	100	100	100	100

3.17 In 1998-99, the GVA in primary sector is 77.9 per cent of the total output, which is higher than the corresponding figure of 75.0 per cent in 1993-94. The corresponding figures in 1989-90, 1983-84, 1978-79, 1973-74 and 1968-69 are 71.5, 71.9 per cent, 71.7 per cent, 76.2 per cent and 75.6 per cent respectively. The GVA

Table 3.6: Purpose-wise Percentage Distribution of Final Use of Output
(Percentages)

Sl. No.	Sector/ Item	Year	PFCE	GFCE	GFCF	CIS	EXP	IMP	Total FUSE
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1.	Primary	1968-69	101.2	0.5	0.3	0.4	1.8	4.2	100
		1973-74	99.5	0.4	0.3	3.3	1.6	5.1	100
		1978-79	100.2	0.0	0.3	2.8	2.2	5.5	100
		1983-84	100.1	0.1	0.3	3.6	4.6	8.7	100
		1989-90	106.3	0.7	0.3	1.4	2.0	10.6	100
		1993-94	105.5	0.7	0.6	0.4	3.5	10.7	100
		1998-99	106.6	0.5	0.6	0.1	5.5	13.4	100
2.	Secondary	1968-69	49.2	4.9	48.3	1.6	8.8	12.8	100
		1973-74	44.6	5.8	42.6	7.3	8.9	9.2	100
		1978-79	48.2	5.6	43.2	5.2	12.8	15.0	100
		1983-84	49.7	5.8	44.8	5.1	9.9	15.3	100
		1989-90	40.9	6.7	49.4	4.4	12.8	14.1	100
		1993-94	42.2	6.4	57.2	(-0.7)	16.7	21.7	100
		1998-99	49.0	6.0	54.2	(-0.4)	18.5	27.3	100
3.	Transport, Communica- tion and Trade	1968-69	79.7	8.0	5.6		8.2	1.5	100
		1973-74	79.7	5.9	7.1		8.5	1.2	100
		1978-79	82.5	4.2	4.2		10.9	1.8	100
		1983-84	83.8	3.6	6.0		9.6	3.0	100
		1989-90	74.3	7.1	7.7		14.3	3.5	100
		1993-94	73.7	3.6	8.1		15.3	0.7	100
		1998-99	78.8	4.3	7.2		14.4	4.7	100
4.	Other Services include. Financial Services	1968-69	79.4	20.5			0.4	0.3	100
		1973-74	79.4	20.6					100
		1978-79	75.3	23.8			2.3	1.4	100
		1983-84	76.6	20.6			3.2	1.4	100
		1989-90	76.8	22.3			3.0	2.0	100
		1993-94	81.4	19.5			5.6	6.5	100
		1998-99	78.0	19.0	1.6		7.6	6.1	100
5.	Public Administra- tion and Defence	1968-69		100					100
		1973-74		100					100
		1978-79		100					100
		1983-84		100					100
		1989-90		100					100
		1993-94		100					100
		1998-99		100					100
6.	Total Input	1968-69	76.2	9.2	15.3	0.6	4.5	5.8	100
		1973-74	72.9	8.9	15.0	3.7	4.7	5.2	100
		1978-79	71.1	9.6	16.8	2.8	7.4	7.7	100
		1983-84	71.1	10.3	17.7	2.9	6.9	8.9	100
		1989-90	64.2	12.5	22.0	2.2	8.5	9.3	100
		1993-94	67.3	11.4	22.5	(-0.2)	10.6	11.7	100
		1998-99	68.5	12.6	21.8	(-0.1)	12.0	14.8	100
7.	Net Indirect Taxes	1968-69	65.7	7.4	18.9		8.0		100
		1973-74	76.0	2.8	20.5		0.7		100
		1978-79	63.4	8.4	27.6		0.6		100
		1983-84	59.5	8.8	37.9		(-6.2)		100
		1989-90	61.7	7.1	42.2		(-11.0)		100
		1993-94	74.2	3.5	23.5		(-1.2)		100
		1998-99	52.8	6.1	42.1		(-0.9)		100
8.	Total Output	1968-69	75.8	9.1	15.4	0.6	4.6	5.5	100
		1973-74	73.0	8.7	15.2	3.6	4.5	5.0	100
		1978-79	70.8	9.6	17.2	2.7	7.2	7.5	100
		1983-84	70.6	10.0	18.5	2.8	6.4	8.5	100
		1989-90	64.1	12.2	22.8	2.1	7.7	8.9	100
		1993-94	67.7	11.0	22.5	(-0.2)	10.0	11.0	100
		1998-99	67.8	12.3	22.7	(-0.1)	11.5	14.1	100

