ON AREAL DISTRIBUTION OF POVERTY IN RURAL INDIA DURING 1973-74

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SUMMARY. This paper is a follow-up of one part of Moni Mukherjee's (1969) paper based on NSS 18th round (1963-64) household budget data. It utilizes NSS 28th round household budget data collected during the period from October 1973 to June 1974. Only the rural sector of the country is covered in this study. The areal units considered were the NSS regions, numbering 50 in NSS 18th round and 61 in NSS 28th round.

Sample households were ranked in ascending order of PCE, and four fractile groups, namely, the bottom 10%, the bottom 20%, the top 10% and the top 20% of the rural population of the country were formed, once starting from *nominal* PCE and again starting from PCE *adjusted* for inter-state consumer price differentials. Following Mukherjee (1969), the percentages of regional population falling in each fractile group (the "densities") and also the regional distribution of the population in each fractile group were studied. While Mukherjee presented only combined sample results based on *nominal* PCE, *half-sample-wise* and combined sample results based on both *nominal* and *adjusted* PCE are presented here. Only limited comparisons with Mukherjee's results could, however, be made as most of the regional boundaries changed during the intervening ten year period.

The region-wise distribution of the poor, defined in the usual manner in terms of poverty lines, was also studied.

The study reveals marked inter-regional variation in level of living and poverty *within* the rural areas of many states and stresses the need of region-level estimates. It appears that a sample size of 200 households for a region could give fairly reliable region-level estimates.

There was considerable variation in relative price levels in different states between the two time periods.

1. INTRODUCTION

Removal of poverty in the absolute sense and of relative poverty, that is, disparities in level of living, have generally been accepted as one of the goals of economic planning in India. Regional disparities in level of living

have naturally been considered in this context. Previous studies point to wide variation in level of living in India across geographical regions (*vide* Chatterjee and Bhattacharya, 1974 ; Dandekar and Rath, 1971 ; Rath, 1973 ; Gupta, Srinivasan and Singh, 1983). An immediate consequence of this is the marked inter-regional variation in the incidence of poverty or of relative affluence (*vide* Mukherjee, 1969 ; Bardhan, 1973 ; Ahluwalia, 1978 ; Gupta, Datta and Singh, 1983 ; Gupta, Singh and Datta, 1983 ; Sundaram and Tendulkar, 1983). Studies on the regional dimensions of poverty are essential for the identification of the poor, for the formulation of policy measures for amelioration of poverty and finally, for the evaluation of past efforts in this direction.

Attempts have been made from time to time to study the State-wise distribution of the poor (*vide* Bardhan, 1973 ; Ahluwalia, 1978 ; Gupta, Singh and Datta, 1983; Gupta, Datta and Singh, 1983; Pal, Chakravarty and Bhattacharya, 1986). In a more detailed study of this problem, Mukherjee (1969) employed NSS 18th round (February 1963–January 1964) household budget data to study the areal distribution of the (relatively) poor and the (relatively) rich separately for the rural and urban sectors of the country. His areal units were the 50 NSS regions, which were typically smaller than the States.[1] For each sector, rural or urban, Mukherjee arranged the sample households in ascending order of per capita household consumer expenditure on all items (abbreviated PCE), and formed the lowest decile group comprising the poorest 10 per cent of the country's population and the highest decile group covering the richest 10 per cent. The former were called the 'poor' and the latter, the 'rich'. Note that the procedure completely ignored inter-regional consumer price differentials during the survey period (1963–64). Mukherjee studied separately for the two sectors of the country (i) the percentage shares of the different regions in the all-India count of the 'poor' (or the 'rich') and (ii) the percentage of the population of each region that was 'poor' (or 'rich'). These latter percentages were called 'densities'. Mukherjee finally tried to form clusters of the regions having similar densities of the poor or similar values of mean PCE.

Tewari (1983) examined eight different indices of level of living and poverty like engel ratio for food, percentage of population consuming less than 2400 kilo calories per day, etc., for the rural areas of each of 64 NSS regions. (All the indices do not relate to the same NSS round. They are

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[1]The NSS regions were formed broadly with an eye to homogeneity in respect of soil, climate, etc.

based on data from the 26th (1971–72) to the 32nd (1977–78) rounds.) He then combined these eight different indices using four different sets of weights to obtain four composite indices of development, assuming that the component indices did not change appreciably over the period covered by these NSS rounds.

Mukherjee and Kishore (1983) found the proportion of population in poverty in urban areas of different districts of Himachal Pradesh considering three alternative poverty lines of Rs. 700, Rs. 900 and Rs. 1200 per capita per annum for a "household of 5 persons". These proportions were based on a complete survey of all urban households carried out by the Directorate of Economics and Statistics, Himachal Pradesh, in consultation with the C.S.O. In rural areas, the survey was conducted in the 69 Development Blocks by Integrated Rural Development Department. The proportion of households falling below a poverty line of Rs. 700 per capita per annum for a "household of 5 persons" was found for the rural areas of the different districts. Mukherjee and Kishore also suggested using separate poverty lines for different regions, to take into account inter-regional price differentials.

Data on the incidence of poverty in the different states have been thrown up by every NSS round where the enquiry on consumer expenditure was conducted. Similar data for regions smaller than the state are, however, hard to come by, in spite of the emphasis given now-a-days on regions like districts for planning and policy making.

The present study is a follow-up of this pioneering work by Mukherjee (1969) with some extensions and refinements[2]. It is based on NSS 28th round budget data relating to the period from October 1973 to June 1974. Only the rural sector of the country has, however, been covered. The sample households were arranged in ascending order of PCE and four fractile groups were formed for examination, viz., the bottom 10%, the bottom 20%, the top 10% and the top 20% of the population. This was done in two ways. First, the inter-regional consumer price differentials were ignored and results parallel to those of Mukherjee (1969) were obtained. Next, the exercise was repeated making some allowances for inter-regional price variation. In concrete terms, the Paasche-type consumer price indices constructed by Bhattacharyya et al (1980) were utilized for expressing the price levels in the rural areas of different states as percentages of the price level in rural

[2]One refinement is the systematic use of half-samplewise and combined sample results with a view to assessing their reliability. Mukherjee presented only the combined sample estimates.

India as a whole. These were used to express the PCE figure for each sample household at the prices of all-India rural *before* ranking the households by PCE and forming the fractile groups mentioned above. The regional distribution of population in rural India belonging to each of the four fractile groups was then studied as in Mukherjee (1969) through percentage shares of the regions and the 'densities'.

In addition to the above, a similar exercise was made to study the region-wise distribution of the poor in rural India, defining the poor in the usual manner, in terms of poverty lines.

