

Chapter V :

GROWTH OF EXPENDITURE ON ECONOMIC SERVICES

In this chapter we shall study the growth of the expenditure on Economic Services and examine its relationship to total expenditure of the state governments. The analysis of the pattern of distribution of the expenditure on economic services follows it.

The functional categories included in the Economic Services are Agriculture and Allied Services, Industries and Minerals, Water and Power Development Service, Transport and Communication, Co-operation, Secretariat Economic Services, Foreign Trade and Export Promotion, Special and Backward Areas and Other General Economic Services.¹

A.1 Growth Trend of Total Expenditure on Economic Services

Table V.1 shows the growth of the expenditure on Economic Services. We shall trace its growth period-wise -

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- 1 Special and Backward Areas includes expenditure on Dang Districts. Other General Economic Services includes expenditure on Land Ceilings, Regulation of other business undertakings, Economic Advice and Statistics, Regulation of Patents, Designs and Trade Marks - Regulation of Weights and Measures, Other Expenditures, Transfers to/from Reserve Fund and Deposit Account and Irrecoverable Loans Written off. Further we have included the unallocable items Developmental Schemes and Grants-in-aid Contributions which were booked under (i) Expenditure on Miscellaneous Social and Developmental Organisations and (ii) Miscellaneous Expenditure prior to 1974-1975.

Table V.1

Expenditure on Economic Services At Current

Prices

(Total Expenditure in lakhs of Rs.; Per capita expenditure in Rs.)

States	1957-58		1962-63		1967-68		1972-73		1977-78		TE % increase over 1957-58		PE % increase over 1957-58	
	TE	PE	TE	PE	TE	PE	TE	PE	TE	PE	1957-58	1957-58	1957-58	1957-58
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Andhra Pradesh	1696 (30.77)	4.96	3578 (33302)	9.70	5672 (29.88)	14.05	9761 (27.67)	21.90	21180 (28.53)	43.55	1148.	778		
Assam	1104 (38.83)	9.99	1436 (32.31)	11.23	3350 (33.95)	23.29	4324 (34.18)	27.84	6891 (27.45)	38.69	524	287		
Bihar	2300 (38.53)	5.27	2491 (29.83)	5.22	4377 (25.50)	8.32	8276 (24.47)	14.35	10709 (22.07)	17.07	365	223		
Gujarat	1559* (30.43)	7.66	1833 (25.84)	8.58	4411 (30.04)	18.18	7190 (24.56)	26.10	12523 (25.42)	40.48	703	428		
Haryana					1645 (29.62)	17.95	3912 (33.42)	37.90	9867 (42.70)	86.40	499	381		
Jammu & Kashmir	255 (34.22)	6.48	1163 (46.37)	31.95	2142 (47.62)	52.37	3851 (39.68)	81.41	5966 (41.15)	114.29	2239	1663		
Karnataka	2549 (47.98)	11.54	3924 (41.78)	16.16	5623 (35.69)	20.83	9850 (30.16)	32.78	17307 (32.41)	52.41	578	354		
Kerala	674 (22.60)	4.31	1816 (27.37)	10.38	2454 (19.80)	12.52	4189 (20.74)	19.06	8725 (20.97)	35.78	1194	730		
Madhya Pradesh	1466 (29.07)	4.89	2248 (26.24)	6.71	3218 (18.18)	8.47	7085 (24.45)	16.49	17602 (30.08)	36.49	1100	646		
Maharashtra	2413 (20.96)	4.33	3963 (27.07)	9.70	7680 (24.68)	16.70	11538 (17.73)	22.26	32511 (28.85)	56.60	1247	1207		

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Table 5.1 (contd.)

1	2	3	4	5	6	7	8	9	10	11	12	13
Orissa	861 (36.66)	5.22	2805 (42.50)	15.52 (30.75)	3482 (30.75)	17.25	5095 (26.42)	22.62	10578 (31.01)	42.53	1128	714
Punjab	1160 (31.92)	6.71	2429 (29.67)	12.48 (29.60)	2834 (29.60)	22.43	6336 (33.49)	45.68	11137 (32.48)	73.12	860	989
Rajasthan	652 (20.79)	3.50	1243 (21.88)	5.95 (22.67)	3091 (22.67)	13.10	5494 (22.70)	20.70	13479 (29.26)	45.55	1967	1201
Tamil Nadu	1733 (29.29)	5.34	4298 (35.28)	12.47 (29.39)	6858 (29.39)	18.17	13393 (31.59)	31.72	18829 (26.66)	40.86	986	665
Uttar Pradesh	3524 (35.43)	5.04	6997 (37.08)	9.27 (31.97)	10533 (31.97)	12.77	16841 (29.39)	18.66	34132 (32.10)	35.05	868	595
West Bengal	1596 (22.74)	5.05	2751 (24.23)	7.62 (23.36)	4769 (23.36)	11.70	7652 (18.46)	16.79	16567 (23.63)	32.54	938	544

Source: Appendix Table A.8

- Notes : 1. TE - Total Expenditure - PE - Per capita Expenditure.
 2. Figures in brackets indicate percentage to total revenue expenditure.
 3. * Belongs to 1960-61.

(i) 1957-58 (ii) 1962-63 (iii) 1967-68 (iv) 1972-73 and (v) 1977-78.

The percapita expenditure on Economic Services was at the highest level in 1957-58 at Rs.11.54 in Karnataka. During the subsequent periods it was at the peak level in Jammu & Kashmir. Its level was lowest at Rs.3.50 in Rajasthan in 1957-58 and at Bihar in next four periods.

The range of difference between the lowest and highest percapita expenditure levels was 1:3 in 1957-58, 1:6 in the next three periods and ultimately widened to 1.7 by 1977-78. The coefficient of variation was 37.99% in 1957-58, 56.16% in 1962-63, 56.61% in 1967-68; 57.69% in 1972-73 and 47.99% in 1977-78. This trend indicates that the disparity in the percapita expenditure level increased over the twenty^{one} years period even though there was a decline from 1972-73 to 1977-78.

During the twenty-one years the total and percapita expenditure on economic services increased by manifold both in money terms and real terms.

A.2 Percentage of Total Revenue Expenditure Spent on Economic Services

As a proportion of total expenditure charged to revenue the expenditure on economic services witnessed a

downward movement in most of the states over the twenty-one years. Its share in the total expenditure increased in Haryana, Jammu & Kashmir, Maharashtra and Rajasthan. Constancy in the size of its share was seen in Punjab. However, the downward or upward movements were not without fluctuations in their course. The proportion of the expenditure on Economic Services in total revenue expenditure varied from 20.79% in Rajasthan to 47.98% in Karnataka in 1957-58 and from 20.97% in Kerala to 42.70% in Haryana in 1977-78.

B.1 Agriculture and Allied Services

Agriculture and Allied Services include expenditure on Agriculture, Minor Irrigation, Soil and Water Conservation, Area Development, Food and Nutrition, Dairy Development, Forests, Community Development, Animal Husbandry and Fisheries. The Third Five Year Plan spelt out the importance of the allied services of Agriculture as, "Schemes for increasing agricultural production are closely bound up with the success of animal husbandry and dairying and the development of fisheries and rural industry. From the aspect of long term development care for forest wealth, conservation of soil and moisture and the growing of village fuel plantations are of great importance".² Further, "The Agricultural sector contributes nearly one half of the national income, provides livelihood to about three-

2 Government of India - Planning Commission, Draft Third Five Year Plan, p.301.

-fourths of the population, supplies the bulk of wage goods required by the non-agricultural sector and raw materials for a large section of industry".³

The contribution of Agriculture and Allied Services to state income ranged from 28% in Maharashtra to 63% in Orissa in the year 1975-76.

The expenditure on Agriculture and Allied Services is presented at current and constant prices in Tables V.2 and V.3 respectively.

Levels of Percapita Expenditure

In 1957-58 the percapita expenditure on Agriculture and Allied Services was at the highest level in Assam at Rs.3.48 followed by Rs.3.34 in Madhya Pradesh and Rs.3.04 in Orissa. It was at the lowest level in Uttar Pradesh. In 1962-63 the percapita expenditure was at the top in Orissa at Rs.7.43. Jammu & Kashmir came to the second rank with Rs.6.89 followed by Karnataka with Rs.4.90. It was at the lowest level at Uttar Pradesh at Rs.2.63.

Next is the period 1967-68. In this period Jammu & Kashmir went upto first rank with Rs.14.10 as its percapita expenditure. Maharashtra came next with Rs.8.47 and Uttar Pradesh stayed in

3 Government of India, India - A Reference Annual 1977-78, p.198.

Table V-2

Expenditure on Agriculture and Allied Services at Current Prices
(Total Expenditure in Lakhs of Rs.; Per capita Expenditure in Rs.)

States	1957-58		1962-63		1967-68		1972-73		1977-78		TE % increase over 1957-58		PE % increase over 1957-58	
	TE	PE	TE	PE	TE	PE	TE	PE	TE	PE	1957-58	1957-58	1957-58	1957-58
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Andhra Pradesh	621 (11.26)	1.81	1203 (11.10)	3.26	1855 (9.77)	4.59	4856 (13.76)	10.89	8767 (11.81)	18.02	1311		895	
Assam	385 (13.54)	3.48	533 (11.99)	4.17	1196 (12.12)	8.31	1620 (12.80)	10.43	3344 (13.32)	18.77	768		439	
Bihar	1107 (18.54)	2.68	1363 (16.32)	2.85	2647 (15.42)	5.03	4395 (13.15)	7.62	6467 (13.32)	10.31	484		284	
Gujarat	717* (13.99)	3.52	799 (11.26)	3.74	1905 (12.97)	7.85	2876 (9.82)	10.44	6594 (13.38)	21.31	819		505	
Haryana					511 (9.20)	5.57	1094 (9.34)	10.60	2607 (11.28)	22.82	410		309	
Jammu & Kashmir	123 (16.51)	3.12	251 (10.00)	6.89	557 (12.38)	14.10	1724 (17.76)	36.44	2377 (16.39)	45.53	1832		1359	
Karnataka	588 (11.06)	2.66	1191 (12.68)	4.90	1906 (12.10)	7.06	4715 (14.43)	15.69	7937 (14.86)	24.03	1249		803	
Kerala	321 (19.72)	2.05	636 (9.58)	3.63	1392 (11.23)	7.10	2211 (10.81)	10.06	4087 (9.82)	16.76	1173		717	
Madhya Pradesh	1002 (19.87)	3.34	1468 (17.13)	4.38	2140 (12.09)	5.63	5415 (18.68)	12.60	12698 (21.70)	26.32	1167		688	
Maharashtra	1182 (10.27)	2.12	1817 (12.41)	4.44	3898 (12.52)	8.47	7684 (11.80)	14.83	19483 (17.29)	33.92	1548		1500	

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Table V-2 (contd.)

1	2	3	4	5	6	7	8	9	10	11	12	13
Orissa	501 (21.33)	3.04	1343 (14.30)	7.43	1415 (12.50)	7.01	2670 (13.84)	11.85	5502 (16.13)	22.12	998	627
Punjab	374 (10.29)	2.16	7734 (8.96)	3.77	896 (9.35)	7.09	1729 (9.13)	12.46	4073 (11.88)	26.74	989	1137
Rajasthan	344 (10.97)	1.85	613 (10.79)	2.93	1127 (8.26)	4.77	2541 (10.49)	9.57	5924 (12.86)	20.02	1622	982
Tamil Nadu	542 (9.16)	1.67	1440 (11.82)	4.18	2502 (10.72)	6.62	4441 (10.47)	10.51	9020 (12.77)	19.57	1564	1071
Uttar Pradesh	1156 (11.62)	1.65	1984 (10.51)	2.63	3171 (9.62)	3.84	9658 (16.85)	10.70	16688 (15.69)	17.13	1343	938
West Bengal	734 (10.45)	2.32	1017 (8.95)	2.81	2303 (11.28)	5.65	5133 (12.38)	11.26	10290 (14.67)	20.21	1301	771

Source: Appendix Table A.22.

Notes : 1. Figures in brackets indicate percentage of the expenditure on Agriculture and Allied Services to total Revenue Expenditure.

2. TE - Total expenditure; PE - Per capita Expenditure.

3. * Belongs to 1960-61.

Table V.3

Expenditure on Agriculture and Allied Services at Constant 1960-61 Prices

(Total expenditure in lakhs of Rs.; Per capita expenditure in Rs.)

States	1957-58		1962-63		1967-68		1972-73		1977-78		TE % increase over 1957-58		PE % increase over 1957-58	
	TE	PE	TE	PE	TE	PE	TE	PE	TE	PE	TE	PE	TE	PE
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Andhra Pradesh	668	1.95	1146	3.10	1091	2.70	2335	5.23	2893	5.94	333	205	333	205
Assam	414	3.74	508	3.97	704	4.89	779	5.01	1104	6.19	166	66	166	66
Bihar	1190	2.72	1298	2.72	1557	2.96	2113	3.66	2134	3.40	79	25	79	25
Gujarat*	717*	3.52	761	3.56	1121	4.62	1383	5.02	2176	7.03	203	100	203	100
Haryana					301	3.28	586	5.09	860	7.53	186	130	186	130
Jammu & Kashmir	132	3.35	239	6.56	328	8.01	829	17.52	784	15.01	710	348	710	348
Karnataka	632	2.86	1134	4.67	1121	4.15	2267	7.54	2619	7.93	314	177	314	177
Kerala	345	2.20	606	3.46	819	4.18	1063	4.83	1349	5.53	291	151	291	151
Madhya Pradesh	1077	3.59	1398	4.17	1259	3.31	2603	6.05	4191	8.68	289	142	289	142
Maharashtra	1271	2.28	1730	4.23	2293	4.98	3694	7.12	6430	11.19	406	391	406	391
Orissa	539	3.27	1279	7.07	832	4.12	1284	5.70	1816	7.30	237	123	237	123
Punjab	402	2.32	699	3.59	527	4.17	831	5.99	1344	8.82	234	280	234	280
Rajasthan	370	1.99	584	2.79	663	2.81	1222	4.60	1955	6.60	428	232	428	232
Tamil Nadu	583	1.79	1371	3.98	1472	3.90	2135	5.05	2977	6.46	411	261	411	261
Uttar Pradesh	1243	1.77	1890	2.50	1865	2.26	4643	5.14	5508	5.65	343	290	343	290
West Bengal	789	2.50	969	2.68	1355	3.32	2468	5.41	3396	6.67	330	167	330	167

Source: Appendix Table A.23.

Notes: TE - Total expenditure; PE - Total Per capita Expenditure.

* Belongs to 1960-61.

the last position with Rs.3.84. During 1972-73 Jammu & Kashmir and Karnataka stayed in the first and second positions with Rs.36.44 and Rs.15.69 respectively. Bihar came down to last position with its percapita expenditure at Rs.7.62.

In 1977-78, also Jammu & Kashmir had the highest per-capita expenditure level at Rs.45.53 followed by Maharashtra at Rs.33.92. The expenditure per head of population was lowest at Rs.10.31 in Bihar.

Growth of Percapita and Total Expenditure

Expansion took place in the levels of percapita expenditure in all the states over each six year period. But the rate of increase varied from period to period in each state. In money terms per capita expenditure went up by 6.34% in Bihar by 1962-63 over 1957-58 and in real terms zero growth was witnessed during this period. At Current Prices it declined by 5.65% in Orissa by 1967-68 over 1962-63. At Constant 1960-61 prices it decreased in Andhra Pradesh, Karnataka, Madhya Pradesh, Orissa, Tamil Nadu and Uttar Pradesh during the same period. In money terms by 1977-78 it decreased by 7% in Bihar and 14.32% in Jammu & Kashmir over 1972-73.

Over the 21 years under our analysis, the growth of per-capita expenditure varied from 3 times in Bihar to 17 times in Maharashtra at Current Prices. At Constant 1960-61 price it

FIG. V-1
PER CAPITA EXPENDITURE ON AGRICULTURE
AND ALLIED SERVICES (AT CURRENT PRICES)



Source: Table V, 2

moved up by 1.25 times in Bihar and five times in Maharashtra by 1977-78 over 1957-58.

Share of Agriculture and Allied Services in
Total Revenue Expenditure.

The proportion of total expenditure spent on Agriculture and Allied Services suffered a set back by 28.15% in Bihar, 50.20% in Kerala and 24.37% in Orissa. Over the twenty-one years. It almost remained constant in Andhra Pradesh, Assam, Gujarat and Jammu & Kashmir and had uptrend in other states. The percentage of total revenue expenditure gained by Agriculture and Allied Services differed from 9.16% in Tamil Nadu to 21.33% in Orissa in 1957-58 and from 9.82% in Kerala to 21.70 in Madhya Pradesh in 1977-78.

B.2 Extent of Inter-State Variation in the Per capita
Expenditure Levels on Agriculture and Allied Services

The following table V.4 presents the extent of inter-state variation in the per capita expenditure on Agriculture and Allied Services.

Table V.4

Measures of Inter-State Variation in Per capita
Expenditure on Agriculture and Allied Services

Year	Mean (in Rs.)	Standard deviation	Coefficient of variation(In %)
1957-58	2.425	0.6279	25.8927
1958-59	2.7828	0.7835	28.155
1959-60	3.1	0.9369	30.2225
1960-61	3.4486	0.8547	24.7839
1961-62	3.882	1.1188	28.8201
1962-63	4.134	1.4046	33.9767
1963-64	4.5593	1.4556	31.9259
1964-65	5.6073	1.7549	31.2967
1965-66	6.3913	1.9413	30.3741
1966-67	6.6175	2.4081	36.3898
1967-68	6.7931	2.3788	35.0178
1968-69	6.915	2.0477	29.6124
1969-70	7.2437	2.3438	32.3563
1970-71	9.1362	7.0434	77.0933
1971-72	9.98	5.8168	58.2845
1972-73	12.8718	6.5765	51.0923
1973-74	14.8106	10.9784	74.1252
1974-75	15.7643	9.538	60.5037
1975-76	18.8543	10.8638	57.6197
1976-77	21.2881	13.379	62.8473
1977-78	22.7356	8.002	35.1959

Ratio between the lowest and highest per capita expenditure levels.

1957-58	1:2
1962-63	1:3
1967-68	1:4
1972-73	1:5
1977-78	1:4

Rank Correlation Coefficient between 1957-58 percapita expenditure and absolute variation in percapita expenditure levels.

