

Scientific and Technical Personnel

Inter-State Flow and Distribution

B Dey

Scientific and technical personnel move from every State to every other State, but some States are net importers and others are net exporters.

The percentage of inflow to the total number of such personnel in the State varies between 3 and 35, though the ratio in general is between 10 and 20 per cent.

The South zone is the biggest exporter and lowest importer: nearly one-half of migrants from the South have gone to West zone.

THIS study does not intend to go into the intricacies of profit or loss to States arising from the movement of scientific and technical personnel. Its aim is to reveal the extent of inter-State migration of such persons as in 1961, the year of the last Census. Zonal and State-wise distributions of scientific and technical persons have also been included to reveal the excesses or deficiencies in respect of technical education for each of the States.

The study is based on data collected by the Census through a special enumeration of scientific and technical personnel (February 10 to March 5, 1961) and published in Vol 1, Part II(C), Social and Cultural Tables. The enumeration covered the following categories of scientific and technical personnel classified under 56 subgroups irrespective of whether they were employed/unemployed, retired or students:

1 General Science: Anybody holding bachelor's and/or higher degrees in science subjects;

2 Engineering and Technology: Anybody holding degree or diploma in

any branch of engineering or technology;

3 Medicine and allied subjects: Persons holding degree or diploma in medicine and surgery (human and animal), modern and indigenous system, nursing, etc.

The coverage extended to all urban areas and selected rural areas which in the experience of the Census Organisation, were likely to contain this category of persons in the States of Assam, Bihar, Gujarat, Jammu and Kashmir, Madhya Pradesh, Maharashtra Orissa, Rajasthan, Uttar Pradesh, West Bengal; and in all areas of the remaining States and the Union Territories.

The total number of persons who filled in this special questionnaire was 250,650 which covered 65 per cent in respect of engineering and technology (degree or diploma equal to degree or post-graduate degree) and 61 per cent in respect of medicine (degree or above — modern and other indigenous system) of the total enumerated figures as given in Union Census Table C-III in the same volume.

The data given in the Census Tables

as referred to above have been rearranged to build up the inter-State flow matrices. Out of the total number of persons enumerated in the States, 4303 constituting 1.72 per cent of the total could not be distributed as their States of birth were not specifically available.

Total scientific and technical personnel includes graduates in general sciences numbering 95,445 persons or 38 per cent of the total. Of this only 28 per cent are engaged in technical activities and the rest in either teaching (26.9 per cent in schools and 5.5 per cent in colleges) or are employed as non-technical personnel (39.6 per cent).^{*} A separate flow matrix of this major group has also been included in Table 1 (lower figures within brackets).

From the flow Tables it may be observed that scientific and technical persons move from every State to every other State. Even the same category of persons have been exchanged between States. But some States are net importers and others are net ex-

^{*} Monograph No 1, Census of India 1961, Table 2.2.