Bardhan (1973) had chosen PCE = Rs. 15 at 1960-61 prices as the poverty line for rural India and adjusted this to get statewise poverty lines at 1960-61 prices utilizing the indices of inter-state consumer price differentials constructed by Chatterjee and Bhattacharya (1974) on the basis of NSS 18th round (February 1963-January 1964) budget data. Statewise poverty lines at 1960-61 prices obtained by Bardhan were expressed at NSS 28th round (October 1973-June 1974) prices using statewise official CPI numbers for agricultural labourers. Note that in view of the non-availability of separate regionwise price indices the same poverty line was used for all the NSS regions within any state ; for the same reason, the same poverty line was used (i) for the Punjab, Haryana and Himachal Pradesh and (ii) for Assam, Manipur, Tripura and Meghalaya.

Some comparisons have, of course, been made with the state and region-wise results of Mukherjee (1969). Most of the regional boundaries, however, changed during the ten year period intervening between the 18th and the 28th rounds of the NSS. There is also the fact that levels of living in rural India fluctuate from year to year due to rainfall and other factors ; and this affects different states and regions unequally to some extent.

Following Mukherjee (1969), the areal distributions of average PCE and poverty have been illustrated in maps of India, showing NSS regions. Unlike Mukherjee's maps which are based on *nominal* PCE, the maps presented here are based on PCE *adjusted* for inter-state consumer price differentials.

The definitions of the NSS regions can be found in Appendix II of National Sample Survey Organisation, Government of India (1973) or from the authors on request.

2. THE DATA

The present study is mainly based on NSS 28th round (October 1973–June 1974) household budget data. An account of the enquiry with its main results is available in NSS Report No. 240 : Tables with Notes on Consumer Expenditure : Twenty-eighth Round, published by the NSS Organisation, Govt. of India (1978). For the purpose of the present investigation, the authors carrried out a special tabulation of the same material using a copy of the updated Honeywell tape supplied by the authorities of the NSS Organisation, Government of India.

The NSS 28th round budget data had been collected from a nationwide probability sample of households. The sampling design was two-stage stratified with provision for two independent and inter-penetrating half-samples. Each half-sample yielded an equally valid estimate of population characteristics. The divergence between the two half-sample estimates points to the margin of uncertainty associated with the combined sample estimate[3]. The interview method was adopted for collecting data on household consumption including consumption out of home-grown produce, transfer receipts, etc. during the last 30 days preceding the date of interview. The interviews for different households were evenly staggered over the survey period with a view to reducing the effects of seasonality.

The sample sizes for the different regions, States and Union Territories are presented in col. (2) of Table 1.

Bhattacharyya et al (1980) had analyzed the same body of NSS 28th round budget data to compute indices of inter-state consumer price differentials. They had expressed the price level in each state as a percentage of the price level in every other state (and all-India), separately for rural and urban sectors of the country. These indices were computed from weights and implicit prices of 94 items of consumption, all estimated from NSS budget data. As stated earlier, in one of the exercises reported in this paper, the Paasche type indices of Bhattacharyya et al were employed to express the PCE of each sample household as well as the region-wise averages of PCE (presented in cols. (6)—(8) of Table 1 at all-India rural prices.

3. THE RESULTS

Tables 1 to 4 set out the main results based on NSS 28th round data.

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[3]Two useful discussions on the reliability and validity of NSS data are found in Srinivasan, Radhakrishnan and Vaidyanathan (1974) and Vaidyanathan(1986).

Table 1 shows the average PCE for all the rural regions of the country, separately for half-samples 1, 2 and combined, in cols. (3) to (5), respectively; but the more useful figures are the *adjusted* values shown in cols. (6)—(8). Finally, the poverty indices (head-count ratios) are shown, region-wise, in cols. (9) to (11). As mentioned earlier, state-wise poverty lines were used for defining the poor in the absolute sense, in obtaining these measures of poverty.

The sample sizes in col. (2) of Table 1 are not repeated in subsequent tables for reasons of space. It can be seen that the sample size was quite small, even below 100, for some of the regions. The divergence between half-sample results tends to be rather large in such cases. There are, however, instances where the divergence is marked even though the sample size is not so small. Note that the NSS results are usually presented at the state level and not at any smaller regional level, in view of the limitations of sample size[4].

Table 2 presents "densities" of the type considered by Mukherjee (1969) in cols. (5) to (16). These are based on a ranking of the sample households in ascending order of *nominal* PCE, without any adjustment for variation in consumer prices across states and regions. However, cols. (2) to (4) of this table show the distribution of the total population of rural India over the regions, as estimated from NSS data.

Table 3 parallels Table 2, but is based on a ranking of sample households by *adjusted* PCE, that is, PCE expressed at all-India rural prices with the difference that cols. (2) to (4) of Table 2 have not been reproduced here.

Finally, Table 4 shows in cols. (2)—(4) the shares of the different regions in the total count of poor in rural India[5]. These can be derived if necessary from the percentages in cols. (2) to (4) of Table 2 and the head count ratios in cols. (9)—(11) of Table 1. Cols. (5) to (8) give similar shares of the regions in different ordinal groups of the population of rural India based on a ranking by *adjusted* PCE. Only the combined sample figures are presented here to save space. The figures can be arrived at from the percentages in cols. (2) to (4) of Table 2 and the densities in cols. (4), (7), (10) and (13) of Table 3.

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[4]It is sometimes stated that the NSSO would be able to release dependable region-level estimates when the results based on the Central and the State Samples have been pooled after careful comparisons between the two sets of results. This goal has hardly been achieved so far. The present study is based solely on data for the Central sample.

[5]Note, however, that all figures in Table 4 were derived after excluding the Union Territories. The first step was to adjust the percentages of population shown in cols. (2) to (4) of Table 2 so that the total of adjusted percentages over the states becomes equal to 100.