1957-58 and 1962-63	-0.0441
1957-58 and 1967-68	+0.0677
1957-58 and 1972-73	+0.0647
1957-58 and 1977-78	+0.2736

Rank Correlation between 1957-58 percapita expenditure levels and the percentage variation in percapita expenditure levels.

1957-58 and 1962-63	-0.25
1957-58 and 1967-68	-0.3088
1957-58 and 1972-73	-0.5265*
1957-58 and 1977-78	-0.45

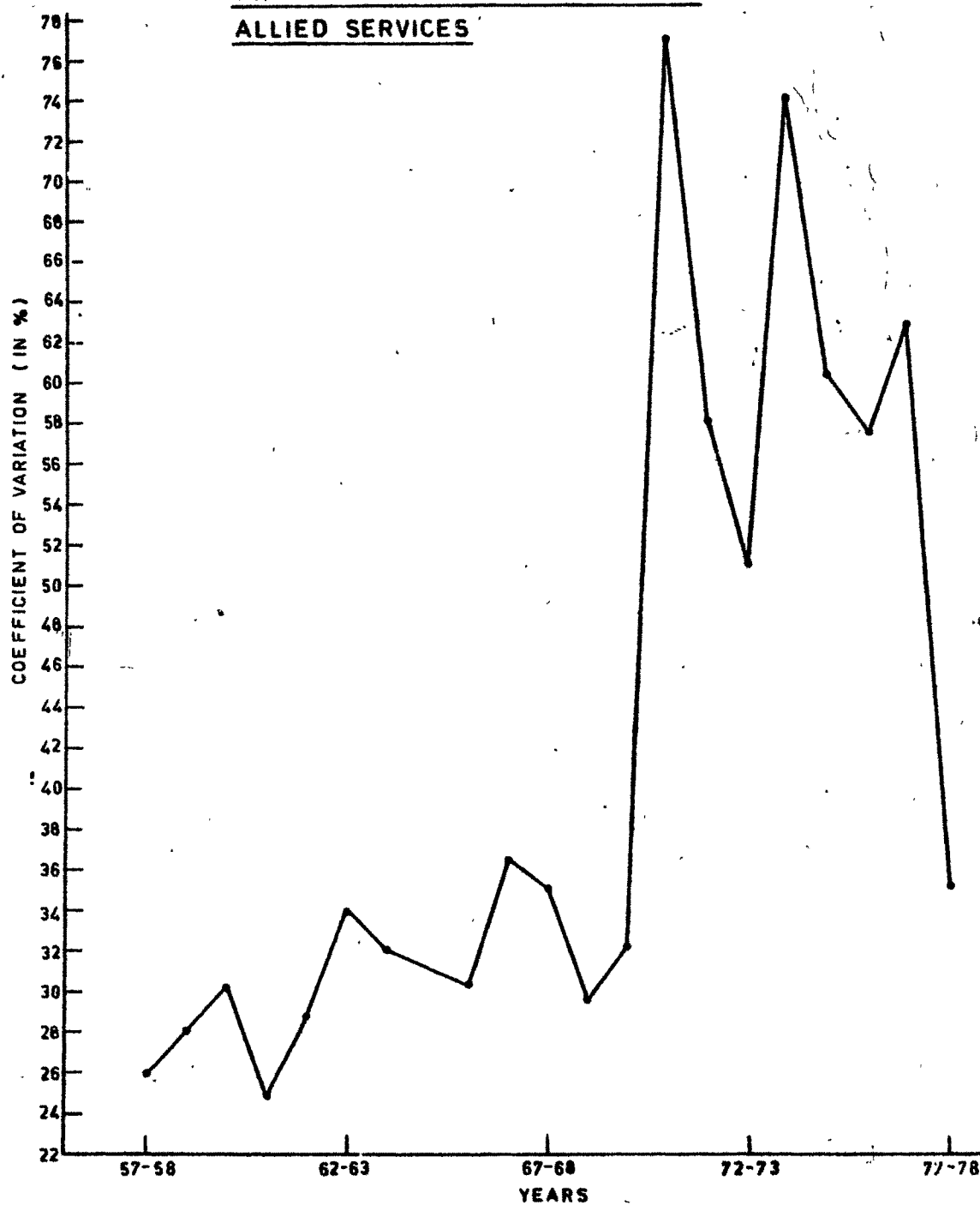
*Significant at 5% level

Source: Derived from Table V.2

The facts given in the above table discloses that the variations in the percapita expenditure levels widened over the twenty-one years period. The variations increased because the richer states expanded their percapita expenditure levels faster than the weaker states. As such the relative rankings of the states by the size of their percapita expenditure levels underwent substantial changes as revealed by Table V.5.

FIG: V-2:

INTER STATE DISPARITY IN PER CAPITA
EXPENDITURE ON AGRICULTURE AND
ALLIED SERVICES



Source: Table V.4

Table V.5

Matrix of Rank Correlations Among the Rankings Percapita Expenditure on Agriculture and Allied Services in Selected Years.

Year	1957-58	1962-63	1967-68	1972-73	1977-78
1957-58	1	0.5161*	0.3058	0.3205	0.3677
1962-63		1	0.6161*	0.6514**	0.6426**
1967-68			1	0.3382	0.5147*
1972-73				1	0.7912**
1977-78					1

* Significant at 5% level.

** Significant at 1% level.

Source: Derived from Table V.2.

The weaker states Assam, Bihar, Madhya Pradesh and Orissa stood at the upper end of the array in 1957-58. But they went down during the subsequent years. The developed states like Gujarat, Haryana, Maharashtra, Punjab and Tamil Nadu who had lower levels of percapita expenditure in 1957-58, later improved their expenditures substantially.

B.3 Distribution of the Expenditure on Agriculture and Allied Services.

The causes for the differences in the levels of the

expenditure per head of population may be traced by examining the composition of Agriculture and Allied Services. Table V.6 shows the composition of Agriculture and Allied Services.

Expenditure on Agriculture and Minor Irrigation etc.

From Table V.6 we could observe that the function Agriculture increased faster than other services. Agriculture⁴ includes expenditure on Direction and Administration, Land Reforms, Consolidation of holdings, Multiplication and distribution of seeds, Agricultural forms, Manures and Fertilizers, High yielding varieties Programme, Plant Protection, Commercial crops, Schemes for small and marginal farmers and agricultural labour, Drought prone Areas Programme, Extension and Farmer's training, Agricultural Education, Agricultural Engineering, Agricultural Research, Agriculture Engineering Workshops, Agricultural Economics and Statistics, Storage and Warehousing, Agricultural Marketing and quality Control, Horticulture, Transfer to/from Reserve Funds and Deposit Accounts, Irrecoverable Loans Written Off and Other Expenditure.

4 Prior to 1974-75, Botanical and Other Public Gardens, Cane Development and Regulation of Sugar Industry, Special Rural Uplift Schemes, Colonisation Schemes and Fisheries were booked under the Major head Agriculture. As per the new accounting procedure we have included Botanical and Other Public Gardens with Other Social and Community Services; Cane Development and Regulation of Sugar Industry with Industries, Special Rural Uplift Scheme with community Development, Colonisation with Area Development and Fisheries with the independent minor head Fisheries.

Table V.6
Distribution of the Expenditure on Agriculture and Allied Services
(Rs. in Lakhs)

	Agriculture		Minor Irrigation & Conservation		Food & Nutrition & Dairy Development		Forests		Community development		Animal Husbandry		Fisheries	
	1957- 58	1977- 78	1957- 58	1977- 78	1957- 58	1977- 78	1957- 58	1977- 78	1957- 58	1977- 78	1957- 58	1977- 78	1957- 58	1977- 78
Andhra Pradesh	160 (25.76)	2792 (31.84)	1645 (18.96)	1663 (18.96)	-	-	81 (13.04)	1221 (13.92)	1407 (48.14)	299 (21.96)	544 (10.62)	996 (11.36)	15 (2.41)	169 (1.92)
Assam	128 (33.24)	505 (27.06)	607 (12.41)	415 (12.41)	-	-	16.3 (4.87)	86 (22.33)	838 (35.84)	138 (13.53)	330 (8.57)	403 (14.59)	-	110 (3.28)
Bihar	484 (43.72)	1470 (22.73)	203 (16.14)	1044 (16.14)	-	-	58 (8.89)	102 (9.21)	790 (12.21)	675 (38.84)	399 (8.22)	862 (13.)	91 (1.57)	98 (1.57)
Gujarat	168 (23.43)	1822 (27.63)	984 (31.52)	2079 (31.52)	-	-	324 (4.91)	53 (7.39)	354 (5.36)	568 (61.92)	1235 (1872)	35 (4.88)	564 (8.55)	171 (2.37)
Haryana	212 (41.48)	945 (36.28)	346 (18.23)	478 (18.23)	-	-	73 (2.88)	64 (12.52)	234 (8.57)	266 (15.42)	177 (16.82)	448 (17.18)	26 (0.78)	550 (0.99)
Jammu & Kashmir	11 (8.94)	335 (4.09)	2945 (20.02)	476 (20.02)	-	-	67 (2.81)	39 (31.70)	2159 (37.06)	59 (47.96)	241 (10.13)	349 (14.68)	28 (1.62)	1300 (1.17)
Karnataka	89 (15.13)	1876 (23.63)	2007 (22.51)	1787 (22.51)	-	-	469 (5.90)	163 (27.72)	1331 (16.76)	717 (46.59)	534 (21.89)	594 (7.48)	1088 (8.50)	142 (1.78)
Kerala	63 (19.62)	1068 (36.13)	1595 (16.63)	680 (16.63)	-	-	151 (3.69)	78 (24.29)	753 (16.27)	138 (42.99)	864 (21.14)	15 (4.67)	257 (9.83)	852 (8.41)
Kodhya Pradesh	212 (21.15)	2403 (18.94)	1034 (7.48)	950 (7.48)	-	-	818 (6.44)	202 (20.15)	2891 (47.57)	502 (50.09)	1416 (11.16)	78 (7.78)	958 (7.54)	107 (0.84)
Maharashtra	273 (23.09)	3511 (18.02)	1166 (9.51)	1853 (9.51)	-	-	9276 (47.61)	183 (15.48)	1382 (13.31)	647 (54.73)	1082 (5.55)	67 (4.48)	53 (4.67)	138 (0.70)
Orissa	92 (18.36)	1646 (29.91)	1689 (19.66)	1082 (19.66)	-	-	124 (2.25)	56 (11.17)	929 (10.46)	288 (57.48)	1309 (23.79)	47 (9.38)	602 (10.94)	811 (2.19)
Punjab	85 (22.72)	1671 (41.02)	1865 (12.10)	493 (12.10)	-	-	676 (16.69)	78 (20.85)	369 (8.98)	162 (43.31)	353 (8.66)	118 (12.56)	474 (11.63)	39 (.95)
Rajasthan	68 (18.02)	2187 (36.91)	3427 (23.09)	1368 (23.09)	-	-	102 (1.72)	53 (15.40)	1381 (13.25)	186 (54.06)	715 (12.06)	43 (12.50)	711 (12.0)	56 (.94)
Tamil Nadu	161 (29.70)	3007 (33.15)	1767 (8.43)	765 (8.43)	-	-	76 (.83)	56 (10.33)	448 (4.93)	700 (43.35)	3506 (38.65)	65 (11.99)	1048 (11.55)	220 (4.61)
Uttar Pradesh	208 (17.99)	3794 (22.73)	1704 (4.23)	7466 (44.73)	-	-	869 (5.20)	228 (19.72)	835 (5.0)	226 (44.89)	2537 (15.20)	152 (13.14)	1086 (6.50)	101 (0.60)
West Bengal	452 (61.58)	2294 (22.29)	407 (23.17)	2387 (23.17)	-	-	2556 (24.83)	98 (13.35)	589 (5.72)	135 (18.39)	1489 (14.47)	32 (4.35)	788 (7.65)	1000 (2.31)

Sources: 1. For 1957-58 - Combined Finance and Revenue Accounts of Union and State Governments in India, 1957-58.
2. For 1977-78 Reserve Bank of India Bulletin, Sept.-October 1979.

Notes: 1. Figures in brackets indicate percentage to total expenditure on Agriculture & Allied Services

2. Expenditure figures given under the columns for the year 1957-58 stand for (a) Gujarat - 1960-61 (b) Haryana, 1967-68.

Apart from Bihar and West Bengal all states devoted higher percentage of expenditure on Agriculture and Allied Services to Community Development Programme in 1957-58. Purely on Agriculture the expenditure share was higher in Bihar in 1957-58 and in Punjab in 1977-78. We have seen that the expenditure percapita on Agriculture and Allied Services was at the highest level in Jammu & Kashmir. This was due to its higher spending on forest than on Agriculture. Jammu & Kashmir and Madhya Pradesh devoted more funds to forest than for Agriculture. The reason for the sudden jump in the percapita expenditure in Maharashtra in 1977-78 was due to the increased expenditure on Food & Nutrition. By 1977-78 all states except Assam, Bihar, Madhya Pradesh, Maharashtra and West Bengal increased their spending on Agriculture. Why the differences in the levels of spending on Agriculture arose in the states? This may be due to the condition of agriculture, employment opportunities, and governments' interest. In all the states about 75% of the people are employed in Agriculture and Allied Services. In Haryana over 82% of the people are engaged in Agricultural pursuit.⁵ This state had allotted a higher percentage of the expenditure on Agriculture and Allied Services to Agriculture alone. Because of this between 1967-68 and 1971-72 agricultural production in Haryana increased

5 Government of India, India, a Reference Annual 1977-78, p.411.

at an annual compound rate of four percent per year as compared to 2.6 per cent in the country.⁶ The economy of Madhya Pradesh is agriculture based. It is surplus in food-grains and commercial crops.⁷ Perhaps this surplus condition may be one of the reasons for this state to spend more on forests than on Agriculture in 1977-78. The case of Punjab is different. About 80% of the total geographical area of Punjab is under cultivation. About 76% of the population is engaged in agricultural pursuits. The state is surplus in foodgrains, especially in wheat and rice.⁸ Even then the State Punjab had allocated the highest proportion (41.02%) of its expenditure on Agriculture and Allied Services to Agriculture. It will not be incorrect here to mention that, "The economy of Punjab is mainly based on agriculture which has been given top priority by the state Government. With the joint efforts of Government and the farmers, the State has rightly earned the name of 'Granary of India'".⁹ Rajasthan had spent 23.09% on minor irrigation, Soil conservation and Area Development. This was because of the effort to set-up new minor irrigation schemes and six soil development schemes by Rajasthan Government in Co-operation with Agriculture Refinance Corpora-

6 G.G. Mirchandani: Aspects of Agriculture in India, 1975 (Allied Publishers, Bombay), 1975, p.57.

7 Government of India, India - A Reference Annual 1977-78, p.419.

8 Ibid, p.429

9 G.G. Mirchandani, op.cit., p-151.

tion.¹⁰ Owing to the larger spending on Minor irrigation, Soil Conservation and Area Development the expenditure on Agriculture and Allied Services Went up suddenly in Uttar Pradesh in 1977-78.

Among Agriculture and Allied Services, Agriculture, Minor Irrigation and Community Development Programme claimed major share of the expenditure in most of the states. Owing to the dependency of Agriculture on the vagaries of monsoon minor irrigation gained importance. Under this are included tanks, surface irrigation well, borewells and lift irrigation schemes. Minor irrigation schemes possess distinct advantage that they involve less capital expenditure and yield results fairly quickly to step-up agricultural production. As such minor irrigation scheme became prominent in Agriculture and Allied Services.

Let us now see the growth of expenditure on Forest, Animal Husbandry and Fisheries individually.

Spending on Forest :

Two reasons can be attributed for the increase in the spending on forests. They are (i) National Forest Policy and (ii) Yield from forests.

In India forests occupy an area of about 749 lakh

10 Ibid, p.154.

hectares and account for 22.8% of the total geographical area. The National Forest Policy aims at maintaining one-third of the total geographical area under forests. There is very heavy pressure on forest land for diversion to river valley projects, industrial estates and many other uses, as a result of which about 34 lakh hectares of forest area were lost during 1951-52 to 1972-73. This alarming situation has been engaging government's attention for long. The National Development Council, therefore, took a decision in December 1973 that further deforestation should never be done for expansion of cultivation and to compensate for the area already lost, suitable waste lands should be afforested. State Governments are, accordingly, taking effective measures to preserve the nature since state forests constitute nearly 95.2% of the total forest area in the country.¹¹

Apart from providing raw-materials for pulp, panel products, matchwood and other wood based industries, forests are also a source of number of useful minor products like bamboo canes, medicinal plants, lac, resins, fatty oils and fats, gums, tanning materials, dyes and animal products etc. Quite a number of these are valuable foreign exchange earners.

Forests cover 23.3% of State's area in Andhra Pradesh.

11 Government of India, India - A Reference Annual 1977-78, p.223.

Assam is endowed by nature with valuable forests. In addition to providing timber for various construction purposes, certain trees provide good tanning and dying materials as well as house-hold fuels and vegetable oils.¹² Forest cover about 17% of the area in Bihar. In Haryana only 3.3% of its land is under forest.

In Jammu & Kashmir forests are most extensive and finest in the country. Their intensity of stocking and quality of the stand are matchless.¹³ Next to agriculture forests constitute the most important sector of the State's economy.¹⁴ Karnataka has forests to the extent of 15.2% of the area of the state. It has practically a monopoly in sandalwood.¹⁵

Madhya Pradesh has the biggest forest in the country. The total forest area in Madhya Pradesh is 33.6 million acres. Approximately 31.5% of the area of the State is under forests. Over 27% of the country's forest area is in Madhya Pradesh.¹⁶ Nearly 42% of the State's land is covered by forest in Orissa. Punjab's forest resources are poor. Only 4% of the total area

12 T.N. Kapoor et al. Industrial Development in the States of India. (Sterling Publishers, New Delhi), 1967, p.54.

13 Ibid, p.531.

14 National Council of Applied Economic Research, New Delhi. Techno Economic Survey of Jammu & Kashmir, 1969, p.52.

15 T.N. Kapoor et al., op.cit., p.292.

16 National Council of Applied Economic Research, Techno-Economic Survey of Madhya Pradesh, 1960, p.39.

is covered with forest. But the Techno-Economic Survey of Punjab points out that, "The potential of these Himalayan forests is still large and when the problems mentioned here are solved through a sustained and planned effort the forest will come to play important role in the economic development of Punjab. During the second plan soil conservation, afforestation were undertaken. But the second plan progress regarding forest road development is not satisfactory."¹⁷

Rajasthan is particularly deficient in forest. Out of the total area forests occupy only 4.2%. The main policy of the State government in this respect may be stated as, "meeting the primary requirements of forest products of local people, sustained supply of raw material for forest-based industries, prevention of soil erosion, extension of land under forests with a view to meet the demands of the people of forest products, better utilisation of marginal lands by creating village forests, development of pasture lands and thereby increasing the productivity of agricultural land."¹⁸

Tamil Nadu is deficient in forest area and resources. It has only about 17% of the total area under forest. The forest land of Uttar Pradesh comes to 13.54% of the area of the state. West Bengal has 13.4% of its land as forest area.