TABLE 1. INTER-STATE FLOW OF SCIENTIFIC AND TECHNICAL PERSONNEL 1961

Born in	Enumerated In													Born in the State enumerated in the State					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)		(14)	(15)	(16)	(17)	
1 Andhra	18105 (765)	19	51	58	1	24	226	233	347	228	67	17	23	96	147	138	16	1731	19816
2 Assam	3028	21	21	(12)	(-)	2	410	51	14	3	4	2	(-)	28	69	(19)	33	63	19836
3 Bihar	8489	37	2	(-)	(-)	(1)	12	11	(4)	18	53	(-)	(-)	28	69	(7)	26	(78)	11791
4 Gujarat	10	3	38	12730	3	22	90	22	56	18	10	(-)	12	32	72	(12)	3	802	29291
5 Jammu and Kashmir	6	(-)	(5)	(4375)	(1)	72	90	22	472	25	10	14	30	67	44	36	3	876	13606
6 Kerala	111	43	132	167	3	19716	335	4	20	6	1	21	5	31	18	35	5	191	1203
7 Madhya Pradesh	60	(13)	(32)	(1)	(3)	(12381)	101	832	779	231	70	36	57	126	188	529	65	3704	25420
8 Madras	26	3	48	70	5	7	9911	14	239	36	16	14	43	116	45	48	10	740	10651
9 Maharashtra	671	(7)	(27)	(24)	(3)	(82)	(42)	23377	621	267	52	39	31	111	218	255	59	5392	25964
10 Mysore	319	30	99	421	7	29	583	105	3198	203	37	55	66	179	137	222	15	2307	17021
11 Orissa	260	24	190	259	(-)	45	361	430	1074	19369	63	59	43	151	136	191	34	5183	22554
12 Punjab	132	31	61	72	2	(-)	65	6	(-)	(-)	56	(-)	(-)	45	(11)	49	3	52	620
13 Rajasthan	5	(2)	(17)	(10)	(5)	(1)	(45)	(6)	(4)	35	41	6657	151	430	123	580	160	2389	8946
14 Uttar Pradesh	81	60	664	166	35	6	1203	43	300	67	71	275	36	23899	937	72	145	4695	28314
15 West Bengal	20	60	980	136	16	12	1053	60	49	19	115	51	90	900	104	173	127	1640	9201
16 Delhi	18	(18)	(314)	(16)	(1)	(6)	(120)	(9)	(106)	64	314	87	109	481	24386	330	244	3996	28382
17 Other Union Territories	11	(5)	(17)	(10)	(3)	(7)	(30)	(8)	(54)	(11)	(8)	(5)	(22)	(69)	(33)	(2002)	(10)	(330)	(2352)
Unspecified	4	13	9	3	(-)	3	(-)	13	13	3	(-)	5	20	20	36	9	160	164	1304
Enumerated in the State but born in other State	1504	690	2515	1745	146	68	4508	3137	3546	1777	888	1138	1127	2943	7416	3469	893	3609	2913
Total enumerated	18669	3718	15096	1198	1198	30324	4449	26769	38644	21146	2610	7785	6679	26552	56662	9734	2312	28680	208660
	(8130)	(1240)	(5203)	(4820)	(409)	(12042)	(3451)	(12070)	(13171)	(8100)	(809)	(2193)	(991)	(832)	(1702)	(2966)	(728)	(35465)	(53465)

Note: Upper figures are the flow of all categories of scientific and technical personnel including graduates in general sciences; lower figures within brackets are the flow of only graduates in general sciences.

TABLE 2: INTRA-STATE FLOW OF SCIENTISTS AND TECHNOLOGISTS AS ON 1961
(Percentage) Upper figures are for those who have returned to their State; Lower:
(Percentage) Upper figures are for those who have returned to their State; Lower:
Column-wise Give Interflows (Including Stay-in-State).