TABLE 1. REGIONWISE AVERAGES OF PCE AND HEAD-COUNT RATIO INDICES OF POVERTY FOR RURAL INDIA :
NSS 25TH ROUND*

state/region	no. of sample households	average PCE (Rs.)			average PCE (Rs.) (adjusted)			head count ratio*		
		hs 1	hs 2	combined	hs 1	hs 2	combined	hs 1	hs 2	combined
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Rajasthan										
1	159	61.56	62.90	61.84	67.01	68.04	67.53	0.245	0.238	0.242
2	274	73.85	75.55	74.50	80.11	82.50	81.36	0.186	0.222	0.204
3	96	45.22	41.04	43.89	49.88	44.82	47.33	0.587	0.595	0.590
4	84	52.01	59.16	55.01	57.78	64.61	61.05	0.418	0.256	0.341
total/average	613	62.59	65.37	63.98	68.36	71.40	69.86	0.301	0.278	0.289
Punjab										
5	387	77.02	77.80	77.40	82.23	83.06	82.64	0.180	0.143	0.162
6	283	69.90	81.70	75.79	74.63	87.22	80.92	0.199	0.203	0.201
total/average	670	73.87	79.55	76.68	78.87	84.93	81.87	0.189	0.170	0.179
Jammu and Kashmir										
7	44	49.83	66.28	58.91	64.91	86.34	76.74	0.380	0.004	0.222
8	290	44.99	46.02	45.54	58.61	59.95	59.32	0.523	0.580	0.553
9	323	82.43	57.89	60.20	81.33	75.41	78.43	0.132	0.234	0.182
total/average	657	54.73	53.57	54.14	71.80	69.79	70.52	0.302	0.369	0.336
Haryana										
10	350	66.47	66.82	67.19	70.00	67.29	68.59	0.367	0.352	0.355
11	253	84.61	76.15	80.56	86.50	77.85	82.36	0.151	0.195	0.172
total/average	603	75.54	70.29	73.01	77.83	71.86	74.64	0.267	0.284	0.275
Himachal Pradesh										
12	394	72.42	71.25	71.85	65.81	64.25	64.79	0.188	0.177	0.183

TABLE 1 (Contd.). REGIONWISE AVERAGES OF PCE AND HEAD-COUNT RATIO INDICES OF POVERTY FOR RURAL INDIA : NSS 28TH ROUND*

state/region	no. of sample households	average PCE (Rs.)			average PCE (Rs.) (adjusted)			head count ratio*		
		hs 1	hs 2	combined	hs 1	hs 2	combined	hs 1	hs 2	combined
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Uttar Pradesh										
13	87	50.57	49.07	49.77	56.96	55.27	56.06	0.542	0.559	0.557
14	681	52.21	56.26	54.25	58.81	63.37	61.11	0.473	0.429	0.451
15	297	46.70	50.71	48.61	52.60	57.13	54.75	0.606	0.519	0.564
16	724	50.69	50.82	50.75	57.10	57.25	57.17	0.489	0.543	0.515
17	95	55.89	47.32	51.19	62.96	53.31	57.66	0.512	0.621	0.571
total/average	1784	50.78	52.40	51.68	57.20	59.02	58.10	0.505	0.507	0.506
Madhya Pradesh										
18	432	47.21	46.38	46.80	52.05	51.14	51.60	0.628	0.540	0.584
19	251	41.68	41.32	41.50	45.95	45.55	45.75	0.700	0.748	0.724
20	219	55.33	58.98	57.40	61.00	65.03	63.28	0.447	0.540	0.505
21	242	58.33	54.85	56.43	64.31	60.47	62.22	0.500	0.491	0.495
22	176	53.12	59.76	56.39	58.56	65.88	62.15	0.497	0.410	0.454
total/average	1320	50.34	51.30	50.84	55.40	56.56	56.04	0.572	0.552	0.561
Bihar										
23	316	50.03	45.88	47.98	44.49	40.80	42.66	0.705	0.728	0.716
24	592	61.10	58.41	59.81	54.33	51.94	53.18	0.593	0.541	0.568
25	380	58.78	56.63	57.72	52.27	50.35	51.33	0.579	0.551	0.565
total/average	1288	57.76	54.79	56.31	51.36	48.72	50.07	0.615	0.590	0.603
Orissa										
26	301	50.95	49.80	50.39	63.58	62.15	62.88	0.407	0.453	0.430
27	141	33.45	31.14	32.37	41.74	38.86	40.40	0.842	0.929	0.883
28	229	36.82	39.13	37.47	45.95	47.59	46.77	0.736	0.688	0.712
total/average	671	42.81	42.39	42.61	53.48	52.90	53.17	0.602	0.621	0.611

TABLE 1 (*Contd.*). REGIONWISE AVERAGES OF PCE AND HEAD-COUNT RATIO INDICES OF POVERTY FOR RURAL INDIA : NSS 28TH ROUND*

state/region	no. of sample households	average PCE (Rs.)			average PCE (Rs.) (adjusted)			head count ratio*		
		hc 1	hc 2	combined	hc 1	hc 2	combined	hc 1	hc 2	combined
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
West Bengal										
29	124	47.41	39.76	43.84	44.88	37.64	41.50	0.763	0.787	0.774
30	289	38.44	43.12	40.72	36.39	40.82	38.55	0.824	0.780	0.802
31	359	49.90	55.16	52.48	47.24	52.22	49.69	0.612	0.647	0.630
32	258	50.51	49.15	49.83	47.82	46.53	47.18	0.586	0.666	0.626
total/average	1030	46.46	48.54	47.47	43.98	45.95	44.94	0.685	0.705	0.695
Assam										
33	581	51.64	52.41	52.02	53.55	54.35	53.94	0.394	0.383	0.389
34	19	50.48	55.58	51.64	52.33	57.61	53.66	0.302	0.211	0.280
total/average	600	51.59	52.45	52.01	53.50	54.89	53.93	0.391	0.381	0.386
Manipur										
35	116	52.37	60.07	56.19	52.89	60.44	56.63	0.316	0.178	0.248
36	106	44.19	55.08	48.91	44.46	55.42	49.21	0.583	0.423	0.514
total/average	222	48.42	57.97	52.88	48.71	58.33	53.21	0.445	0.281	0.369
Tripura 37	187	48.85	51.61	50.15	57.08	60.50	58.78	0.542	0.331	0.435
Meghalaya 38	225	57.46	60.35	58.89	58.11	58.93	57.51	0.258	0.184	0.219