17 National Council of Applied Economic Research, Techno-Economic Survey of Punjab, 1962, pp.37-42.

18 T.N. Kapoor, et al: op.cit., p.388.

During the second and third plan periods this state undertook two types of developmental activities with respect to forests: one is replacement of about 87,300 acres of existing forest by more costly species like teak and the other is afforestation of new lands. It also took measures for soil conservation, improvement of communications and extension of social amenities.¹⁹

The facts regarding the extent of forest area and the activities to enrich forest in the various states helps us to understand the differences in the levels of expenditure on forest. Those states who have vast forest resources and get more benefits spent more than other states. For instance the States Assam, Jammu & Kashmir, Karnataka, Kerala and Madhya-Pradesh, where, the forests are rich and wider, had spent more on forests and thereby account for the differences in the levels of expenditure on Agriculture and Allied Services. As we have seen above the expenditure on forest increased due to the efforts in the Planning period for afforestation, soil conservation, construction of forest roads and providing social amenities to those employed in the development of forests.

Expenditure on Community Development :

The Community Development Programme is one of the major functions which account for the differences in the expenditure

19 Ibid, p.500.

on Agriculture and Allied Services. The Community Development Programme was launched in 1952. Its basic objective is to secure the fullest development of available material and human resources on an area basis and thereby raise the rural community to higher levels of living with the active participation and as much as possible on the initiative of the people themselves. Agriculture the main stay of about 70% of the rural population receives the highest priority in the programme. Other activities include improvement of communications, health, sanitation, housing, education, rural employment, women's and Children's welfare and finally cottage and small scale industries.²⁰ There were 5026 community development blocks in India by 1976.²¹ In 1957-58 excluding Bihar and West-Bengal all the states devoted a major share of the expenditure on Agriculture and Allied Services on Community development programmes. By 1977-78 its share diminished in all the states. The range of its share varied from 10.13% in Jammu & Kashmir to 38.65% in Tamil Nadu in 1977-78. Tamil Nadu spent more on this category than on Agriculture in 1977-78 also. Thus the extent of importance given by states to this programme serves as a reason for the variations in the expenditure levels on Agriculture and Allied Services.

20 Government of India, India - A Reference Annual 1973, p.223.

21 Government of India, India - A Reference Annual 1977-78, p.237.

Expenditure on Animal Husbandry

Animal Husbandry is one of the important components of Agriculture and Allied Services.

The development programme of animal husbandry has three-fold objective, namely, "to increase the supply of the protective foods, to provide draught power for farm operations and to improve the output of certain products of commercial importance such as wool and hides. The combination of crop production with livestock rising enables fuller utilisation of farm by-products, conservation of soil fertility, increase in income and fuller employment."²² The Fifth Five Year Plan aimed, "To develop animal husbandry as an important economic occupation for the small and marginal farmers and agricultural labourers for rearing crossbred heifers and for raising poultry, sheep and pigs."²³

When compared to the 1957-58 level in most of the states the expenditure on animal husbandry went up by 1977-78. This increasing tendency may be due to the significance it gained in the five year plan. But the variations in the magnitude of the expenditure on this category depend on the scope for the development of animal husbandry in the states. Table V.7 presents the position of live-stock in the states.

22 India - A Reference Annual, 1973, p.217.

23 Government of India, Planning Commission, Draft Fifth Five Year Plan, Vol.II, p.30.

Table V.7Position of Livestock in States in the year 1972

States	Livestock (In '000)	Percentage to total livestock in India
Andhra Pradesh	33064	9.4
Assam	8002	2.3
Bihar	27946	7.9
Gujarat	15098	4.3
Haryana	6289	1.8
Jammu & Kashmir	4285	1.25
Karnataka	21965	6.2
Kerala	4936	1.4
Madhya Pradesh	39989	11.3
Maharashtra	26361	7.5
Orissa	17568	5.0
Punjab	8646	2.5
Rajasthan	38878	11.0
Tamil Nadu	23433	6.6
Uttar Pradesh	49199	13.9
West Bengal	19085	5.5
All India	353338	100.00

Source: Commerce, Annual Number 1979, p.296.

We can cite a few states whose expenditures on Animal Husbandry are relatively higher. Punjab had allotted higher percentage both in 1957-58 and 1977-78. The Techno-Economic Survey of Punjab pointed out that, "Punjab has excellent scope for developing live-stock industry on a commercial basis. The peasants can add to their income markedly by

organising agriculture on a mixed farming basis."²⁴ The same reason accounts for the higher expenditure in Haryana also.

The spending on Animal Husbandry is relatively higher in Rajasthan since the state has excellent potentialities for the development of animal husbandry. For instance, "out of India's total wool production of about 35 million kgs, Rajasthan, with a sheep population of 86 lakhs (roughly one-fifth of the country's sheep population) produces ten million kilograms of wool. With the excellent potentialities for development of sheep to produce wool of fine quality for import substitution, it is proposed to increase wool production from 108.5 lakh kilograms to 119 lakh Kgs. during the Fifth Five Year Plan period, out of which the quantity of fine wool is expected to be 12 lakh Kgs. This will be achieved through 12 intensive sheep development projects, covering a population of six lakh adult sheep."²⁵

In 1957-58 Uttar Pradesh spent the highest percentage of Agriculture and Allied Services on animal husbandry among the fourteen states. But the percentage declined in 1977-78. In Uttar Pradesh next to Agriculture animal husbandry is the most important economic sector of the State's activity.

24 National Council of Applied Economic Research, Techno-Economic Survey of Punjab, 1962, p.30.

25 G.G. Mirchandani, op.cit., p.361.

"Though Uttar Pradesh has only 9.6% of the country's total area it supports 15% of its total live-stock population. For a few communities live-stock rearing is the principal occupation. But animal husbandry is mostly practised as a supplementary activity with agriculture on a mixed farming basis."²⁶

The lowest percentage on animal husbandry was spent by West Bengal in 1957-58. The consequence of this lowest spending can be understood from the Techno-Economic Survey." The incidence of livestock diseases in West Bengal is very high. It is estimated that the annual mortality rate in the state is about 15% which is about 5% higher than the all India average. Diseases also render a large number of cattle infirm and reduce their productivity. The wide spread prevalence of diseases underlines the need for taking due care in the rearing of livestock especially for dairy purposes.²⁷ The Agricultural personnel committee of the Planning Commission (1958) also examined the condition of animal husbandry in detail and recommended that "for a few years at least the objective should be to have one veterinary doctor per 25,000 cattle." Perhaps because of these suggestions West Bengal

26 National Council of Applied Economic Research.
Techno-Economic Survey of Uttar Pradesh, 1965, p.45.

27 National Council of Applied Economic Research.
Techno-Economic Survey of West Bengal, 1962, p.60.

might have increased its spending on animal husbandry and ultimately allocated 7.65% by 1977-78.

Expenditure on Fisheries.

Fisheries also contributed to the economy of some states. In the Third Five Year Plan fisheries schemes were formulated with the main objective of, "increased production so that protein diet becomes available to the population in addition to cereals."²⁸ Development of fisheries was assigned a high priority under the Fifth Five Year Plan in view of its vast potential for raising the nutritional standard of Indian diet and as a foreign exchange earner. The Plan aimed at achieving a production level of 31.18 lakh tonnes of fish and foreign exchange earning of Rs.150 crores through export of marine products in 1978-79.²⁹

Of all the states Kerala devoted the highest percentage of the expenditure on Agriculture and Allied Services to fisheries. Karnataka has potentialities in developing fisheries. The coast line of the State is very rich in marine fisheries and deep sea fishing promises to offer considerable scope for the opening of new yards for curing fish and starting factories for the extraction of oil.³⁰ Though Gujarat has rich potentials

28 Government of India. Ministry of Planning. Draft Third Five Year Plan, p.358.

29 Government of India: India - A Reference Annual, 1977-78, p.221.

30 T.N. Kapoor et al, op.cit., p.318.

the fishing industry has not developed fastly. "Among the maritime states Gujarat has the largest coast line of more than 1000 miles most of which is deeply indented and contains rich fishing grounds. However, due to the religious belief and vegetarian food habits of the majority of the population fishing industry has made little progress in the past."³¹ But now the state spends more to exploit the potential. Its Fifth Five Year Plan says that, "the objectives of fisheries programme are (1) nutritious food for human consumption, (2) a source of cattle and poultry feed, (3) a base for setting up fish based industries and (4) a source of foreign exchange earnings. It also maintains that fisheries development will help economic uplift of weaker sections of the society."³²

Madhya Pradesh has rich potential for inland fishery development. In this state the second plan schemes aimed at the establishment of more fish seed resources, introduction of pisculture and assistance to fisherman. Fishery is an important subsidiary industry in many districts of Madhya Pradesh.³³ Even then the expenditure on fisheries is low in this state.

Though Punjab has potentials for fisheries the government

31 National Council of Applied Economic Research.
Techno-Economic Survey of Gujarat, 1963, p.55.

32 Government of Gujarat: Draft Fifth Five Year Plan, 1974-79, p.30.

33 T.N. Kapoor, et al. op.cit., p.228.

has not spent much on this. It has been opined that, "Fisheries can constitute an important source of income and employment to the State's rural population. Punjab has four important rivers, the Yamuna, the Sutlej etc. Besides this, there are large number of streams and lakes and reservoirs which offer good scope for the development of fisheries on a large scale. The first and second plans of the State included many schemes for stocking fish in impounded waters. But the actual progress has been slow."³⁴ It seems that Punjab has not yet given serious thought to this industry.

Tamil Nadu has an extensive sea-board of 500 miles long and numerous lakes, rivers and tanks. Fishing is an important source of income. Next only to Maharashtra and Kerala, Tamil-nadu is the major fish producing region.³⁵ Hence Tamil Nadu has spent a higher percentage on fisheries. Fish is one of the staple foods of the people of West Bengal. The scarcity of fish became so acute after partition. As a result provisions for development of fisheries - inland, coastal and deep sea were made from the very beginning of the Planning in this state.³⁶

Bihar ranks among the States in fresh-inland-water fish. It has a large number of rivers as well as Canals, lakes, tanks

34 National Council of Applied Economic Research.
Techno-Economic Survey of Punjab, 1962, p.35.

35 T.N. Kapoor, et al, op.cit., 179.

36 Ibid, p.503.

and ponds which yield fish. But inspite of the fact that the state is rich in fisheries, they have not been properly and systematically exploited.³⁷ This is reflected in the expenditure of this state.

In Rajasthan the large number artificial lakes, perennial tanks and reservoirs and a few rivers in the state offer a fruitful ground for the development of fisheries.³⁸ Though Rajasthan is having facilities its expenditure is too low on fisheries. Even in 1977-78 Uttar Pradesh allotted only 0.60% of its expenditure on Agriculture and Allied Services to fisheries. This sort of non-utilization of available natural resources by the governments of Bihar, Rajasthan and Uttar Pradesh is a reason for their low spending and backwardness.

Thus the up-shot of the expenditure on Agriculture and Allied Services is the consequence of the importance given to Agriculture and Allied Services in the Five Year Plans.

The above discussed facts reveal that the reasons for the variations in the levels of percapita expenditures are (1) the importance given to agriculture, minor irrigation and community development programmes by the states and (2) efforts to utilize the available potential regarding forest, animal husbandry and fisheries.

37 Ibid, p.461.

38 Ibid, p.394.

The expenditure purely on agriculture increased faster than those on other services in most of the states. Next to Agriculture, expenditure on Animal Husbandry had grown at a faster pace.

C. Growth of Expenditure on Industries and Minerals.

The functional head Industries and Minerals comprises the expenditures on Industries,³⁹ small-scale and village Industries and Mines and Minerals.

Under Industries the state governments incur expenditures on Direction and Administration, Standardisation and quality Control, Industrial Productivity, Industrial Education, Research and Training, Tariff and Price Regulation, Other Expenditure, Transfers to Reserve Funds and Deposit Accounts, Large and Medium Industries and Plantations.

The expenditure on Industries and Minerals is presented at Current Prices in Table V.8 and at Constant price in Table V.9.

39 The expenditure on supplies and Disposal which was included in Industries, in some states before 1962-63, has now been shifted to Administrative Services. The expenditure incurred on Distilleries under the State Excise Duty has been clubbed with Industries as per new accounting classification. Expenditure on fisheries which were booked under Industries in Maharashtra and Gujarat upto 1974-75 has now been transferred to Agriculture and Allied Services of those States.

Table V.8

Expenditure on Industry and Minerals at Current Prices

(Total Expenditure in Lakhs of Rs.; Per capita Expenditure in Rs.)

States	1957-58		1962-63		1967-68		1972-73		1977-78		TE % increase over 1957-58		PE % increase over 1957-58	
	TE	PE	TE	PE	TE	PE	TE	PE	TE	PE	1957-58	1957-58	1957-58	1957-58
1	2	3	4	5	6	7	8	9	10	11	12	12	13	13
Andhra Pradesh	101 (1.83)	0.29	172 (1.58)	0.46	107 (0.89)	0.42	304 (0.86)	0.68	920 (1.23)	1.89	810	551		
Assam	62 (2.18)	0.56	93 (2.09)	0.72	127 (1.28)	0.85	185 (1.46)	1.19	509 (2.02)	2.85	720	408		
Bihar	136 (2.27)	0.31	194 (2.32)	0.40	171 (0.99)	0.32	345 (1.03)	0.59	698 (1.43)	1.11	413	258		
Gujarat	72* (1.40)	0.35	79 (1.11)	0.37	112 (0.76)	0.46	255 (0.87)	0.92	469 (0.95)	1.51	551	331		
Haryana					64 (1.15)	0.69	97 (0.82)	0.93	191 (0.82)	1.67	198	142		
Jammu & Kashmir	6 (0.80)	0.15	292 (11.64)	8.02	48 (1.06)	1.17	118 (1.21)	2.48	399 (2.75)	7.64	6550	4993		
Karnataka	1433 (26.97)	6.49	1160 (12.35)	4.77	1227 (7.78)	4.54	1578 (4.83)	5.25	3055 (5.72)	9.25	113	42		
Kerala	75 (0.47)	0.47	226 (3.40)	1.29	122 (0.98)	0.62	183 (0.89)	0.83	569 (1.36)	2.33	658	395		
Madhya Pradesh	107 (2.12)	0.35	143 (1.66)	0.42	136 (0.76)	0.35	187 (0.64)	0.43	538 (0.91)	1.11	402	217		
Maharashtra	138 (1.19)	0.24	110 (0.75)	0.26	155 (0.49)	0.33	253 (0.38)	0.48	433 (0.38)	0.75	213	212 ²	212 ²	212 ²

cont....

Table V.8 (contd.)

1	2	3	4	5	6	7	8	9	10	11	12	13
Orissa	83 (3.53)	0.50	152 (2.30)	0.84	122 (1.07)	0.60	147 (0.76)	0.65	309 (0.90)	1.24	272	148
Punjab	55 (1.51)	0.31	200 (2.44)	1.02	208 (2.17)	1.64	214 (1.13)	1.54	317 (0.92)	2.08	476	570
Rajasthan	78 (2.48)	0.41	114 (2.00)	0.54	173 (1.26)	0.73	448 (1.85)	1.68	1252 (2.71)	4.23	1505	931
Tamil Nadu	234 (3.95)	0.72	551 (4.52)	1.59	356 (1.52)	0.94	558 (1.31)	1.32	1543 (2.18)	3.34	559	363
Uttar Pradesh	549 (5.51)	0.78	905 (4.79)	1.19	1122 (3.40)	1.36	551 (3.27)	0.61	1051 (0.98)	1.07	914	37
West Bengal	166 (2.36)	0.52	344 (3.02)	0.95	636 (3.11)	1.59	539 (1.30)	1.18	1071 (1.52)	2.10	545	303

Source: Appendix Table A.24.

Notes: 1. Figures in brackets indicate percentage to total Revenue Expenditure.
 2. TE - Total expenditure ; PE = Per capita Expenditure.
 3. * Belongs to 1960-61.

Table V.9

Revenue Expenditure on Industries and Minerals at Constant 1960-61 Prices
(Total Expenditure in lakhs of Rs.; Per capita expenditure in Rs.)

States	1957-58		1962-63		1967-68		1972-73		1977-78		TE % increase over 1957-58		PE % increase over 1957-58	
	TE	PE	TE	PE	TE	PE	TE	PE	TE	PE	TE % increase over 1957-58	PE % increase over 1957-58	TE % increase over 1957-58	PE % increase over 1957-58
Andhra Pradesh	109	0.31	164	0.44	100	0.24	146	0.32	304	0.62	179	100	179	100
Assam	67	0.60	89	0.69	75	0.52	89	0.57	168	0.94	151	57	151	57
Bihar	146	0.33	185	0.38	101	0.19	166	0.28	230	0.36	58	9	58	9
Gujarat	72*	0.35	75	0.35	66	0.27	123	0.44	155	0.50	115	43	115	43
Haryana					38	0.41	47	0.45	63	0.55	66	34	66	34
Jammu & Kashmir	6	0.15	278	7.63	28	0.68	57	1.20	132	2.52	2100	1580	2100	1580
Karnataka	1541	6.98	1105	4.55	722	2.67	759	2.52	1008	3.05	-35	-56	-35	-56
Kerala	81	0.51	215	1.22	72	0.36	88	0.40	188	0.77	132	51	132	51
Madhya Pradesh	115	0.38	136	0.40	80	0.21	90	0.20	178	0.36	55	-5	55	-5
Maharashtra	148	0.26	105	0.25	91	0.19	122	0.23	143	0.24	-3.37	-8	-3.37	-8
Orissa	89	0.54	145	0.80	72	0.35	71	0.31	102	0.41	15	-24	15	-24
Punjab	59	0.34	190	0.97	122	0.96	103	0.74	105	0.68	78	100	78	100
Rajasthan	84	0.45	109	0.52	102	0.43	215	0.81	413	1.39	392	209	392	209
Tamil Nadu	252	0.77	525	1.52	209	0.55	268	0.63	509	1.10	102	43	102	43
Uttar Pradesh	590	0.84	862	1.14	660	0.80	265	0.29	347	0.35	-41	-58	-41	-58
West Bengal	178	0.56	328	0.90	374	0.91	259	0.56	353	0.69	98	23	98	23

Source: Appendix Table A.25.