S No	Born in	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Born in the State But Enumerated in Other States	Total Born in State		
1	Andhra	91.37	10.46	20.46	0.91	12.12	1.14	1.17	1.91	1.25	1.05	2.34	0.22	0.48	1.41	0.78	70.08	100.00	8.73	7.91		
2	Assam	09.92	23.54	21.19	0.06	0.07	0.03	0.04	0.01	0.04	0.03	0.04	0.02	0.04	0.10	0.36	0.10	3.24	1.31	100.00		
3	Bihar	0.11	0.70	71.14	0.76	0.17	0.01	0.78	0.04	0.17	0.08	2.01	0.27	0.12	0.16	0.80	0.57	1.22	8.63	100.00		
4	Coimbatore	15.02	28.93	56.04	1.11	0.62	0.08	1.23	0.12	0.38	1.18	0.07	1.10	2.22	2.77	3.2	26.04	6.44	100.00	3.43		
5	Jammu and Kashmir	0.50	0.38	0.66	84.12	0.17	1.83	0.33	1.66	0.50	0.88	1.74	4.2	2.58	1.50	2.91	4.2	15.88	100.00	0.46		
6	Kerala	0.87	1.16	1.20	1.15	0.26	97.01	2.32	3.24	2.02	1.09	2.68	0.46	1.22	0.47	0.70	3.43	3.03	15.82	100.00		
7	Madhya Pradesh	0.24	0.03	0.45	0.66	0.05	0.06	93.05	0.13	2.25	0.34	0.15	0.13	0.40	1.10	0.42	0.15	0.09	6.95	100.00	0.46	
8	Madras	1.27	0.78	1.17	0.57	0.32	1.05	0.78	91.69	1.28	1.32	0.20	0.15	0.13	0.43	0.84	0.40	5.73	9.21	100.00	0.46	
9	Maharashtra	0.61	0.81	0.90	2.90	0.60	0.14	4.03	0.41	86.13	0.96	1.42	0.70	1.41	0.67	0.31	2.28	0.70	6.50	100.00	14.16	
10	Mysore	1.16	0.11	0.40	1.10	0.02	0.20	1.60	1.86	4.76	85.88	0.28	0.17	0.19	0.67	0.60	0.85	0.15	14.12	100.00	9.00	
11	Orissa	1.32	0.64	0.82	1.72	0.43	0.22	2.50	1.63	2.80	91.00	2.41	0.50	0.92	0.56	0.31	1.96	1.39	12.77	100.00	10.90	
12	Punjab	0.18	0.11	0.37	0.01	0.01	0.01	0.19	0.02	0.68	0.03	85.98	0.03	—	—	—	0.16	0.19	12.77	100.00	3.57	
13	Rajasthan	0.30	0.27	0.45	1.36	—	0.02	2.24	0.12	1.62	0.27	0.20	0.60	88.18	1.92	0.89	1.34	0.22	11.82	100.00	1.61	
14	UP	0.29	0.21	1.64	0.55	0.12	0.02	4.26	0.17	0.98	0.32	2.72	3.31	7.71	89.00	1.64	7.41	6.81	15.91	100.00	11.29	
15	West Bengal	0.41	1.61	4.72	1.00	3.02	0.03	8.35	0.17	0.96	0.32	2.72	3.31	7.71	89.00	1.64	7.41	6.81	15.91	100.00	11.29	
16	Delhi	0.25	1.07	3.37	0.22	0.05	0.06	1.74	0.21	1.30	0.22	1.11	0.38	1.68	85.92	1.15	0.86	14.08	100.00	14.16		
17	Other Union Territories	0.51	0.28	1.36	0.77	0.26	0.21	2.36	0.28	2.78	0.51	0.42	3.41	1.15	4.35	1.73	78.47	1.03	21.53	100.00	3.23	
18	Unspecified	0.31	1.90	0.98	0.23	—	0.21	0.46	0.69	1.00	0.45	0.38	0.19	0.16	—	—	0.07	0.13	0.09	51.47	100.00	3.23
19	Unspecified	2.10	1.91	1.38	1.55	1.47	1.02	2.08	1.23	1.49	1.24	1.04	4.37	2.30	12.99	8.67	4.34	2.02	100.00	17.72		
20	Unspecified	9.60	1.65	3.53	5.23	0.40	4.81	6.97	7.48	13.34	12.25	1.04	4.37	2.30	12.99	8.67	4.34	2.02	100.00	17.72		
21	Unspecified	2.10	1.91	1.38	1.55	1.47	1.02	2.08	1.23	1.49	1.24	1.04	4.37	2.30	12.99	8.67	4.34	2.02	100.00	17.72		
22	Unspecified	18.56	22.86	12.18	12.61	2.99	31.26	8.31	13.87	8.40	34.02	14.60	24.09	11.00	9.01	34.95	46.33	—	—	—		
23	Unspecified	1.48	4.30	3.78	0.46	0.11	5.27	10.26	15.39	8.46	11.64	3.87	11.67	10.69	3.19	10.87	100.00	100.00	100.00	100.00		
24	Unspecified	7.87	10.60	10.09	10.06	10.06	10.06	10.06	10.06	10.06	10.06	10.06	10.06	10.06	10.06	10.06	10.06	10.06	10.06	100.00	100.00	