TABLE 1 (Contd.). REGIONWISE AVERAGES OF PCE AND HEAD-COUNT RATIO INDICES OF POVERTY FOR RURAL INDIA:
NSS 28TH ROUND*

state/region	no. of sample households	average PCE (Rs.)			average PCE (Rs.) (adjusted)			head count ratio*		
		hc 1	hc 2	combined	hc 1	hc 2	combined	hc 1	hc 2	combined
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Andhra Pradesh										
39	501	50.94	57.36	54.21	61.20	68.91	65.12	0.316	0.317	0.317
40	441	49.91	39.00	44.25	59.96	46.85	53.16	0.443	0.570	0.509
41	204	57.74	51.46	54.54	60.36	61.83	65.53	0.343	0.387	0.365
total/average	1236	51.83	49.61	50.69	62.26	59.60	60.90	0.366	0.422	0.395
Tamil Nadu										
42	248	43.05	43.71	43.89	51.50	52.36	51.97	0.568	0.554	0.561
43	275	49.70	45.32	47.39	59.53	54.29	56.76	0.546	0.485	0.514
44	387	51.05	50.59	50.80	61.14	60.59	60.85	0.419	0.451	0.436
total/average	910	48.34	47.07	47.68	57.90	56.39	57.11	0.501	0.490	0.495
Kerala										
45	234	52.81	52.25	52.28	63.37	53.31	63.34	0.600	0.474	0.537
46	411	55.67	58.49	57.09	56.80	59.68	58.25	0.462	0.504	0.483
total/average	645	54.43	56.22	55.32	55.53	57.36	56.44	0.513	0.493	0.503
Gujarat										
47	100	50.24	53.79	52.11	47.67	51.03	49.44	0.614	0.483	0.545
48	151	48.03	47.61	47.83	45.67	45.17	45.98	0.398	0.486	0.440
49	90	60.05	60.79	60.41	56.97	57.68	57.32	0.374	0.127	0.255
50	79	58.23	58.27	58.25	55.24	55.28	55.26	0.137	0.158	0.148
51	110	52.53	64.42	57.63	49.84	61.12	54.69	0.329	0.261	0.300
total/average	530	52.98	56.21	54.54	50.26	53.33	51.74	0.375	0.326	0.351

TABLE 1 (*Contd.*). REGIONWISE AVERAGES OF PCE AND HEAD-COUNT RATIO INDICES OF POVERTY FOR RURAL INDIA:
NSS 28TH ROUND*

state/region	no. of sample households	average PCE (Rs.)			average PCE (Rs.) (adjusted)			head count ratio*		
		hs 1	hs 2	combined	hs 1	hs 2	combined	hs 1	hs 2	combined
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Maharashtra										
52	158	58.90	55.68	57.29	55.12	51.93	53.62	0.373	0.415	0.394
53	300	58.09	58.44	58.27	54.28	54.60	54.44	0.408	0.331	0.368
54	150	44.96	52.14	48.22	42.01	48.71	45.05	0.612	0.506	0.564
55	226	43.54	50.99	46.63	39.75	47.64	43.56	0.635	0.482	0.551
56	213	53.76	53.82	53.79	50.23	50.29	50.26	0.433	0.500	0.466
57	90	46.75	53.21	50.42	43.69	49.71	47.11	0.688	0.394	0.521
total/average	1135	51.33	54.50	52.91	47.96	50.92	49.43	0.506	0.426	0.466
Karnataka										
58	61	61.02	63.29	62.13	58.64	61.03	59.91	0.127	0.244	0.184
59	81	48.68	58.26	53.43	46.94	56.17	51.52	0.523	0.414	0.469
60	190	56.44	61.18	58.83	54.42	58.99	56.73	0.315	0.410	0.363
61	289	42.66	48.18	45.47	41.13	46.41	43.94	0.640	0.642	0.641
total/average	621	49.60	54.92	52.29	47.82	52.96	50.42	0.472	0.502	0.488
Others (Union Territories)	111	60.82	73.47	62.19	**	**	**	**	**	**
India	15452	52.80	53.69	53.24	55.42a	56.38a	55.90a	0.495a	0.486a	0.491a

*The average PCEs and the head-count ratios were adjusted for inter-state consumer price differentials. Thus, statewise poverty lines were used for computing the head-count ratios.

**Price indices and hence poverty lines were not available for the U.T.'s of Delhi, Pondicherry, Goa, Daman and Diu.

a Excludes the U.T.'s mentioned in (**)

TABLE 2. REGIONWISE "DENSITIES" OF THE POOR AND THE RICH IN RURAL INDIA BASED ON *NOMINAL PCE*: NSS 28TH ROUND

state/union territory/ region	percentage of all-India rural population			percentage of regional population in all-India rural fractile group (%)											
				0—10			0—20			90—100			80—100		
	hs 1	hs 2	combined	hs 1	hs 2	combined	hs 1	hs 2	combined	hs 1	hs 2	combined	hs 1	hs 2	combined
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Rajasthan															
1	1.26	1.31	1.29	3.31	3.86	5.33	7.23	10.73	9.03	16.69	16.62	15.56	33.19	26.82	31.06
2	2.03	2.29	2.19	0.94	1.60	0.83	8.57	5.77	6.45	33.55	30.56	30.28	36.19	44.05	40.57
3	0.79	0.62	0.70	0.54	21.82	18.82	17.67	40.45	27.63	8.68	8.64	8.58	14.84	8.18	11.08
4	0.76	0.65	0.71	11.08	5.87	9.31	14.83	9.09	12.08	8.76	13.84	11.09	17.11	28.51	22.18
total/average	4.86	4.90	4.88	4.47	5.28	5.02	9.80	11.98	10.55	18.17	21.06	19.62	30.37	32.76	31.57
Punjab															
5	1.93	1.84	1.38	0.09	0.76	0.43	1.56	0.76	1.18	23.57	29.29	28.74	46.15	43.82	45.27
6	1.09	1.10	1.10	2.08	0.46	1.27	7.86	2.32	3.85	22.48	33.20	27.56	35.09	40.98	42.15
total/average	2.47	2.44	2.46	0.97	0.63	0.80	4.84	1.46	2.87	25.95	31.09	28.21	42.57	44.97	43.86
Jammu and Kashmir															
7	0.03	0.04	0.03	3.10	0.00	1.39	16.28	0.00	7.29	0.00	13.84	7.64	22.48	25.79	26.35
8	0.16	0.19	0.17	16.58	3.54	10.06	37.90	18.76	28.23	5.95	4.10	4.96	13.61	8.70	10.63
9	0.22	0.22	0.23	0.00	0.00	0.00	1.84	2.34	2.51	11.69	10.21	10.06	33.86	23.55	28.25
total/average	0.41	0.46	0.43	6.30	2.68	4.44	12.93	9.09	11.31	8.62	7.93	7.81	24.75	18.96	20.81
Haryana															
10	1.09	1.04	1.06	1.52	1.23	1.38	12.04	3.07	9.76	31.80	17.09	19.80	35.77	29.53	32.80
11	0.85	0.79	0.82	4.46	1.50	8.16	6.41	3.87	4.95	34.55	25.81	31.50	56.98	47.68	52.53
total/average	1.94	1.82	1.88	2.81	1.85	2.15	9.67	6.04	7.66	27.42	29.86	24.88	45.06	37.96	41.95
Himachal Pradesh															
12	0.77	0.75	0.76	0.00	2.50	1.25	1.48	3.69	2.56	21.58	26.00	23.71	37.34	41.70	40.28
Delhi															
13	0.08	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.06	8.83	3.57	12.50	41.67	25.00
Uttar Pradesh															
14	0.74	0.86	0.80	8.87	9.52	10.14	24.14	15.15	19.96	5.42	4.76	5.07	24.14	12.99	18.20
15	5.83	5.98	5.90	6.35	4.83	5.21	15.84	12.83	14.25	7.02	11.50	9.91	18.54	28.01	20.29
16	2.61	2.57	2.69	7.43	6.33	6.91	28.60	22.33	24.70	7.17	6.10	6.70	12.65	15.54	14.84
17	7.68	7.01	7.84	4.01	7.27	5.71	11.51	13.56	14.66	5.11	4.59	4.94	18.57	17.24	18.66
18	0.79	0.96	0.88	0.00	5.33	4.62	10.70	21.34	15.31	14.83	4.98	9.87	38.87	11.83	19.83
total/average	17.85	17.38	17.61	5.84	6.13	5.87	15.79	17.19	16.34	6.80	7.33	7.09	17.48	19.46	17.80