Notes: 1. TE - Total Expenditure; PE - Per capita Expenditure.
2. * Belongs to 1960-61.

C.1 Levels of Per Capita Expenditure.

The percapita expenditure on Industries and Minerals was at the height at Rs.6.49 in 1957-58, at Rs.4.54 in 1967-68, at Rs.5.25 in 1972-73 and Rs.9.25 in 1977-78 in Karnataka. Only in 1962-63 it was at the highest level in Jammu & Kashmir at Rs.8.02. It was in the least level at 0.24 paise in 1957-58 and 0.26 paise in 1962-63 in Maharashtra, 0.32 paise in Bihar in 1967-68, 0.43 in Madhya Pradesh in 1972-73 and 0.75 paise in Maharashtra in 1977-78.

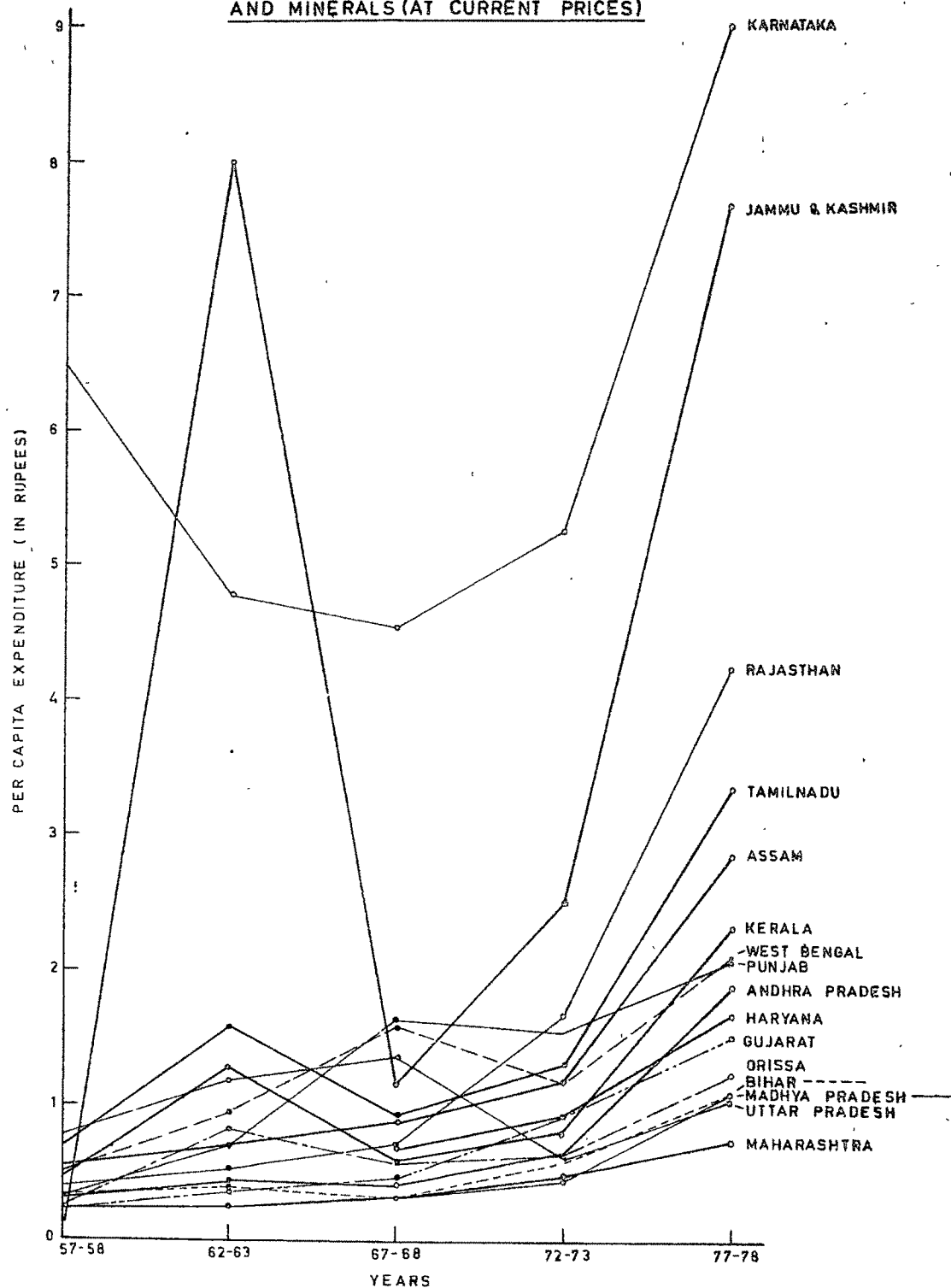
The expenditure on Industries per head of population was lower than the percapita expenditure on Agriculture and Allied Services, Water and Power Development Services and Transport and Communications in all the States.

Growth of Percapita Expenditure at Current and Constant Prices.

In money terms the percapita expenditure declined by 26.50% in Karnataka by 1962 over 1957-58, by 8.69% in Andhra Pradesh, 20% in Bihar, 85.14% in Jammu & Kashmir, 4.82% in Karnataka, 51.93% in Kerala, 16.16% in Madhya Pradesh, 28.57% in Orissa and 40.88% in 1967-68 over 1962-63, by 6.09% in Punjab, 55.14% in Uttar Pradesh and 25.78% in West Bengal by 1972-73 over 1967-68. It experienced an upward movement in all the states by 1977-78 over 1972-73.

FIG. V-3

PER CAPITA EXPENDITURE ON INDUSTRY
AND MINERALS (AT CURRENT PRICES)



Source: Table V. 8

In real terms it declined by 34.81% in Karnataka and 3.84% in Maharashtra by 1962-63 over 1957-58, Went down in all the states except West Bengal by 1967-68 over 1962-63, decreased by 4.76% in Madhya Pradesh, 11.42% in Orissa, 22.91% in Punjab, 62.75% in Uttar Pradesh and 38.46% in West Bengal by 1972-73 over 1967-68 and fell by 8.10% in Punjab by 1977-78 over 1972-73.

Over the twenty-one years period the highest rate of increase in percapita level was witnessed in Jammu & Kashmir by 4993.33% and the lowest growth was seen in Uttar Pradesh by 37.17% at current prices. The rate of growth of the percapita expenditure on Industries and Minerals was lower than that of other services in all the states.

Share of the Industries and Minerals in Total Revenue

Expenditure :

Of all the services the percentage of total expenditure devoted to Industries and Minerals is the lowest in all the states. Devoid of Jammu & Kashmir and Kerala the proportion of this function in the total revenue expenditure declined in all the states. The share of total revenue expenditure absorbed by this function ranged from 0.47% in Kerala to 26.97% in Karnataka in 1957-58 and from 0.38% in Maharashtra to 5.72% in Karnataka in 1977-78.

C.2 Inter-State Disparity in Percapita Expenditure.Table V.10Measures of Inter-State Variation in percapita
Expenditure on Industries and Minerals

I. Ratio Between the Lowest and Highest Percapita Expenditure Level.

1957-58	1:27
1962-63	1:31
1967-68	1:14
1972-73	1:12
1977-78	1:12

II.

Years	Mean (in Rs.)	Standard deviation	Coefficient of variation(in %)
1957-58	0.8642	1.6288	188.4748
1958-59	0.9421	1.7887	189.863
1959-60	1.015	1.8011	177.4482
1960-61	1.044	1.839	176.1494
1961-62	1.6286	2.6906	165.2093
1962-63	1.5226	2.1063	138.3357
1963-64	1.2273	1.1017	89.76615
1964-65	1.036	1.007	97.2007
1965-66	1.0813	1.0841	100.2589
1966-67	0.9331	1.1165	119.65491
1967-68	1.04	1.0287	98.9134
1968-69	1.1687	1.2041	103.029
1969-70	1.1443	0.9536	83.3347
1970-71	1.1562	1.0725	92.7607
1971-72	1.1937	1.0828	90.7095
1972-73	1.2643	1.0131	80.1312
1973-74	1.4575	1.2666	86.9022
1974-75	1.8025	2.0187	111.9944
1975-76	1.9731	1.9356	98.0994
1976-77	2.4406	2.2174	90.8547
1977-78	2.7637	2.4166	87.4407

III. Rank Correlation Coefficient between 1957-58 percapita expenditure levels and the absolute variations in percapita expenditure levels.

1957-58 and 1962-63	-0.011
1957-58 and 1967-68	-0.0316
1957-58 and 1972-73	-0.444
1957-58 and 1977-78	+0.0911

IV. Rank Correlation Coefficient between 1957-58 and percapita expenditure levels and percentage variations in percapita expenditure levels.

1957-58 and 1962-63	-0.247
1957-58 and 1967-68	-0.372
1957-58 and 1972-73	-0.6691**
1957-58 and 1977-78	-0.5617*

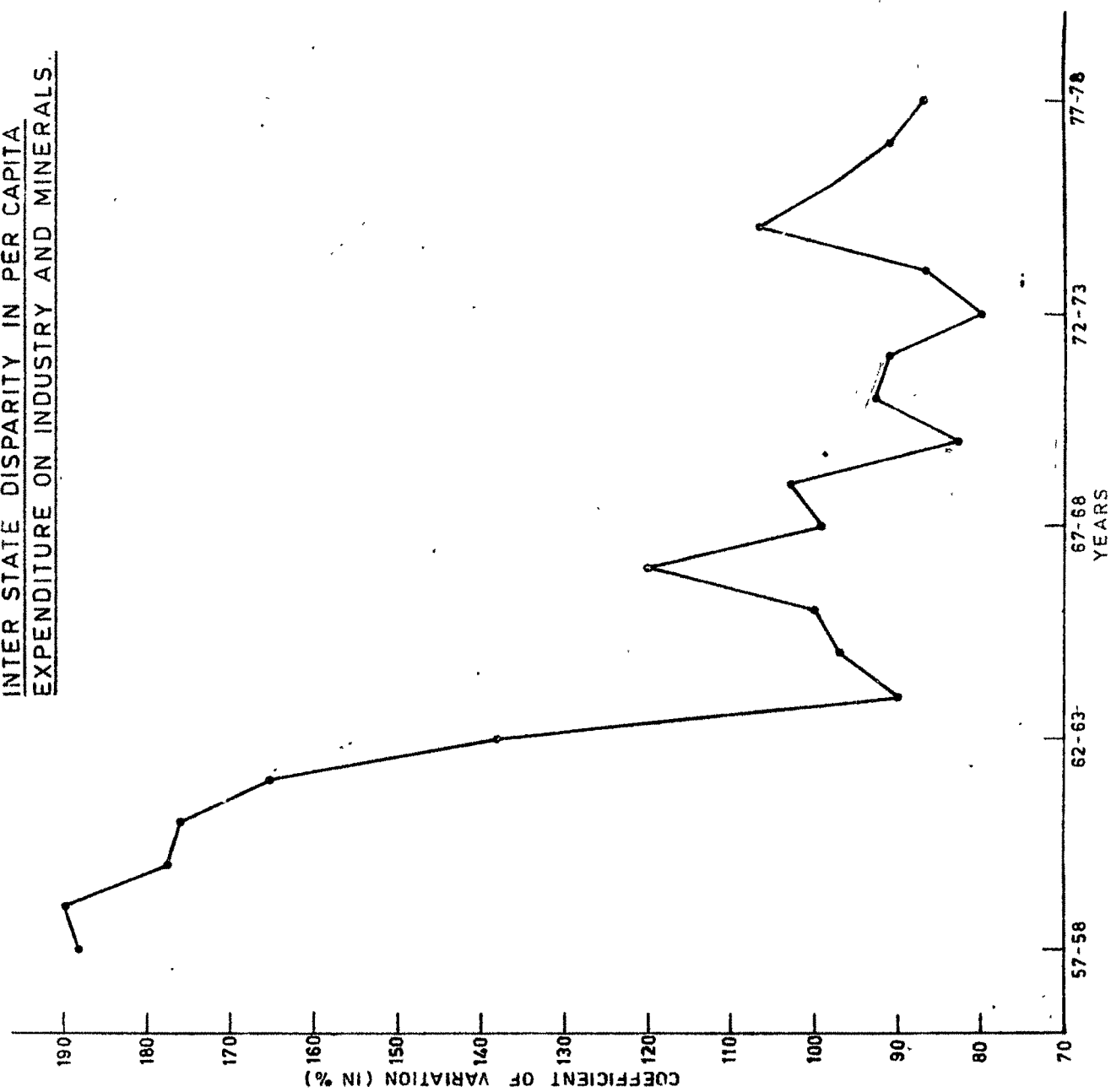
** Significant at 1% level;

* Significant at 5% level.

Source: Derived from Table V.8.

The above figures show that though the variations in the percapita expenditure levels among the states decreased from the 1957-58 level the gap is still wider. The reduction in the gap was brought about by the increase in the percapita levels of the states like Andhra Pradesh, Jammu & Kashmir, Gujarat, Haryana, Punjab and West Bengal who stood at the lower end in 1957-58. But the Weaker States like Bihar, Madhya Pradesh, Orissa and Uttar Pradesh went down with lower levels of expenditure percapita.

FIG: V - 4
INTER STATE DISPARITY IN PER CAPITA
EXPENDITURE ON INDUSTRY AND MINERALS.



Source : Table V in

As such the relative rankings of the states witnessed change as revealed by Table V.11.

Table V.11
Matrix of Rank Correlations Among the Rankings of Percapita
Expenditure on Industries and Minerals in Selected Years

Years	1957-58	1962-63	1967-68	1972-73	1977-78
1957-58	1	0.5382*	0.522*	0.1897	0.261
1962-63		1	0.7382**	0.5794*	0.6448**
1967-68			1	0.7647**	0.6235**
1972-73				1	0.9147**
1977-78					1

** Significant at 1% level

* Significant at 5% level.

Source: Derived from Table V.8.

C.3 Distribution of the Expenditure on Industries and Minerals.

The distribution of the expenditure on this service is taken upto know the item which absorbed the major share of the expenditure on this function and caused variations in the percapita expenditure levels.

Table V.12 exhibits that in 1957-58 industries took major share in all the states except Kerala, Maharashtra and Orissa.

Table V.12

Distribution of Expenditure on Industries and Minerals

(in Rs. lakhs)

States	Industries			Village and Small Industries			Mines and Minerals		
	1957-58	1977-78	% Incr.	1957-58	1977-78	% Incr.	1957-58	1977-78	% Incr.
Andhra Pradesh	71 (70.29)	672 (73.04)	846	29 (28.70)	216 (23.47)	645	1 (0.99)	32 (3.47)	3100
Assam	46 (74.19)	74 (14.53)	61	16 (25.80)	366 (71.90)	2188		69 (13.55)	
Bihar	111 (81.62)	404 (57.87)	264	25 (18.38)	228 (32.66)	812		66 (9.45)	
Gujarat	20 (27.77)	161 (34.32)	705	52 (72.23)	229 (48.82)	340		79 (16.84)	
Haryana	56 (87.50)	49 (25.65)	-13	8 (12.50)	139 (72.77)	1638		3 (1.57)	
Jammu & Kashmir	6 (100)	43 (10.77)	617		338 (84.71)			18 (4.51)	
Karnataka	1372 (95.74)	2317 (75.84)	69	58 (4.04)	686 (22.45)	1083	3 (0.20)	52 (1.70)	1633
Kerala	14 (18.67)	122 (21.44)	771	61 (81.33)	430 (75.57)	605		17 (2.98)	
Madhya Pradesh	54 (50.47)	187 (34.75)	246	50 (46.72)	261 (48.51)	422	3 (2.80)	90 (16.72)	2900
Maharashtra	61 (44.20)	240 (55.42)	293	77 (55.79)	111 (25.63)	44		82 (18.93)	
Orissa	38 (45.78)	17 (5.50)	-55	2 (2.40)	179 (57.92)	8850	43 (51.80)	113 (36.56)	163
Punjab	55 (100)	13 (4.10)	-76	-	295 (93.05)	-		9 (2.83)	
Rajasthan	49 (62.82)	314 (25.07)	541	15 (19.23)	180 (14.37)	1100	14 (17.94)	758 (60.54)	5314
TamilNadu	210 (89.74)	270 (17.49)	29	24 (10.25)	1246 (80.75)	5092		27 (1.74)	
Uttar Pradesh	549 (100)	239 (22.74)	-56	-	746 (70.98)			66 (6.27)	
West Bengal	140 (84.34)	635 (59.29)	354	26 (15.56)	418 (39.02)	1508		18 (1.68)	

Source: 1957-58 combined Finance and Revenue Accounts of Central and State Governments in India, 1957-58. 1977-78 - Reserve Bank of India Bulletin, Sept. and Oct. 1979.

Notes : 1. Figures in brackets indicate percentage to total expenditure on industries and Minerals.
2. For the states Gujarat and Haryana the expenditure figures given under column for the year 1957-58 pertain to 1960-61 and 1967-68 respectively.

The major share was taken by village and small-scale industries in Kerala and Maharashtra and by Mines and Minerals in Orissa in that year. By 1977-78 the States Andhra Pradesh, Bihar, Karnataka, Maharashtra and West Bengal spent more on Industries while other states except Rajasthan spent on village and small scale industry. Rajasthan spent more on Mines and Minerals. It is interesting to note that the village and small-scale industries gained importance in the later years. Hence it will be useful to know why village and small scale industries has been given importance by the states.

Sericulture, handicrafts, small scale industries, industrial estates, handlooms, Khadi and village industries, coir industry constitute small scale and village industries. These industries are encouraged by the state Governments because a harmonious blend of industrial advance both in small-scale and large-scale industries is needed for the economic development of the states. A number of agencies are functioning in the states to render assistance in every sphere for the setting up of small scale industries.