Note : Col (10) = Total Col (4) to Col (8) minus Col (9)

output ratios in the sectors of primary, secondary and transport, communication & trade have gone up during 1998-99 in comparison to 1993-94 from 75.0 per cent to 77.9 per cent, 28.4 per cent to 29.1 per cent and 59.2 per cent to 61.7 per cent respectively, while that of other services has gone down from 84.7 per cent to 72.1 per cent. The intermediate inputs of 'transport, communication and trade' sector for 1989-90 (34.8 per cent) has gone down from that of 36.7 per cent during 1993-94. These are 39.2, 37.8, 30.7 and 28.3 per cent in 1983-84, 1978-79, 1973-74 and 1968-69, respectively. The input requirement is minimum in other services sector and maximum in secondary sector.

3.18 Table 3.6 gives a comparative picture of the components of final demand for the years 1968-69, 1973-74, 1978-79, 1983-84, 1989-90, 1993-94 and 1998-99. As regards the supplies from primary sector, it is the Private Final Consumption Expenditure category of the final demand, which accounted for almost entire final use. This has been true for all the seven periods under study. Imports have been considered as negative outputs of the corresponding domestic sectors. In 1998-99, the imports of 'primary' sector commodities have been 13.4 per cent and exports 5.5 per cent of the total final expenditure. In 1998-99, the imports of 'secondary' sector commodities have been 27.3 per cent and exports 18.5 per cent of the total final expenditure.

3.19 The share of PFCE in the final use of secondary sector output has increased from 42.2 per cent in 1993-94 to 49.0 per cent in 1998-99. There is slight decrease in the GFCF from secondary sector from 57.2 per cent in 1993-94 to 54.2 per cent in 1998-99. The shares of CIS, however, declined over the periods and are negligible. During 1998-99, there is an increase in the share of exports from 16.7 per cent in 1993-94 to 18.5 per cent in 1998-99 and the share of imports too have increased from 21.7 per cent in 1993-94 to 27.3 per cent in 1998-99.

3.20 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.

3.21 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 tables 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. The derived matrices known as product mix and market share matrices are used in arriving at the pure tables.

Product Mix Matrix

3.22 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.

3.23 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. However, in manufacturing industries, there are categories e.g. 'hydrogenated oil (vanaspati)', where the main product accounts for just 39.2 per cent of the total output. But, when the sectors 'hydrogenated oil (vanaspati)' and 'Edible oils other than vanaspati' are taken together, their main product accounts for 93.3 per cent of the entire output.

3.24 In the agriculture sector (1 to 17), 2.7 per cent is of "other crops" as by-products and subsidiary products. These by-products are straw, stalks, etc. and milling activity is the subsidiary product of the industry. For the rest of the industries relating to primary, products hardly any by-product or subsidiary product exists.

3.25 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 as high as 60.8 per cent for hydrogenated oil (vanaspati). The number of secondary products and by-products of an industry is generally small, with a few exceptions.

3.26 Out of the 66 industries listed under manufacturing, 12 industries share proportion of by-products less than 10 per cent, 26 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 not much.

Market Share Matrix

3.27 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.

3.28 For the commodity groups relating to primary sectors, the output is produced as main product in all the cases except for the commodity group, 'other crops'. In this particular case, 86 per cent of the total output comes as a main product whereas 14 per cent is produced as a subsidiary product or by-products by the industries of agriculture crops (sectors 1 to 16).

3.29 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 95 per cent of the output is produced as main product in the case of 34 commodity groups and less than 80 per cent of the output is for 11 commodity groups belonging to manufacturing sectors.