TABLE 2 (Contd.). REGIONWISE "DENSITIES" OF THE POOR AND THE RICH IN RURAL INDIA BASED ON NOMINAL POOR : NSS 28TH ROUND

state/union territory / region	percentage of all-India rural population			percentage of regional population in all-India rural fractile group (%)											
				0—10			0—20			90—100			80—100		
	ls 1	ls 2	combined	ls 1	ls 2	combined	ls 1	ls 2	combined	ls 1	ls 2	combined	ls 1	ls 2	combined
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Madhya Pradesh															
19	2.53	2.51	2.52	13.58	15.17	13.87	29.08	28.18	27.46	8.85	5.27	8.98	13.53	11.84	12.72
20	1.56	1.53	1.54	24.83	18.29	21.27	33.36	48.75	40.57	4.46	6.55	6.51	8.96	9.91	9.13
21	1.15	1.52	1.34	7.98	6.12	7.71	13.77	18.65	18.54	11.18	15.29	13.42	21.76	22.02	22.77
22	1.65	1.87	1.71	7.91	12.22	10.19	22.94	18.70	20.58	16.57	8.80	12.43	20.40	20.82	24.39
23	1.18	1.10	1.12	9.98	5.99	8.61	13.13	14.59	13.49	16.27	16.91	16.06	20.98	31.71	26.24
total/average	7.92	8.59	8.23	13.92	12.19	12.77	25.87	24.85	25.21	10.70	9.52	10.12	18.02	17.73	17.94
Bihar															
24	2.68	2.64	2.66	10.59	8.17	10.11	19.63	28.56	23.42	7.53	3.88	5.23	16.25	10.94	14.45
25	6.11	4.72	4.91	8.70	8.16	8.44	14.14	14.08	14.17	16.25	12.46	14.11	25.62	25.05	25.25
26	5.56	3.49	3.52	6.83	8.83	7.52	14.37	14.45	14.43	15.25	11.76	13.21	26.80	28.50	28.43
total/average	11.84	10.85	11.60	9.56	8.87	9.64	15.49	17.51	16.47	13.43	9.80	11.69	23.93	29.97	23.03
Orissa															
27	2.28	2.20	2.24	13.78	7.11	10.19	19.72	17.18	18.45	6.45	5.67	6.06	16.31	13.83	15.23
28	0.97	0.85	0.91	31.25	29.99	28.41	64.88	56.46	60.95	0.90	0.65	0.48	3.93	1.09	2.06
29	1.53	1.58	1.58	31.33	30.99	28.45	46.31	50.57	48.58	1.93	8.86	2.58	3.84	7.90	5.78
total/average	4.98	4.63	4.78	22.03	19.41	19.80	37.65	35.49	36.69	3.52	4.13	3.82	9.49	9.48	9.53
West Bengal															
30	0.89	0.87	0.98	6.10	24.92	14.88	13.06	39.20	25.74	4.94	1.88	3.26	11.34	10.30	10.85
31	2.40	2.30	2.35	26.59	17.78	20.99	45.15	31.99	30.85	2.75	3.90	3.51	10.30	9.63	9.58
32	2.92	2.85	2.89	18.70	12.41	16.31	27.46	25.74	25.61	10.83	18.02	11.91	22.94	20.96	21.06
33	3.04	3.03	3.04	19.36	21.11	17.09	28.41	33.10	30.74	9.42	9.84	9.63	19.83	18.12	18.98
total/average	8.35	8.05	8.20	18.17	17.49	17.01	31.13	30.94	31.19	7.67	8.95	8.04	18.96	15.79	18.09
Assam															
34	2.88	2.80	2.84	7.91	4.04	6.65	14.42	12.51	13.89	6.21	6.85	5.69	17.61	16.42	16.53
35	0.11	0.02	0.07	0.00	21.05	4.86	0.00	21.05	4.89	1.59	5.26	2.44	11.11	28.32	14.68
total/average	2.99	2.83	2.91	7.58	4.24	5.64	13.90	12.42	13.18	6.14	5.34	5.61	17.37	18.53	16.49