The programme of village and small-scale industries in the States was accorded a significant place in its first and second Five Year Plans. These industries not only provide gainful employment but also assure a broad and decentralised

base to the state economy.⁴⁰ The objectives of the programmes for development of village and small industries in the Fourth Plan were to improve progressively the production techniques of small industries so as to enable them to produce quality goods, to bring them to a viable level, to promote decentralisation and dispersal and to promote agro-based industries.⁴¹ The aims of the programmes for the development of different small industries in Fifth Plan are "to facilitate the attainment of some of the major tasks for the removal of poverty and inequality in consumption standards of these persons through creation of large-scale opportunities for fuller and additional productive-employment and improvement of their skills so as to improve their levels of earnings. Furthermore, the programme would be reoriented to step up the production of some of the basic and essential articles for the masses and also the products which have a larger potential for exports."⁴²

C.4 Causes for the Differences in the Per capita Expenditure levels.

Having seen the importance given to the small-scale industries let us now review the reasons for the variations

40 T.N. Kapoor, et al., op.cit., p.239.

41 Government of India, India - A Reference Annual 1973, p.298.

42 Government of India, Planning Commission, Draft Fifth Five Year Plan, Vol.II, p.164.

in the levels of percapita expenditure between the states. Andhra Pradesh is rich in minerals. It has a varieties of industries. The importance of cottage industries to the economy of the state is considerable in view of the wide variety of goods that are produced and considerable amount of main and supplementary employment they provide to rural population.⁴³ Though Andhra Pradesh has rich resources and small scale industries its percapita expenditure is low. Assam also is rich in minerals. Cotton, Silk Handloom Industries, Rice poundings, Bell-Metal Industry and Handicrafts are some of the cottage industries in Assam. Assam though endowed with rich mineral and forest resources has witnessed only limited progress in industrialisation because of her backward transport system. The great physical distances from the main consuming centres have been intensified by inadequate, costly and time consuming methods of transport to and within the state. Assam cannot, therefore, specialise in the mineral oriented industries.⁴⁴

Bihar is the most mineral-bearing State in India and accounts for 40.57% of its mineral production.⁴⁵ One of objectives of the Third Five Year Plan of Bihar which was

43 T.N. Kapoor, et al. op.cit., p.30.

44 Ibid, p.76.

45 National Council of Applied Economic Research. Techno-Economic Survey of Bihar, 1960, p.167.

drawn up within the frame work of the National Third Plan was, "to expand basic industries like steel, chemical industries, fuel and power and to establish machine building capacity so that requirements of further industrialization can be met up in a period of ten years are so mainly from the country's own resources". But its percapita expenditure continues to be low.

Gujarat is an industrially developed state. However, the small-scale industries and cottage industries have a vital role to play in the development of industries in the State. Besides yielding employment to a vast population, the small-scale industries play a role supplementary to the large scale sector. Development of village and small industries is essential due to large-scale unemployment of both educated and uneducated persons in rural as well as urban areas and in view of relative scarcity of capital resources and the need for dispersal of industries in rural areas. These industries play an important role in providing employment opportunities at low capital cost to the rural people and weaker sections of the community.⁴⁶ Therefore village and small-scale industries got larger share.

Haryana is industrially developed. It has spent more on village and small scale industries. Jammu & Kashmir also has devoted more on village and small-scale industries. We could

46 Government of Gujarat: Draft Fifth Five Year Plan, p.217.

understand the reason for this from the following statement, "Industrially Jammu & Kashmir is one of the least developed states in the country. Not only is the total industrial activity in the State of a low order, but structurally it is dominated by inefficient and low income generating household industries. There is another aspect of industrial development of the State that needs to be stressed. Unlike Other states the Government of Jammu & Kashmir has played a prominent role in industrialisation of the state".⁴⁷ This state really made first earnest efforts in the Third Plan period to prepare ground for industrial development.⁴⁸ This effort may be the reason for the sudden jump in the percapita expenditure in 1962-63.

Karnataka has the highest percapita expenditure on Industries and minerals. This is the result of the availability of natural resources and the state governments desire to industrialise the state. Mysore(Karnataka) stands fifth among the States in Indian Union in respect of mineral wealth.⁴⁹ The state aimed at the development of both heavy and large scale industries as well as small-scale industries. "While fostering the growth of heavy and large-scale industries -

47 National Council of Applied Research.
Techno-Economic Survey of Jammu & Kashmir, 1969, pp.76-77.

48 Ibid, p.81.

49 T.N. Kapoor, et al, op.cit., p.292.

the State government has not been unmindful of the need for development of rural and cottage industries which provide the means of subsistence or of subsidiary occupation to several thousands of the people in the rural parts. The Government of Mysore (Karnataka) has also recognised that the cottage industries are complementary to organised industry".⁵⁰ Hence the absolute amount spent on village and small-scale industry is substantial in Karnataka.

Kerala also allotted a higher percentage on village and small-scale industry. Copra making, oil pressing, coir-making, handloom are the main cottage and small-scale industries.⁵¹ Kerala is proclaimed to be a land of small industries.⁵²

Madhya Pradesh is rich in minerals. Madhya Pradesh though have a high industrial potential still awaits development.⁵³ Obviously the low percapita expenditure indicates this. Maharashtra is one of the most industrialised states. Owing to the high level of industrial development the government's spending is less on this function in this state.

Industrially Orissa is among the most backward states

50 Ibid, p.308.

51 Ibid, p.153.

52 Government of India, India - A Reference Annual 1977-78, p.319.

53 T.N. Kapoor, et al., op.cit., p.235.

in India.⁵⁴ Raw materials particularly iron ore and manganese are abundant in Orissa. The state has nearly one-third of the proved reserves of iron-ore and one-tenth of the manganese ore of India.⁵⁵ Mining and export of iron-ore in Orissa is predominantly state-controlled.⁵⁶ This may be the cause for Orissa spending more on mining. With regard to scope of employment and net output the small-scale and cottage industries in Orissa play a comparatively modest role. The Techno-Economic Survey of Orissa States that, "Small-scale industries are a relatively unimportant part of industrial sector in Orissa, providing only 1.5% of total industrial employment."⁵⁷ The very low level of spending on village and small scale industry in Orissa in 1957-58 is substantiated by the above statement. But during the Third-Five Year Plan the State Government envisaged the setting up of more Industrial Estates both in rural and urban areas.⁵⁸ This efforts of the Orissa Government might have caused the increase in the expenditure on Small-Scale and Cottage industries during the subsequent years.

Punjab is poor in mineral resources. The deficiency is

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- 54 National Council of Applied Economic Research. Techno-Economic Survey of Orissa, 1962, p.73.
- 55 T.N. Kapoor, et al, op.cit., p.326.
- 56 Ibid, p.328.
- 57 National Council of Applied Economic Research. Techno-Economic Survey of Orissa, p.100.
- 58 T.N. Kapoor et al, op.cit., p.340.

marked in all minerals and industrial fuels.⁵⁹ The higher expenditure on small-scale and cottage industries was due to the emphasis placed on them in Five Year Plans." Since increase in employment opportunities was the Central objectives of the Second Five Year Plan and small-scale and cottage industries could provide ample scope for employment, considerable emphasis was laid on their development in the State during this period. The Third Plan also laid considerable emphasis on the development of small-scale and cottage industries.⁶⁰ Further other factors are also responsible for the development of small-scale industries. "Punjab is the leading state in India in the small-scale industries. The present position is mainly because of the suitability of the State for small-scale industries. People are adventurous and capable and possess good organising ability and competence to run the industries independently. Further the absence of finance and shortage of basic minerals to run large industries so far, have proved to be a blessing in disguise for the small scale industry in the state".⁶¹ Thus the lack of large-scale industries and efforts of the people induced the government to lay emphasis on village and small-scale industries.

59. National Council of Applied Economic Research.
Techno-Economic Survey of Punjab, 1962, p.61.

60. T.N. Kapoor, et al., op.cit., pp.355-356.

61 Ibid, p.373.

Rajasthan is richly endowed with mineral resources. "The second and Third plans aimed at the development of mining industry. The intention of the Plan is to progressively develop mining activities on a scale which may gradually create potential for additional employment of about one-lakh persons daily."⁶² As such the higher level of expenditure on mining is the outcome of the importance given to mines and minerals in the Five Year Plans.

There is a marked general deficiency of minerals in Tamil Nadu particularly in metallic ones and industrial fuels.⁶³ This deficiency might have urged the state to spend more on village and small-scale industries. Small-scale industries were given due considerations from the Second Five Year Plan period. "The establishment and Working of two industrial estates and six colonies in the second plan period was a success. In the planning era small industries are provided with workshop, technical, financial and marketing facilities in an ever growing number of industrial estates and colonies. The traditional cottage industries are not neglected. They are also being granted technical and financial aid and rehabilitated on well thoughtout lines. New rural industries like sericulture, coir and palmyra products are

62 Ibid, p.403.

63 Ibid, p.186.

being promoted on the lines formulated in a broad-based, state-wide programme".⁶⁴ All these efforts lead to increased expenditure on village and small-scale industries.

The mineral resources of Uttar Pradesh are meagre. The quantities of iron and copper that are extracted are small.⁶⁵ Industrially Uttar Pradesh is among the less developed states. Its industrial structure is largely dominated by the village and cottage industries. The only important industries in the organised sector are the sugar and textile mills whose spread out effects are limited. The engineering and chemical industries which lead to the development of several other industries and also add to the tertiary activities are poorly developed".⁶⁶ In the Third Five Year Plan of Uttar Pradesh priority was given to village and small industries.⁶⁷ "Further many of the cottage industries are good foreign exchange earners. Uttar Pradesh Government has been following a policy of giving active encouragement to cottage industries."⁶⁸ This policy of the Uttar Pradesh Government must have necessitated it to spend more on village and small-scale industries in the

64 Ibid, p.213-14.

65 Ibid, p.462.

66 National Council of Applied Economic Research.
Techno-Economic Survey of Uttar Pradesh, 1965, p.99.

67 T.N. Kapoor, et al, op.cit., p.469-470.

68 Ibid, p.479.

subsequent periods.

In West Bengal major development took place mainly in Iron and Steel and Engineering Industries both heavy and light. So the small and village industries have lesser importance in this state.

The reasons for the growth of the expenditure on Industries and Minerals are (i) the efforts of the states to industrialize the states under Five Year Plans and (ii) the importance given to small-scale and village industries.

Some of the causes for the inter-state variations in the percapita expenditures are (1) State governments' interest to industrialize the states, for example, Jammu & Kashmir and Karnataka. In these two states, as we have already seen, the state governments evinced keen interest in the industrial development of the states. (ii) Lesser utilization of natural resources by the states like Bihar, Madhya Pradesh and Orissa.

D. Growth of Expenditure on Water and Power Development.

The expenditure on Water and Power Development includes expenditure on -

- (i) Multi-purpose River Projects,
- (ii) Irrigation, Navigation, Drainage and Flood Control Projects.

- (iii) Power Project, and
- (iv) Water and Power Development Services.

Table V.13 presents the expenditure on Water and Power Development at Current prices and Table V.14 contains the same at Constant price.

D.1 Levels of Percapita Expenditure.

The expenditure per head of population on Water and Power Development was at the maximum at Rs.3.09 and Rs.4.19 in 1957-58 and 1962-63 respectively in Punjab. Jammu & Kashmir had the maximum level during the subsequent years. It was at the least level in Madhya Pradesh in all the years under our review.

Growth of Percapita Expenditure.

The percapita expenditure in money terms declined by 10.90% in Bihar and 33.33% in Madhya Pradesh by 1962-63 over 1957-58 by 25% in Madhya Pradesh and 18.59% in Uttar Pradesh by 1972-73 over 1967-68, by 27.76% in Bihar by 1977-78 over 1972-73. Apart from these downward movements the percapita expenditure increased in varying degrees in all the states over each six year period.

Over the twenty-one years from 1957-58 to 1977-78 the growth of percapita expenditure varied from 4 times in Punjab

Expenditure on Water and Power Development at Current Prices
(Total Expenditure in Lakhs of Rs.; Per capita Expenditure in Rs.)

States	1957-58		1962-63		1967-68		1972-73		1977-78		TE % increase over 1957-58	PE % increase over 1957-58
	TE	PE	TE	PE	TE	PE	TE	PE	TE	PE		
Andhra Pradesh	666 (12.03)	1.95	1178 (10.87)	3.19	2422 (12.76)	6.00	3676 (10.42)	8.24	6703 (9.03)	13.78	906	606
Assam	91 (3.30)	0.82	150 (3.37)	1.17	241 (2.44)	1.67	548 (4.33)	3.52	726 (2.89)	4.07	697	396
Bihar	241 (4.03)	0.55	238 (2.85)	0.49	649 (3.78)	1.23	2038 (6.10)	3.53	1604 (3.30)	2.55	565	363
Gujarat*	267* (5.21)	1.31	436 (6.14)	2.04	951 (6.47)	3.92	2172 (7.42)	7.88	3643 (7.39)	11.77	1264	798
Haryana					621 (11.18)	6.77	1181 (10.08)	11.44	2736 (11.84)	23.95	340	253
Jammu & Kashmir	48 (6.44)	1.22	82 (3.26)	2.25	363 (8.07)	8.87	810 (8.34)	17.12	2040 (14.07)	39.08	4150	3103
Karnataka	176 (3.31)	0.79	386 (10.69)	1.58	1157 (7.34)	4.28	1830 (5.60)	6.09	3337 (6.25)	1010	1796	1178
Kerala	53 (1.77)	0.33	162 (2.44)	0.92	326 (2.63)	1.66	425 (2.07)	1.93	907 (2.18)	3.72	1611	1027
Madhya Pradesh	38 (0.75)	0.12	28 (0.32)	0.08	139 (0.78)	0.36	118 (0.40)	0.27	993 (1.69)	2.05	2513	1608
Maharashtra	320 (2.78)	0.57	457 (3.12)	1.11	1249 (4.01)	2.71	2083 (3.20)	4.02	4897 (4.34)	8.52	1430	1394

cont...

Table V.13 (contd.)

1	2	3	4	5	6	7	8	9	10	11	12	13
Orissa	63 (2.68)	0.38	585 (8.86)	3.23	1213 (10.71)	6.01	1371 (7.11)	6.08	3270 (9.58)	13.14	5090	3357
Punjab	535 (14.72)	3.09	815 (9.95)	4.19	985 (10.28)	7.79	1552 (8.20)	11.18	1769 (5.16)	11.61	250	275
Rajasthan	86 (2.74)	0.48	161 (2.83)	0.82	810 (5.94)	3.43	1802 (7.44)	6.79	3947 (8.56)	13.53	4489	2677
Tamil Nadu	426 (7.20)	1.31	569 (4.67)	1.65	941 (4.03)	2.49	1573 (3.71)	3.72	3952 (5.59)	8.57	827	554
Uttar Pradesh	778 (7.82)	1.11	1848 (9.79)	2.44	2710 (8.22)	3.28	2415 (4.21)	2.67	4478 (4.21)	4.59	475	313
West Bengal	249 (3.54)	0.78	430 (3.78)	1.19	636 (3.11)	1.56	791 (1.90)	1.73	1890 (2.69)	3.71	659	375

Source: Appendix Table A.26.

Notes : 1. TE - Total expenditure.

PE - Per capita expenditure

2. Figures in brackets indicate percentage to total revenue expenditure.

3. * Belongs to 1960-61.

Table V.14

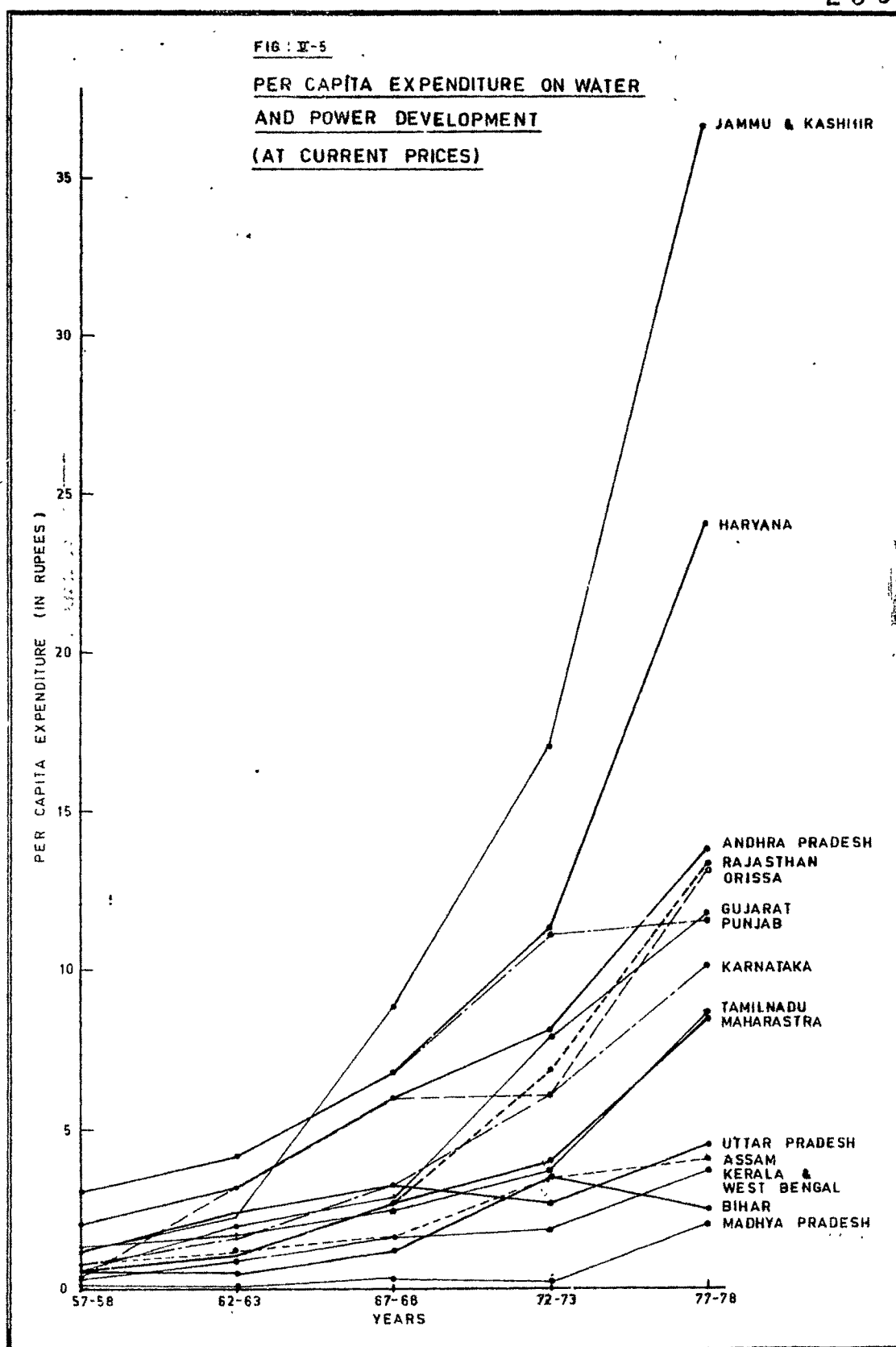
Revenue Expenditure on Water and Power Development at Constant
1960-61 prices
(Total Expenditure in lakhs of Rs.; Percapita Expenditure in Rs.)