Enumerated in the State but Born in Other States

Unenumerated

TABLE 3: NET MOVEMENT OF SCIENTIFIC AND TECHNICAL PERSONNEL BY GROUPS BETWEEN STATES 1961

All Categories	(1)	(2)	(3)	(4)	(5)	(6)
	Graduates in General Science	Post-graduates in General Sciences	Engineers (Graduates)	Engineers (Diploma)	Medicine (All Types)	(Number)
<i>NET EMIGRATION</i>						
Kerala	3109	Kerala 1294	UP 491	Mysore 723	Kerala 785	W Bengal 832
W Bengal	1580	UP 481	Kerala 338	Kerala 444	UP 577	Kerala 248
UP	1562	W Bengal 466	Andhra 120	Andhra 314	Punjab 546	Mysore 44
Mysore	1408	Mysore 258	Punjab 94	Madras 299	W Bengal 410	Punjab 42
Punjab	1151	Mysore 247	Mysore 55	Punjab 222	Mysore 328	J & K 0
Madras	255	J & K 26	Madras 52	UP 182	Madras 78	
Andhra	227		J & K 25	J & K 20	Andhra 47	
J & K	45					
<i>NET IMMIGRATION</i>						
Madhya Pradesh	3766	Maharashtra 1211	Delhi 388	MP 800	MP 1410	MP 413
Maharashtra	3039	MP 841	Maharashtra 386	Maharashtra 579	Maharashtra 683	Delhi 274
Bihar	1688	Delhi 611	MP 304	Bihar 506	Bihar 535	Other UT 209
Delhi	1668	Bihar 664	Bihar 124	Delhi 247	Other UT 332	Gujarat 185
Gujarat	889	UP 429	Rajasthan 116	Orissa 225	Gujarat 248	Maharashtra 180
Other UT	810	UP 429	Gujarat 72	Gujarat 137	Other UT 201	UP 169
Rajasthan	651	Other UT 155	Other UT 81	Assam 137	Rajasthan 148	Kalashan 122
Orissa	636	Andhra 132	West Bengal 52	Other UT 84	Delhi 148	Andhra 112
Assam	435	Rajasthan 132	Assam 16	West Bengal 54	Orissa 149	Madras 94
		Assam 90	Orissa 1	Rajasthan 39	J & K 27	Bihar 85
		Madras 61				Orissa 81
						J & K 0

Note. The difference between net emigration and net immigration figures are due to some unspecified migrants which could not be distributed.

porters of technical personnel. Among the major exporting States, Kerala tops the list followed by West Bengal, UP, Mysore, Punjab, Madras, Andhra Pradesh and Jammu and Kashmir. Madhya Pradesh and Maharashtra are the two chief importers of such persons; other importing States in order of importance are Bihar, Delhi, Gujarat, Rajasthan, Orissa, Assam, and Other Union Territories.

Some States are net importers of all categories of scientific and technical personnel as, for example, Delhi, Bihar, Maharashtra, Madhya Pradesh, Gujarat, Orissa, Assam, Rajasthan, whereas a few other States, viz. Kerala, Mysore and Punjab are net exporters of all categories of scientists. There is a third group of States which are net exporters of some categories but net importers of some other categories (Table D). For instance, West Bengal exports ordinary graduates, engineering diploma-holders, and medical personnel in excess of its imports, and is a net importer of post-graduates in general sciences and engineering graduates; UP imports medical personnel in greater number and is net exporter of all other categories of technicians; Andhra exports graduates in general sciences and medical persons and imports post-graduates in general sciences and engineers.