TABLE 2 (Contd.). REGIONWISE "DENSITIES" OF THE POOR AND THE RICH IN RURAL INDIA BASED ON NOMINAL POP.: NSS 28TH ROUND

state/union territory/ region	Percentage of all-India rural population			percentage of regional population in all-India rural fractile group (%)											
				0—10			0—90			90—100			80—100		
	ts 1	ts 2	combined	ts 1	ts 2	combined	ts 1	ts 2	combined	ts 1	ts 2	combined	ts 1	ts 2	combined
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Manipur															
36	0.12	0.12	0.12	0.00	0.00	0.00	1.41	0.61	3.99	2.26	5.75	8.09	18.08	28.15	28.50
37	0.11	0.09	0.10	8.16	0.00	4.02	24.77	7.11	15.58	0.60	8.30	8.94	8.65	17.79	11.90
total/average	0.23	0.21	0.22	3.94	0.00	2.10	18.20	3.82	9.36	1.40	6.82	3.42	12.55	23.79	17.96
Tripura															
38	0.29	0.30	0.30	7.74	6.43	7.07	16.47	14.20	15.82	5.95	4.09	5.01	14.88	12.20	12.77
Meghalaya															
39	0.20	0.20	0.20	3.90	1.72	2.82	7.16	3.44	5.39	7.13	12.03	9.22	24.06	25.26	25.02
Andhra Pradesh															
40	3.61	3.67	3.59	10.42	10.88	10.54	17.92	17.73	17.83	9.95	12.52	10.18	16.99	22.15	19.93
41	3.71	2.94	2.82	12.08	23.84	18.00	22.75	38.18	30.74	6.11	3.07	4.54	13.83	8.99	10.57
42	1.41	1.47	1.44	10.88	5.20	9.48	20.81	17.29	20.08	18.87	8.88	9.74	22.16	15.80	17.98
total/average	7.68	8.03	7.85	11.42	14.56	13.02	20.16	25.08	22.38	7.43	8.04	8.05	18.64	15.94	16.15
Tamil Nadu															
43	1.79	1.79	1.75	17.40	17.52	16.38	25.58	31.50	24.11	6.05	4.42	4.68	10.44	13.27	11.98
44	1.86	2.12	2.00	12.35	10.00	11.11	29.33	20.75	25.58	11.19	9.62	7.17	13.53	7.31	12.02
45	2.41	2.77	2.59	13.95	17.26	15.90	22.69	28.46	25.64	7.43	7.81	7.37	13.90	10.43	13.82
total/average	6.01	6.68	6.34	14.44	15.02	14.52	26.61	26.82	27.05	7.90	5.36	6.56	13.37	13.93	15.04
Kerala															
46	1.57	1.60	1.57	16.54	19.37	14.46	28.75	18.38	21.82	12.52	7.43	9.59	20.87	17.09	16.89
47	2.67	2.73	2.70	14.43	12.54	13.69	24.46	24.96	24.24	14.43	16.78	15.19	22.80	25.72	24.20
total/average	4.24	4.29	4.27	14.85	13.48	13.97	24.30	23.52	23.28	13.05	18.37	13.13	21.70	22.58	22.25
Pondicherry															
48	0.09	0.06	0.07	0.00	4.35	1.89	11.80	4.85	8.78	1.66	36.96	11.49	7.73	39.18	19.93

TABLE 2 (Contd.). REGIONWISE "DENSITIES" OF THE POOR AND THE RICH IN RURAL INDIA BASED ON *NOMINAL PCE*: NSS 25TH ROUND

| state/union territory/region | percentage of all-India rural population | | | percentage of regional population in all-India rural fractile group (%) | | | | | | | | | | | |
| | | | | 0—10 | | | 0—20 | | | 90—100 | | | 80—100 | | |
(1)	hs 1 (2)	hs 2 (3)	combined (4)	hs 1 (5)	hs 2 (6)	combined (7)	hs 1 (8)	hs 2 (9)	combined (10)	hs 1 (11)	hs 2 (12)	combined (13)	hs 1 (14)	hs 2 (15)	combined (16)
Gujarat															
49	0.77	0.87	0.82	10.81	0.00	5.12	23.17	6.60	14.44	6.56	5.90	6.22	11.97	23.26	19.20
50	1.22	1.11	1.17	7.32	17.57	12.19	18.05	25.66	22.05	3.66	6.49	5.00	18.86	18.92	18.15
51	0.73	0.69	0.71	0.00	0.00	0.00	3.89	0.00	1.49	22.87	8.88	15.50	28.40	25.44	28.00
52	0.67	0.74	0.71	3.10	0.00	1.48	6.19	7.29	6.77	6.75	10.12	8.03	28.78	14.57	20.93
53	1.13	0.95	0.99	8.18	0.00	1.82	15.65	5.30	11.21	10.08	14.84	13.03	13.00	30.74	20.81
total/average	4.52	4.26	4.40	5.08	4.69	4.84	14.18	10.85	12.42	9.81	8.97	9.21	17.82	22.46	20.23
Maharashtra															
54	0.95	0.95	0.95	11.44	10.38	10.10	19.80	15.94	18.43	11.99	12.02	12.01	28.84	21.31	24.88
55	2.04	2.23	2.14	8.62	6.67	7.97	20.41	14.50	17.84	16.48	12.06	13.87	29.77	28.89	27.98
56	1.13	0.94	1.04	5.28	10.22	7.62	20.19	16.90	18.42	2.52	11.05	6.39	10.78	15.19	11.03
57	1.72	1.63	1.67	14.44	5.72	10.17	28.42	16.85	23.29	3.76	6.58	5.12	7.52	11.56	10.71
58	1.49	1.45	1.47	8.52	11.27	10.91	14.29	23.10	18.60	8.87	9.21	8.21	22.48	17.57	20.28
59	0.53	0.70	0.62	4.99	10.73	6.75	15.61	14.50	14.98	5.85	6.69	6.59	8.78	16.99	12.87
total/average	7.86	7.90	7.89	9.46	8.58	9.07	20.68	17.07	18.93	8.99	9.81	9.45	18.93	18.61	19.09
Karnataka															
60	0.50	0.48	0.49	0.00	0.00	0.00	2.69	4.68	3.85	5.20	14.63	9.79	27.75	24.39	25.52
61	0.71	0.70	0.70	9.47	2.98	7.05	25.51	14.28	19.92	6.58	12.97	9.75	21.40	29.71	24.69
62	1.54	1.58	1.56	3.99	14.05	8.02	6.40	21.63	14.37	9.40	15.31	11.47	26.87	24.58	25.84
63	2.25	2.40	2.32	17.73	13.69	16.12	34.06	24.67	29.49	5.28	8.80	6.71	10.95	14.01	12.99
total/average	5.00	5.15	5.07	10.89	11.07	10.82	21.47	20.43	21.03	6.79	11.29	8.90	15.84	20.77	19.77
Goa, Daman and Diu															
64	0.12	0.17	0.14	0.00	9.80	5.74	0.00	19.20	11.48	10.71	24.60	19.14	15.43	54.40	41.03
India	100.00	100.00	100.00	10.02	10.02	10.00	20.01	20.02	20.01	9.99	9.99	9.99	20.00	19.99	20.00

TABLE 3. REGIONWISE "DENSITIES" OF THE POOR AND THE RICH IN RURAL INDIA BASED ON PCE ADJUSTED FOR INTER-STATE CONSUMER PRICE DIFFERENTIALS : NSS 28TH ROUND.