States	1957-58		1962-63		1967-68		1972-73		1977-78		TE % increase over 1957-58		PE % increase over 1957-58	
	TE	PE	TE	PE	TE	PE	TE	PE	TE	PE	TE % increase over 1957-58	PE % increase over 1957-58	TE % increase over 1957-58	PE % increase over 1957-58
Andhra Pradesh	716	2.09	1122	3.04	1425	3.53	1767	3.96	2212	4.54	209	117	209	117
Assam	98	0.88	143	1.11	142	0.98	263	1.63	240	1.34	145	52	145	52
Bihar	259	0.59	227	0.47	382	0.72	980	1.69	529	0.84	104	42	104	42
Gujarat	267*	1.31	415	1.34	559	2.30	1044	3.79	1202	3.88	350	196	350	196
Haryana					365	3.98	568	5.50	903	7.90	147	98	147	98
Jammu & Kashmir	52	1.32	78	2.14	213	5.20	389	8.22	673	12.89	1194	877	1194	877
Karnataka	189	0.85	368	1.51	681	2.52	880	2.92	1101	3.33	483	292	483	292
Kerala	57	0.36	154	0.88	192	0.98	204	0.92	299	1.22	425	239	425	239
Madhya Pradesh	41	0.13	27	0.08	82	0.21	57	0.13	328	0.68	700	423	700	423
Maharashtra	344	0.61	435	1.06	735	1.59	1001	1.93	1616	2.81	370	361	370	361
Orissa	68	0.41	557	3.08	714	3.53	659	2.92	1079	4.33	1487	956	1487	956
Punjab	575	3.32	776	3.98	579	4.58	746	5.37	584	3.83	2	15	3.83	2
Rajasthan	92	0.49	153	0.73	476	2.01	866	3.26	1305	4.40	316	793	4.40	316
Tamil Nadu	458	1.41	542	1.57	553	1.46	756	1.79	1304	2.82	185	100	2.82	185
Uttar Pradesh	837	1.19	1760	2.33	1594	1.93	1161	1.28	1478	1.51	77	27	1.51	77
West Bengal	268	0.84	410	1.13	374	0.91	380	0.83	624	1.22	133	45	1.22	133

Source: Appendix Table A.27.

Notes : TE - Total expenditure; PE - Percapita expenditure.

* - Belongs to 1960-61.



Source : Table V.13

to 35 times in Orissa in Money terms. In real terms a 11-fold increase in the percapita expenditure level occurred in Orissa during the same period.

Share of Water and Power Development
in Total Revenue Expenditure

The proportion of total revenue expenditure absorbed by Water and Power ranged from 0.75% in Madhya Pradesh to 14.72% in Punjab in 1957-58 and from 1.69% in Madhya Pradesh to 14.07% in Jammu & Kashmir in 1977-78. During the 21 years the proportion of total revenue expenditure spent on this function increased in Gujarat, Jammu & Kashmir, Karnataka, Madhya Pradesh, Maharashtra, Orissa and Rajasthan. It almost remained stable in Haryana and Kerala. Of all the services that come under Economic Services the share of Water and Power Development is next only to Agriculture and Allied Services in all the States except Assam, Haryana, Kerala, Madhya Pradesh and Punjab where Transport and Communication amassed more. In Jammu & Kashmir, only in 1977-78 water and Power Development obtained more than Transport and Communication. The States Assam and Haryana allotted more to Transport and Communication than to Agriculture and Allied Services. Punjab did so since 1969-70.

D.2 Inter-State Variations in Percapita Expenditure Levels.

The extent of the disparity in the expenditure percapita on Water and Power Development is presented in the following Table V.15.

Table V.15

Measures of Inter-State Variation in Percapita Expenditure on Water and Power Development.

I. Ratio between the lowest and highest percapita expenditure levels,

1957-58	1:26
1962-63	1:52
1967-68	1:25
1972-73	1:63
1977-78	1:19

II.

Year	Mean (In Rs.)	Standard deviation	Coefficient of Variation(In %)
1957-58	0.9642	0.7745	80.3256
1958-59	0.9864	0.8995	91.1901
1959-60	0.995	0.7394	74.3115
1960-61	1.058	0.697	65.879
1961-62	2.0966	3.1062	148.1541
1962-63	1.7566	1.1356	64.6476
1963-64	2.1253	1.4878	70.0042
1964-65	2.3373	1.5231	65.1649
1965-66	2.934	1.8289	62.3346
1966-67	3.3293	2.2397	67.2723
1967-68	3.8768	2.5325	65.3244

cont...

Table V.15 (contd.)

II

Year	Mean (In Rs.)	Standard deviation	Coefficient of Variation(In %)
1968-69	4.8656	3.3954	69.7837
1969-70	5.0743	3.1934	62.9328
1970-71	5.8237	3.6021	61.8524
1971-72	6.1925	4.4414	71.7222
1972-73	5.6581	2.9755	52.5883
1973-74	6.9431	6.4476	92.863
1974-75	7.7006	6.238	81.006
1975-76	8.6168	8.0963	93.9594
1976-77	9.09	7.3336	80.6776
1977-78	10.9131	9.4308	86.4172

III Rank Correlation Coefficient between 1957-58 percapita expenditure and absolute variation in the percapita expenditure levels.

1957-58 and 1962-63	+0.3110
1957-58 and 1967-68	+0.4455
1957-58 and 1972-73	+0.45
1957-58 and 1977-78	+0.372

IV Rank Correlation coefficient between 1957-58 percapita expenditure and the percentage variations in the percapita expenditure levels.

1957-58 and 1962-63	-0.2536
1957-58 and 1967-68	-0.4191
1957-58 and 1972-73	-0.3073
1957-58 and 1977-78	-0.4647

Source: Derived from Table V.13.

The range of difference in the percapita expenditure levels of the states remained higher with a little change in its magnitude during the period under our analysis. The relative ranking of the states also altered as indicated by Table V.16.

Table V.16
Matrix of Rank Correlation Among the Rankings Percapita
Expenditure on Water and Power Development Services in
Selected Years.

Years	1957-58	1962-63	1967-68	1972-73	1977-78
1957-58	1	0.7084**	0.5922*	0.6231**	0.5246*
1962-63		1	0.8220**	0.6691**	0.675**
1967-68			1	0.9058**	0.9117**
1972-73				1	0.9176**
1977-78					1

** Significant at 1% level

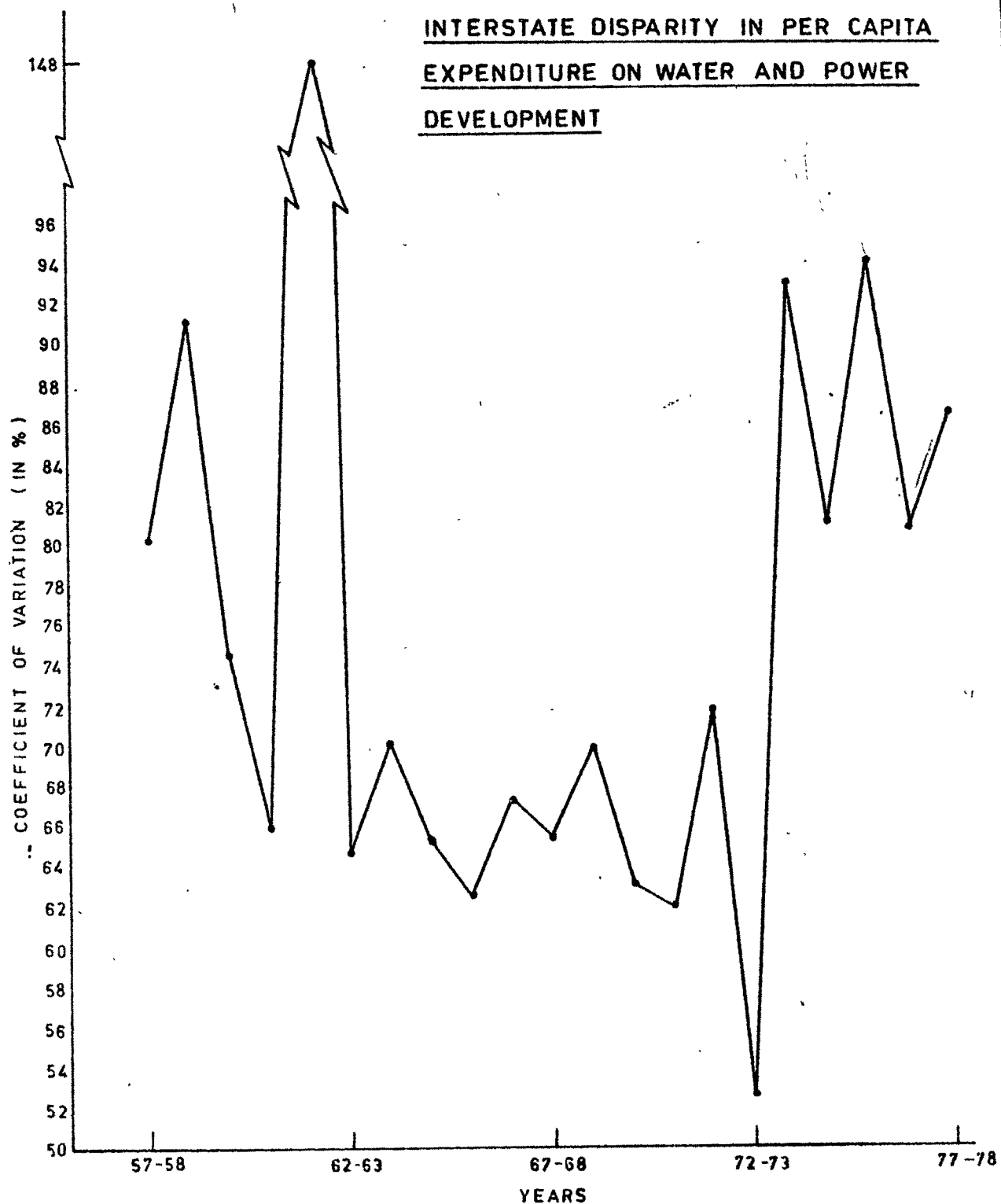
* Significant at 5% level

Source: Derived from Table V.12.

Consequent of the faster growth in the spending of the states like Mammu & Kashmir, Haryana, Orissa and Rajasthan and Slower growth in the states like Assam, Bihar, Madhya-Pradesh, Punjab, Tamil Nadu, Uttar Pradesh and West Bengal the disparity in the percapita spending between the states persist.

FIG: V-6:

INTERSTATE DISPARITY IN PER CAPITA
EXPENDITURE ON WATER AND POWER
DEVELOPMENT



Source : Table V.15

One could observe that Bihar and Uttar Pradesh who had lower percapita expenditure levels in Education, Medical and Public Health, Agriculture and Allied Services and Industries and Minerals possessed higher percapita expenditure levels in Water and Power Development than Madhya Pradesh. To know the reasons for such differences an analysis of the distribution of the expenditure on water and Power Development is warranted.

D.3 Distribution of the Expenditure on Water and Power Development.

Table V.17 shows that Irrigation, Navigation, Drainage and Flood Control annexed major portion of the expenditure in all states excluding Punjab where Multi-purpose-River Projects claimed more in 1957-58. By 1977-78 Power Projects obtained larger portion in Jammu & Kashmir, Kerala and Madhya Pradesh where as Water and Power Services took more in Gujarat. Now two questions seems to be relevant. Why the expenditure on Irrigation, Navigation, Drainage and Flood control is higher than other categories? Secondly, What are the reasons for the inter-state variations in the percapita expenditure levels?

Irrigation, Navigation, Drainage and Flood Control annexed a larger share because of the relative importance given to irrigation in five year plans and the measures

Table V.17

Distribution of the Expenditure on Water and Power Development (Rs. in lakhs)

States	Multi-Purpose River Projects			Irrigation, Navigation etc.			Power Projects			Water and power development services		
	1957-58	1977-78	% Incr.	1957-58	1977-78	% Incr.	1957-58	1977-78	% Incr.	1957-58	1977-78	% Incr.
1	2	3	4	5	6	7	8	9	10	11	12	13
Andhra Pradesh	41 (6.15)	1870 (27.89)	4461	335 (50.30)	3763 (56.13)	1023	290 (43.54)	1070 (15.96)	269			
Assam				87 (95.60)	726 (100.0)	734	4 (4.50)					
Bihar		431 (26.87)		171 (70.95)	881 (54.92)	415	70 (29.05)				292 (18.20)	
Gujarat		71 (1.94)		267 (100.0)	1587 (43.56)	494					1985 (54.48)	
Haryana	362 (58.29)	537 (19.63)	48	259 (41.71)	2199 (80.37)	749						
Jammu & Kashmir				48 (100.0)	194 (9.51)	504		1846 (90.49)				
Karnataka				100 (56.81)	3202 (96.0)	3102	76 (43.19)				135 (4.00)	
Kerala				53 (100)	407 (44.87)	668		500 (55.13)				
Madhya Pradesh		23 (2.32)		45 (118.42)	-101 (-10.17)	-	-7 (-18.42)	1070 (107.75)				
Maharashtra				320 (100)	4335 (88.52)	1255		89 (1.82)			473 (9.66)	

265

contd...

Table V.17 (contd.)

1	2	3	4	5	6	7	8	9	10	11	12	13
Orissa	12 (19.05)	1313 (40.15)	10342	35 (55.55)	1232 (39.20)	3563	16 (25.40)	562 (17.19)	3413		113 (3.46)	
Punjab	382 (71.40)	536 (30.30)	40	108 (20.18)	1156 (65.38)	970	45 (8.42)	-			77 (4.35)	
Rajasthan	23 (26.74)	897 (22.73)	3800	60 (69.76)	3050 (77.27)	4983	3 (3.50)	-			-	
Tamil Nadu				342 (80.28)	2605 (65.92)	662	84 (19.71)	1215 (30.74)	1346		132 (3.34)	
Uttar Pradesh		854 (19.07)		505 (64.91)	3622 (80.88)	617	273 (35.09)	-			2 (.04)	
West Bengal	84 (33.73)	771 (40.79)	818	165 (66.27)	1119 (59.21)	578						

Source: 1. 1957-58 combined Finance and Revenue Accounts of Central and State Governments in India, 1957-58.

2. 1977-78 - Reserve Bank of India Bulletin.

Notes : 1. Figures in brackets indicate percentage to total expenditure on water and power development.

2. For Gujarat and Haryana the figures under the column for the year 1957-58 belongs to 1960-61 and 1967-68 respectively.

undertaken by the states to control floods. The vulnerability of India's agriculture to the vagaries of monsoon has made it imperative to accord irrigation a high place in the national development plans. The Fifth Five Year Plan purported two main objectives, namely, (i) a substantial increase in the creation of irrigation potential consistent with relevant organisational and financial capabilities and having regard to the needs of the draught prone areas, and (ii) improvements in the utilisation of the created potential and efficient management of water and land for achieving maximum productivity.⁶⁹

The intensity of the problems created by floods could be understood best from the situation that prevailed in Bihar. "The magnitude of the flood problem, though great only for North Bihar, has a grave impact on the economy of the State as a whole. It subjects about half of the area of the State to insecurity and instability in agriculture, almost the only occupation of the population".⁷⁰

To control floods so many measures were undertaken. "The National Flood Control Programme was launched in September 1954, following the disastrous floods in different parts of the country in that year. During the Second Plan flood control

69 Government of India, Planning Commission. Draft Fifth Five Year Plan, p.106.

70 National Council of Applied Economic Research. Techno-Economic Survey of Bihar, 1960, p.26.

measures consisting of embankments, channel improvements, raising the level of villages etc. were undertaken in most of the vulnerable areas. Since the Third Plan protection measures consisting of storage reservoirs, embankments etc. which will form part of the comprehensive plan of flood control in different-river basins, have been taken up. Attention has been given to drainage and anti-water logging measures also. Flood forecasting and warning centres have been set-up in some of the most flood-prone river basins. For laying down policies and for guidance in the coordinated implementation of flood control programmes there are State Flood Control Boards assisted by Technical Advisory Committees at the State Level and River Commissions (Floods) at the inter-state level."⁷¹ Further, "because of the complexity of magnitude of the flood problem in Brahmaputra Valley and North Bengal rivers, flood control Commissions "have been set-up by the Governments of Assam and West Bengal for implementing a comprehensive plan of flood control."

The construction and maintenance of the major and medium irrigation projects caused increase in the expenditure both on revenue and capital accounts in all the states. But the number of projects in the states do not give any valid

71 Government of India: India - A Reference Annual, 1973, p.249.

explanation for the differences in the levels of percapita expenditure. The irrigation potentials created and the physical achievements of flood control measures (Table VI.11) serve as more meaningful measures to explain the inter-state variations in the percapita expenditure levels.

Table V.18 gives the irrigation potential created in the states.

Assam has tapped only 11% of its irrigation potential and perhaps this may be due to its expenditure on flood control as it is so critical that, "Even a brief description of the State's economy would be incomplete without a mention of the problem of floods which is a chronic ailment of the economy. It causes severe dislocation in transport and communication, extensive damages to standing crops and property and also loss of human and cattle life, The state exchequer has to bear a substantial burden and in the years of more extensive floods the entire State Government administration is thrown out of gear."⁷²

The state Jammu & Kashmir has spent more since it is utilizing 79.3% of its irrigation potential.