Almost every State has enumerated the major portion, ranging from 80 to 90 per cent, of the total number of scientific and technical persons as born within the State. That means that the outflow of such persons ranges between only 10 and 20 per cent. There are a few exceptions, e.g. Andhra, Assam, Bihar, Madhya Pradesh and Maharashtra retain above 90 per cent whereas Punjab and Delhi retain only 74 and 78 per cent, respectively, of their own personnel.

NO CLEAR RELATIONSHIPS

The percentage of inflow to the total number of scientists enumerated in the State varies more widely, between 3 and 35 per cent. Table 4 arranges the States according to their percentages of inflow and outflow of scientific and technical personnel. It is evident that inter-State migration of scientific persons does not, in all cases, depend on the level of development of the State of origin. Both advanced and backward States are among the lowest exporters and lowest importers. Maharashtra and Gujarat are highly developed, having per capita income and productive capital much above the all-India average, while Assam

TABLE 4: GROUPING OF STATES ACCORDING TO PERCENTAGE OF OUTFLOW AND INFLOW

Percentage Range	According to Percentage of Outflow to Total Born	According to Percentage of Inflow to Total Enumerated
Upto 5	Nil	Kerala
6 to 10	Andhra, Madras, Assam, Bihar, Gujarat, MP, Maharashtra	Andhra, Madras, Mysore, West Bengal
11 to 15	Mysore, Orissa, Rajasthan, West Bengal, Other Union Territories	Gujarat, Jammu and Kashmir, Maharashtra, Punjab, UP
16 to 20	Jammu and Kashmir, Kerala, UP	Assam
21 to 25	Punjab, Delhi	Bihar, Rajasthan
26 to 30	Nil	Nil
Above 30	Nil	MP, Orissa, Delhi, Other Union Territories

TABLE 5: IN-MIGRANTS OF SOUTHERN STATES

	Andhra	Madras	Mysore	Kerala	Subtotal	Maharashtra	MP Total
Andhra	—	233	228	24	485 (28.0)	347	1216 1731
Madras	249	—	267	213	729 (30.5)	493	184 2392
Mysore	260	240	—	45	725 (22.8)	1074	361 3185
Kerala	111	832	231	—	1174 (31.7)	335	779 3704
Subtotal	620 (41.2)	1485 (32.9)	726 (40.9)	282 (46.4)	3113		
Total	1504	4508	1777	608		5346	4508

Note: Figures within brackets are percentages of total outflow.

TABLE 6: INTERZONAL FLOWS

Zones	West	South	East	North	Delhi	Total
West	—	545	398	1066	258	2267
South	3250	—	1491	1891	1093	7725
East	617	331	—	1530	422	2900
North	1246	422	1546	—	1440	4654
Delhi	287	124	307	940	—	1658
Total	5400	1422	3742	5427	3213	19204

North Zone : MP, Punjab, J & K, Rajasthan and UP;
 West Zone : Maharashtra and Gujarat;
 South Zone : Mysore, Kerala, Madras and Andhra;
 East Zone : Assam, West Bengal, Bihar and Orissa;
 Delhi : as an abnormal State, Delhi has been shown separately.
 (Other Union Territories are not included here).

and Madhya Pradesh are poor, but both categories are the lowest exporters. Similarly, backward States like Madhya Pradesh and Orissa are among the highest importers, while another poor State, Kerala, together with West Bengal, a highly developed State, are the lowest importers.

It may be said that the governing factors for inter-State movement of scientific and technical persons are employment opportunities, on the one hand, and advancement in technical education, on the other. Central Gov-

ernment service is, of course, another important factor.