percentage of regional population in all-India rural fractile group(%)

state/region	0—10			0—20			90—100			80—100		
	hs 1	hs 2	combined	hs 1	hs 2	combined	hs 1	hs 2	combined	hs 1	hs 2	combined
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Rajasthan												
1	3.31	1.29	2.29	4.19	10.73	7.51	15.67	17.17	16.43	44.59	80.04	37.76
2	0.00	1.60	0.83	4.29	2.82	3.61	29.09	31.29	31.13	43.03	48.96	46.44
3	6.71	20.00	12.62	13.78	37.27	24.06	3.53	5.00	4.17	14.84	8.18	11.93
4	9.89	5.37	7.72	12.17	9.09	10.69	8.75	13.64	11.09	20.91	39.84	24.95
average	3.44	4.86	3.90	6.99	10.15	8.74	18.40	21.74	20.47	35.53	36.03	36.07
Punjab												
5	0.08	0.76	0.42	1.56	0.76	1.16	28.57	29.29	29.18	47.89	45.88	46.02
6	2.08	0.46	1.27	5.43	2.32	3.88	23.01	33.29	27.85	38.50	49.88	44.24
average	0.97	0.63	0.80	3.27	1.46	2.37	26.11	31.69	28.58	43.74	47.68	45.22
Jammu and Kashmir												
7	0.00	0.00	0.00	3.10	0.00	1.39	22.48	25.79	22.57	34.11	72.96	55.66
8	4.96	3.85	4.04	15.01	5.59	9.86	12.61	7.58	10.46	22.80	21.37	22.50
9	0.00	0.00	0.00	0.00	0.00	0.00	30.56	21.81	26.22	55.08	41.91	48.62
average	1.93	1.63	1.64	6.08	2.36	4.12	23.93	18.12	19.01	40.99	35.82	38.53
Haryana												
10	2.14	1.24	1.98	13.83	8.74	11.50	21.86	17.00	19.50	34.52	28.02	31.19
11	4.46	2.62	3.58	6.75	3.37	5.61	33.98	34.84	29.83	51.95	45.14	48.15
average	3.16	1.83	2.34	10.73	6.42	8.94	27.17	20.43	24.00	42.16	35.42	38.57

TABLE 3 (Contd.). REGIONWISE "DENSITIES" OF THE POOR AND THE RICH IN RURAL INDIA BASED ON POE ADJUSTED FOR INTER-STATE CONSUMER PRICE DIFFERENTIALS: NSS 28TH ROUND.

state/region	0—10			0—20			90—100			80—100		
	hs 1	hs 2	combined	hs 1	hs 2	combined	hs 1	hs 2	combined	hs 1	hs 2	combined
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Himachal Pradesh												
12	1.48	3.69	2.56	6.40	7.27	6.83	11.63	12.91	12.15	26.70	31.86	28.98
Uttar Pradesh												
13	5.42	5.19	5.30	15.27	15.15	15.21	6.90	4.76	5.76	29.06	12.99	20.51
14	4.59	3.96	4.15	10.12	9.40	9.82	10.37	13.61	12.28	24.01	27.21	25.66
15	5.61	6.38	5.68	17.86	16.11	16.21	7.95	9.50	8.69	13.04	20.86	16.76
16	2.10	3.00	2.73	6.73	14.07	10.47	7.84	9.01	8.44	19.91	20.03	20.13
17	0.00	0.00	0.00	10.70	16.09	13.66	21.40	8.43	14.29	38.27	15.83	21.22
average	3.51	3.77	3.64	10.12	12.78	11.50	9.16	10.42	9.94	20.92	22.02	21.60
Madhya Pradesh												
18	8.66	13.41	11.02	28.43	22.85	22.68	8.75	6.57	7.76	15.60	14.43	14.83
19	19.10	13.72	16.59	31.19	36.69	34.16	4.93	7.01	5.96	9.85	9.91	9.88
20	6.69	8.82	5.63	11.78	17.28	14.89	11.58	18.06	18.94	23.15	26.15	24.85
21	6.57	10.22	8.56	17.81	17.21	17.26	13.57	13.34	14.81	30.00	22.92	26.58
22	9.98	1.27	5.71	14.66	13.53	14.11	16.09	17.12	16.60	24.44	36.79	30.50
average	10.18	9.49	9.85	20.72	21.88	21.27	10.99	11.10	11.09	19.63	20.43	20.10
Bihar												
23	15.58	22.72	19.38	30.12	41.95	35.97	1.41	2.04	1.72	8.94	3.85	6.60
24	13.33	13.33	13.53	25.05	35.05	24.54	11.17	6.53	8.75	16.79	15.22	16.30
25	13.04	12.48	13.48	20.50	24.95	23.06	9.76	4.01	6.79	19.52	16.03	17.53
average	13.76	15.84	14.92	24.80	29.14	26.91	8.42	4.63	6.45	15.79	12.71	14.36

percentage of regional population in all-India rural fractile group (%)

TABLE 3 (Contd.). REGIONWISE "DENSITIES" OF THE POOR AND THE RICH IN RURAL INDIA BASED ON PCE ADJUSTED FOR INTER-STATE CONSUMER PRICE DIFFERENTIALS: NSS 28TH ROUND.

percentage of regional population in all-India rural fractile group(%)

state/region	0—10			0—20			90—100			80—100		
	hs 1	hs 2	combined	hs 1	hs 2	combined	hs 1	hs 2	combined	hs 1	hs 2	combined
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Orissa												
26	7.59	6.32	6.65	14.54	7.11	10.52	13.78	10.41	12.45	32.11	25.96	29.10
27	9.52	10.88	11.27	31.25	29.93	30.63	1.79	0.80	1.27	7.44	3.06	5.40
28	14.57	14.89	14.46	32.97	31.99	30.83	3.10	6.80	4.94	13.48	16.73	14.46
average	10.26	10.08	10.14	23.93	19.79	21.17	7.88	7.39	7.79	21.08	18.60	19.65
West Bengal												
29	8.43	34.55	20.02	27.03	42.19	32.25	4.07	0.66	2.46	6.40	5.85	6.05
30	35.93	24.06	29.71	58.92	38.41	49.17	1.20	2.52	1.84	7.90	6.80	7.37
31	22.05	17.09	20.06	33.76	32.45	32.97	7.48	7.82	6.90	15.06	15.56	15.31
32	20.53	27.30	23.30	35.02	38.66	37.04	5.20	8.27	6.30	15.39	13.55	14.45
average	24.05	23.57	23.69	40.50	30.78	38.54	4.71	5.65	4.77	12.04	11.48	11.77
Assam												
33	7.81	5.16	5.81	14.54	12.31	13.89	5.65	4.48	4.08	15.81	15.49	16.01
34	0.00	21.05	4.88	0.00	21.05	4.88	1.69	5.26	2.44	11.11	26.82	14.53
average	7.53	6.35	5.78	14.01	12.42	13.18	5.50	4.49	4.92	13.63	15.61	16.98
Manipur												
35	1.41	0.00	0.71	1.41	6.61	3.99	0.00	4.89	2.85	10.45	20.11	15.26
36	10.27	3.95	6.94	28.10	9.49	19.01	0.60	7.51	3.60	3.32	15.81	8.73
average	5.69	1.68	3.27	14.31	7.82	10.61	0.29	5.99	3.19	7.01	18.30	12.29
Tripura												
37	8.77	1.17	2.46	9.72	8.75	9.23	9.13	5.25	7.07	19.25	19.46	19.84