72 Government of Assam: Memorandum submitted to the Seventh Finance Commission, 1978, p.5.

Table V.18

Benefits from Major and Medium Schemes ('000 hectares gross)

States	Estimated irrigation potential	Potential to end of 4th Plan including pre-plan schemes	% of potential to end of 4th Plan	Potential to end of 5th Plan including pre-plan schemes	% of potential to end of 5th Plan	Potential to end of 5th Plan including pre-plan schemes	% of potential to end of 5th Plan	Potential to end of 5th Plan including pre-plan schemes	% of potential to end of 5th Plan
1	2	3	4	5	6	7	8	9	10
Andhra Pradesh	6480	2625	40.9	3195	49.3	21.7			
Assam	9702	38	3.9	108	11.1	184.2			
Bihar	9229	2005	21.7	2885	31.2	43.8			
Gujarat	2150	723	33.6	1093	50.8	51.4			
Haryana	*	1530	*	1780	*	16.3			
Jammu & Kashmir	150	89	59.3	119	79.3	33.7			
Karnataka	2000	926	46.3	1266	63.0	36.7			
Kerala	1000	400	40.0	560	60.0	40.0			
Madhya Pradesh	5630	994	17.7	1624	29.0	63.4			
Maharashtra	2350	922	39.2	1437	61.1	55.8			
Orissa	3600	1326	36.8	1566	43.5	18.1			
Punjab	4920	2023	72.26	2223	31.46	9.9			
Rajasthan	3150	1160	36.8	1570	49.8	35.3			
Tamil Nadu	1610	1128	70.0	1183	73.4	4.9			
Uttar Pradesh	11200	4105	36.6	5473	49.0	33.5			
West Bengal	2310	1390	60.2	1515	65.5	9.0			

* included in Punjab.

Source: Draft Fifth Five Year Plan, p.115.

The percapita expenditure is low in Madhya Pradesh. This may be due to the low expenditure on irrigation projects. This state has tapped only 29% of its estimated irrigation potential.

In Maharashtra the expenditure per head on this function is relatively low. It is even lower than that in Orissa - a backward state. Perhaps Maharashtra may not have given due importance to irrigation. G.G. Mirchandani points out that, "The primary reason for the backwardness of Maharashtra's agricultural economy is the very low coverage of cultivated area under irrigation. Recognising the backwardness of the State in irrigation, the State Government is concentrating all its efforts in this direction. During the Fifth Five Year Plan it is proposed to create an additional potential of 9.88 lakh hectares which will be equal to the potential created since the First Five Year Plan till the end of the Fourth Five Year Plan."⁷³

Because of this step taken by the Government of Maharashtra its percapita expenditure doubled by 1977-78 over 1972-73. The potential to be created by it has gone up from 39.2% to 61.1% by the end of Fifth Plan.

Punjab and Tamil Nadu have tapped their irrigation poten-

73 G.G. Mirchandani: op.cit., pp.71-72.

tial to a greater extent. As such the proportion of total expenditure devoted to this function declined from 8.20% in 1972-73 to 5.16% in 1977-78 in Punjab. G.G. Mirchandani attributes the increase in per-hectare yield in Tamil Nadu to, "the implementation of high yielding varieties programmes and fullest exploitation of the extensive irrigation sources in the States".⁷⁴ In the capital account also the share of this function declined in these two states upto 1972-73.

The expenditure per head of population was low in West Bengal. The proportion of total revenue expenditure allotted to this service fell since 1967-68 and that of Capital account assumed a downward trend since 1962-63. This may be due to the exploitation of major portion of its available potential for irrigation. The National Council of Applied Economic Research felt that, "With the completion of First and Second Plan Schemes, the State would be utilizing most of its irrigation potential, especially from major surface sources. The potential available for further exploitation in future is, therefore, only meagre."⁷⁵

As seen from Table V.18 the states Bihar, Madhya Pradesh, Orissa, Rajasthan and Uttar Pradesh are rich in irrigation

⁷⁴ Ibid, p.78.

⁷⁵ National Council of Applied Economic Research.
Techno-Economic Survey of West Bengal, 1962, p.42.

potential. In development they are standing low because of the non-utilization of the available potential.

El Growth of Expenditure on Transport and Communications.

The function Transport & Communication includes expenditure on Roads & Bridges, Road and Water Transport Services, Tourism and others.

State highways, district and rural roads are the responsibility of state governments. The rural roads are developed under the Minimum Needs Programme with the objective of linking all villages with a population of 1500 and above with all weather roads.

In the Fifth Five Year Plan the road development programme laid emphasis on (i) the completion of works spilling over from Fourth Plan, (ii) construction of bye-passes around congested cities; replacing railway level crossing with over-bridges and under bridges strengthening of pavements and widening of two-lanes of certain remaining single lane sections; (iii) removal of missing links, and (iv) development of rural roads under "minimum needs programme".⁷⁶

76 Government of India, Planning Commission, Draft Fifth Five Year Plan, Vol.II, pp.176-177.

Under Roads and Bridges,⁷⁷ the spending is made on Direction and Administration, Planning and Research, National Highways, Road of Inter-State Importance, Strategic and Border Roads, State highways, District and other Roads, Railway Safety Works, Machinery and Equipment, Suspense, Minimum Needs Programme, Other Expenditure and Transfer to/from Reserve Funds and Deposit Funds.

Road and Water Transport Services Comprises expenditure on Direction and Administration, Assistance to Transport Services, Training and Research, Government Transport Services, Working expenses and other expenditures incurred on both Road and Water Transport Services.

Tables V.19 and V.20 present the expenditure on Transport and Communication charged to revenue account at current and constant prices respectively.

E.1 Levels of Percapita Expenditure.

The percapita expenditure on Transport and Communication was at the maximum level at Rs.3.81 in Assam in 1957-58,

77 Before 1974-75 the expenditures on Communications, Buildings and Public Works were grouped under the major head Public Works. As per the new accounting procedure we have rearranged the data pertaining to the period from 1957-58 to 1974-75. We have booked the expenditure on (i) communications as expenditure on Roads and Bridges, under Transport and Communications, (ii) Buildings as Housing under Social and Community Services, (iii) Public Works as Public Works under Administrative Services.

Table V.19

Expenditure on Transport and Communication at Current Prices.
(Total expenditure in Lakhs of Rs.; Per capita Expenditure in Rs.)

States	1957-58		1962-63		1967-68		1972-73		1977-78		TE % increase over 1957-58		TE % increase over 1957-58	
	TE	PE	TE	PE	TE	PE	TE	PE	TE	PE	1957-58	1957-58	1957-58	1957-58
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Andhra Pradesh	237 (4.30)	0.69	591 (5.45)	1.60	730 (3.84)	1.80	578 (1.63)	1.29	3213 (4.32)	6.60	1255	856		
Assam	422 (14.84)	3.81	520 (11.70)	4.06	1581 (16.02)	10.99	1752 (13.84)	11.28	1659 (6.60)	9.31	293	144		
Bihar	510 (8.54)	1.16	221 (2.64)	0.46	551 (3.21)	1.04	901 (2.69)	1.56	1188 (2.44)	1.89	132	62		
Gujarat	308* (6.01)	1.51	203 (2.86)	0.95	957 (6.51)	3.94	1172 (4.00)	4.25	719 (1.45)	2.32	133	53		
Haryana					375 (6.75)	4.09	1345 (11.49)	13.03	4115 (17.80)	36.03	997	780		
Jammu & Kashmir	60 (8.05)	1.52	467 (18.62)	12.82	1050 (23.34)	25.67	978 (10.07)	20.67	600 (4.13)	11.49	900	655		
Karnataka	264 (4.96)	1.19	856 (9.11)	3.52	728 (4.62)	2.69	1386 (4.24)	4.61	2013 (3.77)	6.09	662	411		
Kerala	141 (4.72)	0.90	678 (10.21)	3.87	368 (2.96)	1.87	784 (3.83)	3.56	1734 (4.16)	7.11	1129	690		
Madhya Pradesh	208 (4.12)	0.69	448 (5.35)	1.33	605 (3.41)	1.59	1068 (3.68)	3.55	2763 (4.72)	5.72	1228	728		
Maharashtra	357 (3.10)	0.64	243 (1.66)	0.59	312 (1.00)	0.67	457 (0.70)	0.88	2612 (2.31)	4.54	631	609		

cont....

Table V.19 (contd.)

1	2	3	4	5	6	7	8	9	10	11	12	13
Orissa	120 (5.11)	0.72	471 (7.13)	2.60	495 (4.37)	2.45	638 (3.30)	2.83	866 (2.53)	3.48	621	383
Punjab	113 (3.10)	0.65	504 (6.15)	2.59	583 (6.09)	4.61	2578 (13.62)	18.58	4460 (13.00)	29.28	3846	4404
Rajasthan	98 (3.12)	0.52	237 (4.17)	1.13	771 (5.65)	3.26	486 (2.00)	1.83	1859 (4.03)	6.28	1796	1107
Tamil Nadu	274 (4.63)	0.84	1067 (8.75)	3.09	2058 (8.81)	5.45	3159 (7.45)	7.48	3194 (4.52)	6.93	1065	725
Uttar Pradesh	388 (3.90)	0.55	1683 (8.71)	2.23	2830 (8.59)	3.43	2625 (4.58)	2.90	3428 (3.22)	3.52	783	540
West Bengal	179 (2.25)	0.56	281 (2.47)	0.77	519 (2.54)	1.27	882 (2.12)	1.93	2670 (2.80)	5.24	1391	835

Source: Appendix Table A.28.

Notes : 1. TE - Total expenditure

PE - Per capita Expenditure

2. Figures in brackets indicate percentage to total revenue expenditure.

3. * Belong to 1960-61.

Table V.20

Revenue Expenditure on "Transport and Communications at Constant 1960-61 Prices
(Total Expenditure in Lakhs of Rs.; Per capita Expenditure in Rs.)

States	1957-58		1962-63		1967-68		1972-73		1977-78		TE % increase over 1957-58		PE % increase over 1957-58	
	TE	PE	TE	PE	TE	PE	TE	PE	TE	PE	TE % increase over 1957-58	PE % increase over 1957-58	TE % increase over 1957-58	PE % increase over 1957-58
Andhra Pradesh	255	0.74	563	1.52	429	1.06	278	0.62	1060	2.17	316	194		
Assam	454	4.10	495	3.87	930	6.46	842	5.42	548	3.07	20	-25		
Bihar	548	1.25	210	0.44	324	0.61	433	0.75	392	0.62	-28	-50		
Gujarat	308*	1.51	193	0.90	563	2.32	563	2.04	237	0.76	-23	-50		
Haryana					221	2.41	647	6.26	1358	11.89	514	393		
Jammu & Kashmir	65	1.65	445	12.22	618	15.11	470	9.93	198	3.79	205	130		
Karnataka	284	1.28	815	3.35	428	1.58	666	2.21	664	2.01	134	57		
Kerala	152	0.97	646	3.69	216	1.10	377	1.71	572	2.34	276	141		
Madhya Pradesh	224	0.74	427	1.27	356	0.93	513	1.19	912	1.89	307	155		
Maharashtra	384	0.68	231	0.56	184	0.40	220	0.42	862	1.50	124	121		
Orissa	129	0.78	449	2.48	291	1.44	307	1.36	285	1.14	121	46		
Punjab	122	0.70	480	2.46	343	2.71	1239	8.94	1472	9.66	1107	1280		
Rajasthan	105	0.56	226	1.08	454	1.92	234	0.88	614	2.07	485	270		
Tamil Nadu	295	0.90	1016	2.95	1211	3.20	1519	3.59	1054	2.28	257	153		
Uttar Pradesh	417	0.59	1603	2.12	1665	2.01	1262	1.39	1131	1.16	171	97		
West Bengal	192	0.60	268	0.74	305	0.74	424	0.93	881	1.73	359	188		

Source: Appendix Table A.29.

Notes : 1. TE - Total expenditure

2. PE - Per capita expenditure

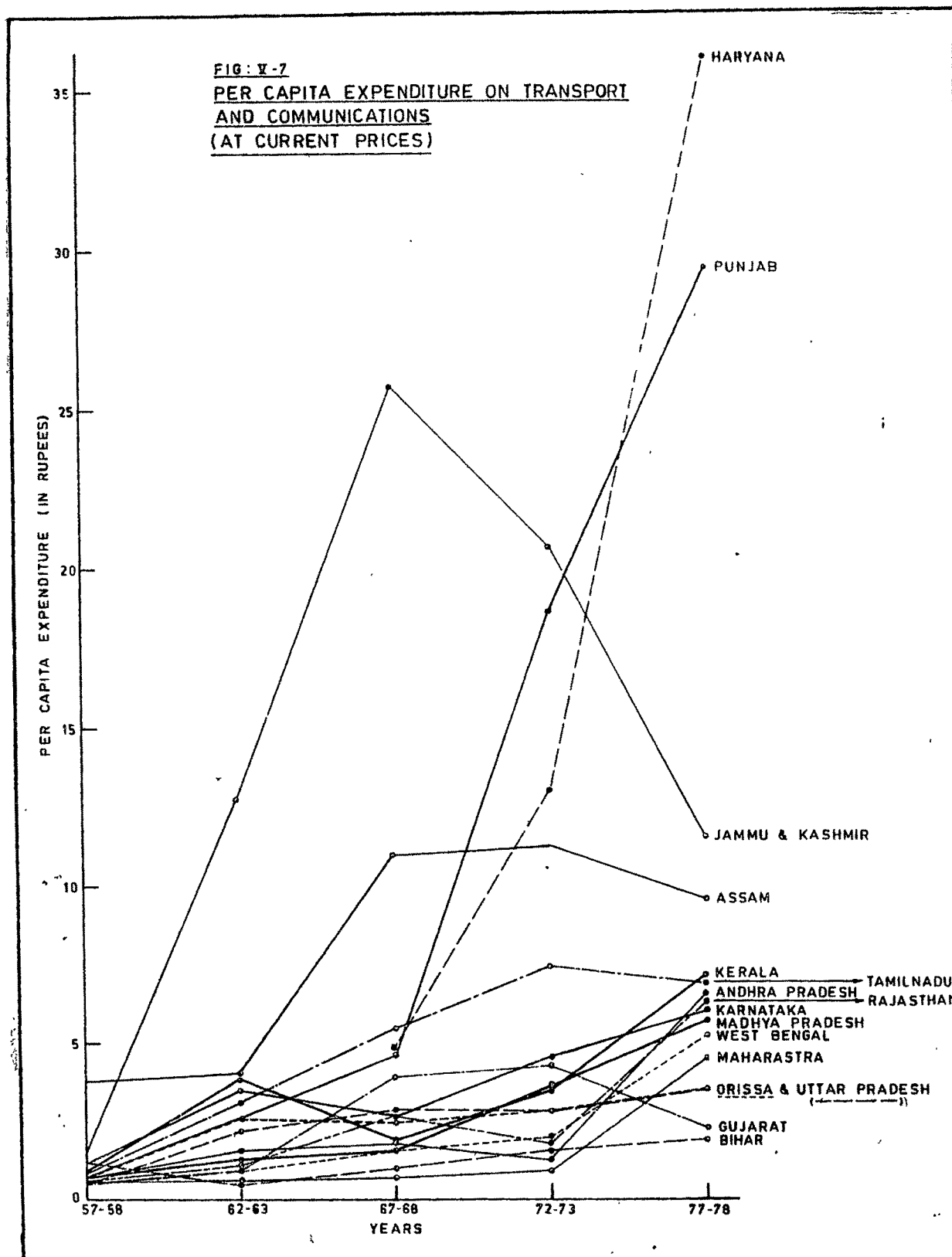
* - belongs to 1960-61.

Rs.12.82, Rs.25.67 and Rs.20.67 in 1962-63, 1967-68 and 1972-73 respectively in Jammu & Kashmir and at Rs.36.03 in Haryana in 1977-78. Least its level was in Rajasthan at 0.52 paise in 1957-58, 0.46 paise in Bihar in 1962-63, 0.67 paise and 0.88 paise in 1967-68 and 1971-72 respectively in Maharashtra and at Rs.1.89 in Bihar in 1977-78.

Growth of Expenditure on Transport and Communications.

At current prices the percapita expenditure decreased by 60.34 in Bihar and 7.81% in Maharashtra by 1962-63 over 1957-58, by 23.57% in Karnataka, 51.67% in Kerala, 5.76% in Orissa by 1967-68 over 1962-63; by 28.33% in Andhra Pradesh, 19.47% in Jammu & Kashmir, 43.86% in Rajasthan and 15.45% in Uttar Pradesh by 1972-73 over 1967-68; by 17.46% in Assam, 45.41% in Gujarat, 44.41% in Jammu & Kashmir and 7.35% in Tamil Nadu by 1977-78 over 1972-73. Such a trend occurred at constant 1960-61 price also.

Over the twenty-one years from 1957-58 to 1977-78, the percapita expenditure on Transport and Communication shot-up rapidly in Punjab by 4404% and slowly by 62% in Bihar in money terms. However in real terms it moved up by 1280% in Punjab and went down by 25.12% in Assam, 50.40% in Bihar and 49.66% in Gujarat during the same period.



Source: Table V.19

Share of Transport and Communication in
Total Revenue Expenditure.

The proportion of total expenditure charged to revenue spent on this functional category differed from 2.25% in West Bengal to 14.84% in Assam in 1957-58. By 1977-78, its share varied from 2.53% in Orissa to 17.80% in Haryana. The percentage of total expenditure absorbed by Transport and Communication stood almost stable in Andhra Pradesh, Kerala, Madhya Pradesh, Tamil Nadu and Uttar Pradesh and increased in Punjab, Rajasthan and West Bengal. The biggest increase was in Punjab. It declined in all the other states during the period under our review.

E.2 Distribution of the Expenditure on
Transport and Communication

We shall now turn to the distribution of the expenditure on this category. As seen from Table V.21 all the states spent more on Roads and Bridges in 1957-58. But by 1977-78 the states Haryana and Punjab allotted 74.22% and 54.89% respectively for Road and Water Transport Services. Hence in these two states Road Transport accounted for most of the expenditure growth in 1977-78. In Gujarat Port, Light House accounted for the increase in this expenditure.