The maximum number of in-migrants to Maharashtra have come from the Southern States, viz. Mysore (1074), Kerala (779), Madras (493) and Andhra (347). A more or less equal number of scientists and technologists have been exchanged between Maharashtra and Gujarat. Other notable migrants to Maharashtra are from the two distant States of UP (380) and West Bengal (369). The outflow from Maharashtra has gone to Gujarat and

TABLE 7: STATE-WISE PERCENTAGES OF GENERAL AND SCIENTIFIC AND TECHNICAL MIGRANTS AND OTHER VARIABLES 1961

States	Per Cent of General Population Emigrated		Percentage of Technical Persons Emigrated	Index of Per Capita Income (India = 100)	Index of Productive Capital In Mig (India = 100)	Percentage of Population Engaged in Agricultural and Allied Activities		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1 Andhra	2.4	1.6	8.73	7.67	85.8	44.1	73	
2 Assam	0.7	3.9	7.77	18.56	99.6	99.6	78	
3 Bihar	4.4	1.9	8.63	22.86	66.0	108.2	80	
4 Gujarat	3.5	2.5	6.44	12.18	117.6	168.9	72	
5 Jammu and Kashmir	2.2	0.9	15.88	12.61	86.4	18.7	81	
6 Kerala	3.6	1.3	15.82	2.99	94.1	51.1	47	
7 Madhya Pradesh	2.5	4.5	6.95	31.26	85.3	40.7	82	
8 Madras	3.0	1.6	9.21	8.31	99.9	79.9	63	
9 Maharashtra	2.2	6.2	6.50	13.87	140.0	251.2	72	
10 Mysore	3.3	4.3	14.12	8.40	91.1	67.5	75	
11 Orissa	2.7	1.9	12.77	34.01	82.6	61.2	76	
12 Punjab	6.5	9.5	25.59	14.60	134.9	67.4	67	
13 Rajasthan	5.6	3.2	11.82	24.09	79.9	23.3	82	
14 UP	3.5	1.6	15.91	11.00	88.9	42.0	77	
15 West Bengal	1.7	6.4	14.08	9.01	138.9	275.1	58	
16 Delhi	6.7	36.3	21.53	34.95	260.5	178.9	8	
All-India	3.2	3.2	11.81	11.81	100.0	100.0	72	

TABLE 8: PERCENTAGE SHARES OF STATES AND ZONES

State	Population	Income	Technical Persons	
			Born	Enumerated
(1)	(2)	(3)	(4)	(5)
Andhra	8.12	7.82	7.91	7.82
Madras	7.60	8.26	10.36	10.26
Mysore	5.32	4.81	9.00	9.08
Kerala	3.81	3.34	9.34	8.11
South Zone	24.85	24.23	36.61	34.63
Maharashtra	8.92	10.51	14.17	15.38
Gujarat	4.66	5.08	5.42	5.78
West Zone	15.55	15.59	19.59	21.16
MP	7.30	7.10	4.25	5.75
Punjab	4.58	5.58	3.56	3.11
J & K	0.80	0.60	0.48	0.46
Rajasthan	4.55	4.66	1.61	1.88
UP	17.77	12.94	11.30	10.56
North Zone	15.00	30.88	21.20	21.86
West Bengal	7.88	7.83	11.32	10.69
Assam	2.68	2.66	1.31	1.48
Bihar	10.48	6.64	3.71	4.39
Orissa	3.96	3.08	0.79	1.04
East Zone	25.00	20.21	17.13	17.60

Madhya Pradesh, the two neighbouring States, and to Delhi, the seat of the Central Government.

Only 876 or 6.44 per cent of the total born in Gujarat have migrated out to other States and more than half of them have been enumerated in Maharashtra. Low rate of migration from three other States, viz. Assam,

Bihar and Madhya Pradesh, is due to their backwardness in technical education: they produce a small number of such persons; the majority of such persons born in those States are absorbed within the States either in teaching or in industries, mines and plantations, etc. The small number of persons who have out-migrated from those States have

probably gone into Central Government services in either Delhi and the Union Territories of Nagaland, Manipur, Tripura or in West Bengal or Maharashtra. West Bengal is the principal source of migrants to Assam (about 50 per cent); West Bengal and UP together are the principal sources for Bihar, which has many migrants also from the Southern States and Punjab. The principal exporters of personnel to Madhya Pradesh are UP (1301) and Maharashtra (583), followed by West Bengal (476), and the Southern States. In-migrants to Andhra and Madra have come mainly from other Southern States and from Maharashtra. In fact, the major part of the outflow of personnel of the four Southern States has been an *inter se* exchange (Table 5). On an average 40 per cent of the in-migrants to these four States and about 30 per cent of the out-migrants are enumerated within themselves.

INTERZONAL MOVEMENT

Table 6 sums up the interzonal flow of personnel. The South zone is the biggest exporter and lowest importer of personnel. Nearly one-half of the migrants from South zone have gone to West zone. Out of 5400 persons enumerated in the West zone, 3250 or more than 60 per cent are out-migrants from the South zone alone. Out-migrants from the South zone also constitute 40 per cent of the in-migrants in the East zone, 35 per cent of those in the North zone and more than 33 per cent of those in Delhi.

Delhi, the seat of the Central Government, is the biggest net importer; its neighbouring States comprising the North zone are the largest contributors (45 per cent), followed by the South

East zone enumerated the largest number of in-migrants from North zone (especially from UP and Punjab) followed by the South zone. Migrants from West zone have not shown much interest in moving toward the East.

The following are the zone-wise mix of total outflow to total inflow:

North zone	: 0.85
West zone	: 0.49
South zone	: 5.43
East zone	: 0.78
Delhi	: 0.52

The movement of scientific and technical persons is much higher than that of the population as a whole: about 12 per cent of the former move from one State to another against only a little over 3 per cent of the latter. This is understandable because most of the people are engaged in agricultural

work and do not feel it necessary to move to other States. Employment opportunities for scientific persons are, on the other hand, widely dispersed. Table 7 gives the percentages of outflow and inflow of general as well as technical persons together with other variables.

General inter-State movement of people is more or less related to the index of per capita income: people have migrated out from the States where indices of per capita income are below the all-India average, with the only exception of Gujarat where both per capita income and outflow of general people are higher. People from this State have migrated in large numbers to nearby Maharashtra which has comparatively higher per capita income. States which have a net attraction for general people of other States have per capita income above all-India average, with the exception of two States, viz, MP and Mysore.

Low per capita income is not, however, the only factor in movement of

scientific and technical persons. Assam, MP, Bihar, Orissa and Rajasthan have low per capita income but they have attracted scientific and technical persons from other States. Besides, general migrants move mostly to the neighbouring States with the same or higher per capita income. Distance is not a major hindrance to the movement of scientific and technical persons. They have moved to the States where they have found opportunities for better employment.

The South zone constituted by Andhra, Madras, Mysore and Kerala has the highest percentage, 37 per cent, of technical personnel (enumeration 35 per cent) although only one-fourth of the total population resides in this zone (Table 8). This difference is found in all the Southern States, except Andhra. Kerala's contribution is the highest both in the zone and in the entire country after Delhi.

The West zone comprising Maharashtra and Gujarat has 14 per cent of total population, and 16 per cent of

total income, but about one-fifth of technical persons were born in this zone. Its absorption ratio of technical persons is the highest compared with its population share.

The North zone consisting of Madhya Pradesh, Punjab, Jammu and Kashmir, Rajasthan and UP is the largest zone in respect of population (35 per cent) and share of income (31 per cent), but only one in every five scientific persons was born and enumerated in this zone. UP, the largest State in the country, having 18 per cent of the total population had only 11 per cent of technical persons born and its absorption capacity was even lower.

In spite of West Bengal's advanced position, the East zone as a whole which also comprises Assam, Bihar and Orissa lags behind the other zones. One-fourth of the total population sharing one-fifth of income resides in this zone but only about one-sixth of the total technical persons were born and enumerated here.