Table V.21

Distribution of the Expenditure on Transport and Communication

(Rs. in lakhs)

States	Road & Bridges			Road & Water Trans- port Services			Tourism & Others		
	1957-	1977-	%	1957-	1977-	%	1957-	1977	%
	58	78	Incr.	58	78	Incr.	58	78	Incr.
Andhra Pradesh	235 (99.15)	3150 (98.04)	1240.42	-	-	-	2 (.85)	63 (1.96)	3050
Assam	422 (100)	1480 (89.21)	250.71	-	162 (9.76)	-	-	17 (1.03)	
Bihar	510 (100)	1150 (96.80)	125.49		-			38 (3.20)	
Gujarat	226 (73.39)	226 (31.43)	-	1 (.32)	19 (2.64)		81 (26.30)	474 (65.92)	485
Haryana	92 (24.53)	1041 (25.29)	1031.52	283 (75.47)	3054 (74.22)	979.15		20 (.49)	
Jammu & Kashmir	56 (93.33)	530 (88.33)	846.42		1 (.17)		4 (6.67)	69 (11.50)	1625
Karnataka	263 (99.62)	1924 (95.57)	631.55		45 (2.24)		1 (.38)	44 (2.19)	
Kerala	141 (100)	1534 (88.46)	987.94		79 (4.56)			121 (6.98)	
Madhya Pradesh	208 (100)	2734 (98.95)	1214.42	-				29 (1.05)	
Maharashtra	273 (76.47)	2488 (95.25)	811.73		23 (0.88)		84 (23.53)	101 (3.87)	20
Orissa	120 (100)	842 (97.22)	601.66		3 (0.35)			21 (2.42)	
Punjab	113 (100)	1947 (43.65)	1623.00		2448 (54.89)			65 (1.46)	
Rajasthan	98 (100)	1811 (97.42)	1747.95					48 (2.58)	
TamilNadu	274 (100)	2998 (93.86)	994.16		136 (4.26)			60 (1.88)	
Uttar Pradesh	384 (98.94)	3352 (97.98)	772.91		10 (0.29)		4 (1.06)	66 (1.93)	1550
West Bengal	169 (94.41)	2178 (81.57)	1188.75		380 (14.23)		10 (5.59)	112 (4.19)	1020

Source: 1. 1957-58 - combined Finance and Revenue Accounts of Central and State Governments in India.

2. 1977-78 - Reserve Bank of India Bulletin, Sept.-Oct.1979.

Notes : 1. Figures in brackets indicate percentage to total expenditure on Transport and Communications.

2. For Gujarat and Haryana the figures under the column for the the year 1957-58 belong to 1960-61 and 1967-68 respectively.

In Jammu & Kashmir, Tourism accounted for Rs.4 lakhs in 1957-58 and Rs.69 lakhs in 1977-78. This state has spent the highest amount for tourism. The reason being "Tourism has immense potentialities in Kashmir. The scenic beauty and salubrious climate of the state provide a rich source for development of tourism which could considerably add to the state income."⁷⁸

E.3 Inter-State Variation in the Percapita Expenditure Levels.

Table V.22 presents the extent of inter-state variations in the percapita expenditure on Transport and Communications.

Table V.22

Measures of Variations in the Percapita Expenditure
on Transport and Communication

I. Ratio between the lowest and highest percapita expenditure levels.

1957-58	1:7
1962-63	1:28
1967-68	1:38
1972-73	1:23
1977-78	1:19

78 National Council of Applied Economic Research.
Techno-Economic Survey of Jammu & Kashmir, 1969, p.131.

Table IV.22 (contd.)

II

Year	Mean (In Rs.)	Standard deviation	Coefficient of Variation(in %)
1957-58	1.0314	0.8503	82.4413
1958-59	0.9485	0.734	77.3853
1959-60	1.2228	1.0705	87.5449
1960-61	1.4566	1.22	83.7566
1961-62	1.9666	2.2182	112.7936
1962-63	2.774	3.0287	109.1816
1963-64	2.9366	3.1383	106.8684
1964-65	3.186	3.1645	99.3251
1965-66	3.8826	4.2024	108.2367
1966-67	4.5068	5.9389	131.7764
1967-68	4.6762	6.116	130.7899
1968-69	5.0137	5.5666	111.0277
1969-70	5.0218	4.8354	96.2881
1970-71	5.7518	5.1403	89.3685
1971-72	6.1481	6.1329	99.7527
1972-73	6.2643	6.2743	100.1596
1973-74	6.0637	6.045	99.6916
1974-75	8.4662	10.4345	123.2489
1975-76	8.8556	11.9199	134.6029
1976-77	9.8068	10.8581	110.7201
1977-78	9.1168	9.5834	105.118

III. Rank correlation coefficient between 1957-58 percapita expenditure levels and the absolute variation in per-capita expenditure.

1957-58 and 1962-63	+0.4544
1957-58 and 1967-68	+0.1783
1957-58 and 1972-73	+0.3308
1957-58 and 1977-78	+0.1558

cont...

Table V.22 (contd.)

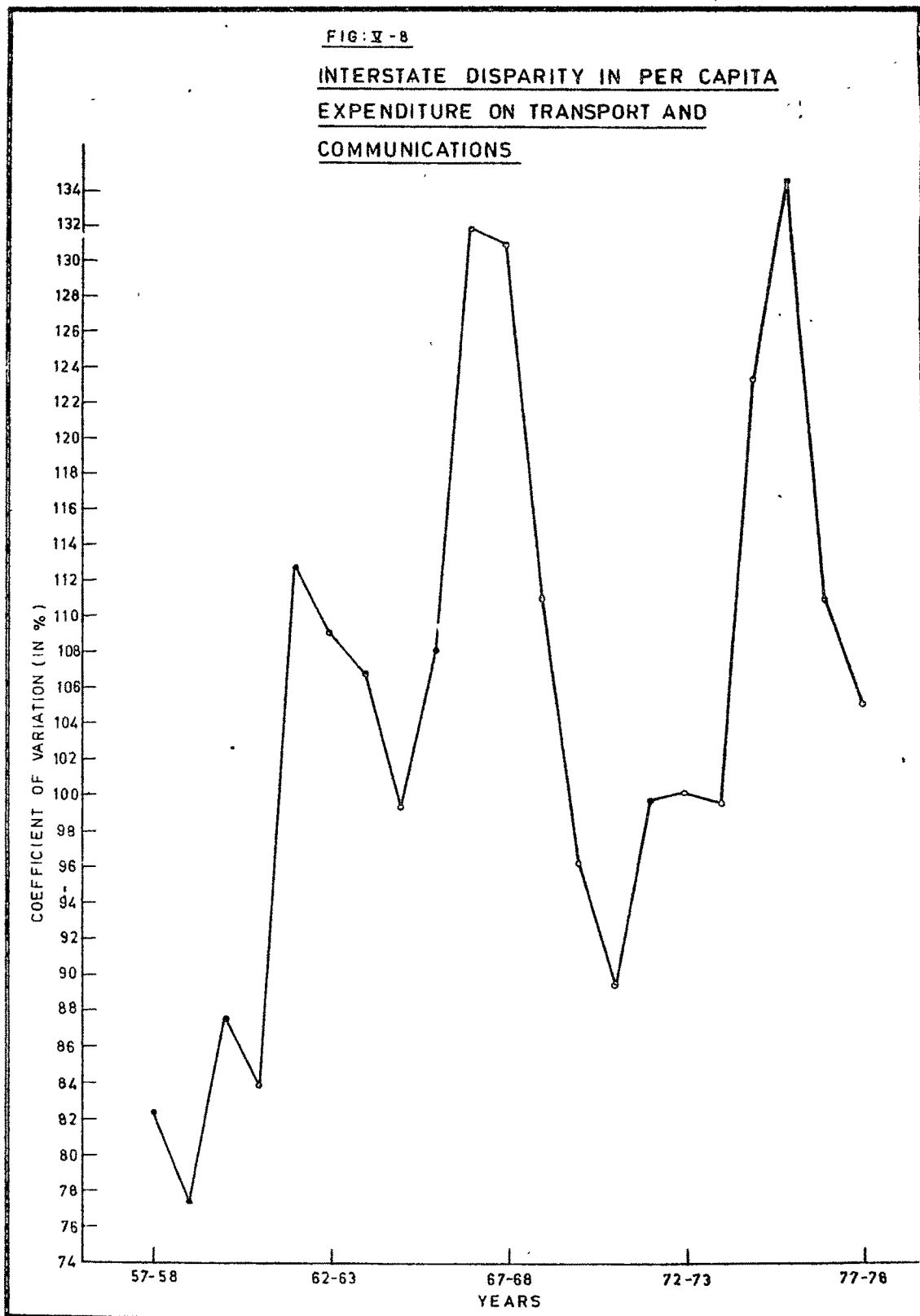
IV. Rank Correlation Coefficient between 1957-58 percapita expenditure levels and percentage variation in the percapita expenditure levels.

1957-58 and 1962-63	+0.0823
1957-58 and 1967-68	-0.1470
1957-58 and 1972-73	-0.970**
1957-58 and 1977-78	-0.4514

** Significant at 1% level.

Source: Derived from Table V.19.

The above table shows that the disparity in the inter-state percapita expenditure is not only greater but expanded also. The rank correlation analysis discloses that the increased gap is not the outcome of faster increase in the percapita levels of the states who already had higher levels in 1957-58. The disparity in the percapita spending widened because some states like Haryana, Punjab, Rajasthan and West Bengal who had lower percapita levels in 1957-58 vastly enhanced their expenditures while there was no appreciable increase in the percapita levels of Bihar, Gujarat, Maharashtra, Orissa and Uttar Pradesh over the twenty-one years. Therefore, the relative ranking of the states changed substantially as given in Table V.23. The change in the relative ranking was brought about by the drastic improvement in the position of Haryana, Punjab, Rajasthan and deterioration in the stages of Assam, Bihar, Karnataka and Orissa.



Source : Table V. 22

Table V.23

Matrix of Rank Correlations Among the Rankings of Per capita Expenditure on Transport and Communications in Selected Years.

Years	1957-53	1962-63	1967-68	1972-73	1977-78
1957-58	1	0.6242**	0.2353	0.3808	0.2639
1962-63		1	0.7014**	0.7382**	0.6692**
1967-68			1	0.8529**	0.6162**
1972-73				1	0.6765
1977-78					1

** Significant at 1% level

* Significant at 5% level

Source: Derived from Table V.19.

One could observe that Maharashtra, a developed State, had its percapita expenditure level lower than ^{that of} the weaker states.

The states Andhra Pradesh, Bihar, Gujarat, Karnataka, Kerala, Orissa, Madhya Pradesh, Maharashtra, Rajasthan, Uttar Pradesh and West Bengal had their percapita expenditure levels lower than the all state average almost in all the years.

E.4 Length of Road available in the States and Causes for the Variations in the Percapita Expenditure.

Table V.24 shows the length of roads constructed upto 1974-75 in the states.

Table V.24
Length of Roads:1974-75 (In Kms.)

States	Surfaced Road	Unsurfaced Road	Total	Road Length per 100000 population	Road Length per 100sq.km
Andhra Pradesh	52197	43771	95968	203	35
Assam	5058	19148	24296	143	30
Bihar	21593	72439	94032	154	54
Gujarat	37144	37573	74717	252	38
Haryana	15138	9833	25071	227	56
Jammu & Kashmir	6393	7682	14075	280	6
Karnataka	57126	40929	97955	307	51
Kerala	19337	58776	78113	332	200
Madhya Pradesh	40066	48720	88786	192	20
Maharashtra	49926	60754	110680	200	35
Orissa	13425	34569	47994	200	30
Punjab	15161	5939	21100	143	41
Rajasthan	25164	21950	47114	165	13
Tamil Nadu	59971	47312	107283	240	82
Uttar Pradesh	31660	85275	116935	123	39
West Bengal	28639	89299	117938	242	134
All India	493111	722226	1215337	203	37

Source: India - A Reference Annual 1977-78, p.343.

We could observe that the states which have their per-capita expenditure levels below all state average level have the road length per 100 sq.km. also below all state average. For instance, Andhra Pradesh, Madhya Pradesh, Maharashtra, Orissa, and Rajasthan, fall under this category. Though the percapita expenditure in Assam is relatively higher the road length per 100 km is lower. This may be due to the land scape of Assam.

We have also seen that the percapita expenditure in Jammu & Kashmir is high. But the road length in that state is very low. The condition of the road in that state has been vividly brought out by the National Council of Applied Economic Research. "There are numerous sections in the State which are having unbridged crossings, weak bridges and frequent land slips even on important roads. The existance of these sections are a hazard to movement. On the whole the state has an inadequate road length both on quantitative and qualitative terms.⁷⁹ Further, "The general terrian of the state being mountainous even road development is not only costly but also difficult on account of the nature of soil, non-availability of road building material and short-working season.⁸⁰ Thus

79 National Council of Applied Economic Research.
Techno-Economic Survey of Jammu & Kashmir, 1969, p.115.

80 Ibid, p.110.

the physical condition of the state coupled with other constraints might have warranted the state to have a higher expenditure level.

Madhya Pradesh had relatively low percapita expenditure level because, "The State's physical features, forest regions, numerous small and big rivers all militate against an efficient system of transport."⁸¹ The percapita expenditure level in Orissa and its road length is also lower. The consequences of this poor road system has been narrated as, "The existence of adequate transport facilities is of fundamental importance for the economic development of an underdeveloped State like Orissa. The inadequacy of facilities is one of the explanations of the paradox that despite the existence of large natural resources Orissa continues to be a poor and backward State".⁸²

One of the reasons for the higher percapita expenditure in Punjab is higher construction cost. In Punjab. "Though much of the land of the State is plain, still the construction of roads is not very cheap. This is because of the fact that in the Western districts stone has to be taken for a quite long distance from the hills, the transportation of which involves considerable cost. On the other hand in the sub-mountainous districts of the State, land is dissected by numerous seasonal streams and the construction of many bridges

81 T.N. Kapoor, et al, op.cit., p.233.

82 National Council of Applied Economic Research.
Techno-Economic Survey of Orissa, 1962, p.121.

over them involve huge expenditure."⁸³ Though the percapita revenue expenditure is low in Uttar Pradesh, the combined percapita expenditure (Revenue + Capital) is relatively high. May be due to the enhanced level of Capital expenditure the road length per 100 sq.km. is above the all-India average level in this state.

Some of the reasons for the variations in the expenditure levels between the states are (i) physical structure of the states, for instance, Assam, Jammu & Kashmir, Madhya Pradesh and Punjab; (ii) the states' spending on Transport Systems as in Punjab and Haryana; (iii) Importance to Tourism in Jammu & Kashmir, (iv) Social and Political situation of the states.

For example, though Maharashtra is a developed state its percapita expenditure on Transport and Communications is very low and so length of the Road is also relatively lower. This may be due to the geographical, social and political conditions of the state.

C O N C L U S I O N :

The percentage of total expenditure absorbed by Economic Services decreased in most of the states. This declining trend is not due to the attainment in the development of infrastructure. Most of the states are lagging behind in power

⁸³ T.N. Kapoor, et al., op.cit., p.352.

and road development. In agricultural and industrial development also they are standing below.

(2) Of the four services Agriculture and Allied Services absorbed higher percentage of total revenue expenditure in all states except Haryana and Punjab. These states allocated more for Transport and Communication. Next to Agriculture and Allied Services, Water and Power Development, got more share in revenue expenditure.

(3) The percapita expenditure on Agriculture and Allied Services is higher than that of Other services. Only in Haryana and Punjab the percapita expenditure on Transport and Communication is at the highest level. The variations in the percapita expenditure levels of the states is less in Agriculture and Allied Services and highest in Transport and Communications. With respect to Industries and Minerals the inter-state variation in percapita expenditure levels tends to shrink. In the other three services the differences in the levels of percapita expenditure assume an increasing tendency.

(4) The rate of growth of the expenditure on Agriculture and Allied Services is higher in Andhra Pradesh, Assam, Haryana, Maharashtra, Tamil Nadu, Uttar Pradesh and West Bengal. In the other nine states expenditure on Water and Power Development had faster growth.

(5) The states of Bihar, Madhya Pradesh, Orissa, Rajasthan and Uttar Pradesh are rich in mineral resources and irrigation potential. Their backwardness in development may be attributed to the poor utilization of the available resources.

(6) The inter-state variations in the percapita expenditures rose owing to the faster expansion in the percapita spending of the richer states. Though the weaker states experienced relatively higher percapita spending levels in the initial years they were not able to expand their spending levels appreciably during the subsequent years. This tendency may be due to their inability to raise revenue adequately as done by their developed counterparts.

APPENDIX V-I

The following are the important major, medium irrigation and multi-purpose river projects* whose construction and maintenance caused the increase in the revenue and capital expenditure on Water and Power Development in the States.

In Andhra Pradesh Nagarjuna Sagar, Kalam, K.C. Canal and Sunkesula Aricut, Thungabhadra High Level Canal (Stage I and Stage II) and Pochampad were constructed.

Assam started Jamuna Irrigation Scheme in 1964 and completed during IV Plan period. Bihar has Baduo, Chandan (1961-62) Gandak (1960), Kosi (1957) Sone Barrage (Stage I 1961, Stage II, 1968-69).

Gujarat possesses Banas, Hatmati, Kakrapar, Mahi right bank canal, Mahi Stage II, Narmada, Shetrunji and Ukai (1960).

Haryana completed Gurgaon canal and Western Jamuna during Fourth Plan period.

In Jammu & Kashmir, the Tawi Lift Irrigation scheme was started in 1969-70 and ended in Fourth Plan period. There is no major irrigation project in this state.

Karnataka has Bhadra (1947) Ghataprabha stage II (1956) Hemavathy (1967) Harangi (1967), Kabini (1959), Thungabhadra (1945), Upper Krishna (1964) and Malaprabha.

* Times of India Directory and Yearbook, 1978, p.96.

Kerala owns Kallada (1962), Kuthiyadi (1962), Malampuzha (1949-1967), Pampa (1962) and periyar (1956 - Fourth Plan).

Madhya Pradesh constructed Barna (1960), Chambal project (1954-1960), Hasdeo (1961) and Pariy Tawa (1962).

Maharashtra constructed Bima (1964), Jayakwadi Stage I (1964), Krishna (1968-69) Kukadi (1969-70), Upper Godavari (1968) and Warma (1964).

Orissa has Hirakud (1948 to Fourth Plan) Mahanadi Delta (1955-56) and Salandi (1961).

Bankra Nangal (1948) and Beas Projects (1961-62) are the joint venture of Punjab, Haryana and Rajasthan. The projects in Punjab are Harike (1950-1958) and Sirhid feeder (1953-54 - 1960).

Rajasthan constructed Kotah Barrage (1953), Rajasthan Canal (1958) and Ranapratap Sagar Dam (1961).

Tamil Nadu has Papanasam, Mettur, Manimuthar, Chittar Pattnankal (1963) and Parambikulam and Aliyar (1959) in collaboration with Kerala.

Uttar Pradesh has Matalila (1952), Ramganga (1961), Sarda Sagar (1957-58), Sarada Canal (1968-69) and Western Gandak (1961).

West Bengal constructed Parakha (1963-64), Kangasabati (1956 - Fourth Plan) and Mayurakshi (1946-1956).

Because of the construction and maintenance of these major and medium projects the total expenditure on both revenue and capital accounts went up in all the states.