TABLE 8 (*Contd.*). REGIONWISE "DENSITIES" OF THE POOR AND THE RICH IN RURAL INDIA BASED ON POE ADJUSTED FOR INTER-STATE CONSUMER PRICE DIFFERENTIALS: NSS 28TH ROUND.

percentage of regional population in all-India rural fractile group(%)

| state/region | 0—10 | | | 0—20 | | | 90—100 | | | 90—100 | | |
| | hs 1 | hs 2 | combined | hs 1 | hs 2 | combined | hs 1 | hs 2 | combined | hs 1 | hs 2 | combined |
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Meghalaya												
38	4.92	1.72	3.33	10.02	3.44	6.75	5.60	5.84	5.98	12.73	22.51	17.59
Andhra Pradesh												
39	4.48	8.20	6.37	11.27	12.67	12.59	13.13	16.24	14.68	26.96	30.77	28.78
40	6.41	16.85	12.02	14.13	26.35	20.27	8.72	4.93	6.85	18.04	12.48	15.15
41	4.05	2.42	3.22	10.98	12.08	11.54	17.92	13.57	15.33	37.19	19.19	28.29
average	5.09	10.29	7.82	12.23	17.54	15.16	12.45	11.65	11.98	25.68	22.11	23.79
Tamil Nadu												
42	11.17	11.33	11.25	19.96	20.18	20.26	8.61	7.61	8.10	13.74	14.51	14.67
43	8.51	2.39	5.28	13.36	14.03	13.71	16.63	4.63	9.22	22.70	16.22	18.44
44	8.21	10.29	9.32	16.43	22.86	19.61	13.02	13.14	13.64	23.73	24.23	24.00
average	9.15	8.06	8.58	16.47	19.34	17.93	12.87	8.96	10.72	20.55	18.77	19.67
Kerala												
45	16.42	13.37	14.91	19.96	19.47	22.58	11.78	6.39	9.08	19.94	16.34	18.52
46	16.15	14.05	14.89	25.84	25.88	25.28	13.57	15.25	14.80	21.52	25.55	23.55
average	16.48	13.81	14.89	25.88	23.23	24.25	13.50	12.02	12.70	20.84	22.20	21.70
Gujarat												
47	17.76	2.43	9.69	32.05	19.10	25.23	6.56	5.90	6.22	8.11	15.97	12.25
48	14.15	22.43	18.06	23.08	31.85	27.91	2.20	4.05	3.08	7.32	12.70	9.87
49	0.00	0.00	0.00	12.36	0.00	6.58	15.64	3.51	10.83	25.10	19.74	22.51
50	3.10	4.86	4.02	6.19	7.29	6.77	5.75	7.69	6.55	18.14	12.55	15.22
51	6.10	2.47	4.55	16.98	15.55	16.36	3.71	10.25	6.52	10.24	19.08	14.09
average	8.84	7.70	8.29	19.01	16.45	17.81	6.01	6.21	6.24	12.67	15.75	14.16

TABLE 3 (Contd.). REGIONWISE "DENSITIES" OF THE POOR AND THE RICE IN RURAL INDIA BASED ON PCE ADJUSTED FOR INTER-STATE CONSUMER PRICE DIFFERENTIALS: NSS 28TH ROUND.

percentage of regional population in all-India rural fractile group(%)

state/region	0—10			0—20			90—100			80—100		
	hs 1	hs 2	combined	hs 1	hs 2	combined	hs 1	hs 2	combined	hs 1	hs 2	combined
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Maharashtra												
52	14.99	12.80	13.92	26.16	26.50	26.33	10.08	8.29	9.69	17.98	14.48	16.28
53	13.09	11.70	12.39	29.28	18.83	23.84	12.17	9.98	10.71	21.98	16.61	18.80
54	16.51	12.71	14.16	36.47	25.41	31.45	2.29	8.66	6.02	2.52	13.64	7.52
55	21.50	11.58	16.69	40.75	27.45	33.85	1.95	5.46	3.65	5.26	9.15	7.14
56	9.91	17.33	14.36	27.83	31.95	30.47	5.04	6.50	5.76	12.52	14.98	13.73
57	13.17	12.27	12.66	32.20	20.07	26.58	3.41	4.09	3.80	7.80	13.01	10.76
average	15.21	12.94	14.08	32.37	24.83	28.72	6.32	7.46	7.01	13.28	13.83	12.96
Karnataka												
58	2.89	0.00	1.48	2.88	8.54	5.64	2.31	8.15	5.64	15.08	21.34	18.10
59	12.35	8.37	10.37	37.88	21.76	29.86	4.58	5.31	4.98	6.68	20.08	13.28
60	3.77	16.08	9.98	17.14	28.84	23.51	7.16	12.01	9.61	20.83	19.78	20.15
61	25.00	16.99	21.08	48.80	29.34	36.89	3.74	6.97	5.27	9.41	13.20	11.30
average	14.45	18.96	14.29	30.41	26.22	29.79	4.76	9.02	6.60	13.00	16.91	14.98
India	10.01	10.01	10.03	20.01	20.02	20.01	9.99	10.00	10.00	20.69	19.97	20.00

TABLE 4. REGIONAL DISTRIBUTION OF SELECTED GROUPS OF THE
POPULATION OF RURAL INDIA: NSS 28TH ROUND

state/region	region's share (%) in all-India count of rural population						
	below poverty line			in fractile group based on adjusted PCE*(%)			
	hs 1	hs 2	combined	0—10	0—20	90—100	80—100
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Rajasthan							
1	0.6	0.6	0.6	0.29	0.48	2.12	2.43
2	0.8	1.0	0.9	0.18	0.43	6.82	5.10
3	0.9	0.8	0.9	0.88	0.84	0.29	0.42
4	0.6	0.4	0.5	0.55	0.38	0.79	0.88
total	2.9	2.8	2.9	1.90	2.13	10.02	8.83
Punjab							
5	0.5	0.4	0.5	0.06	0.08	3.98	3.14
6	0.4	0.5	0.4	0.14	0.21	3.06	2.43
total	0.9	0.9	0.9	0.20	0.29	7.04	5.57
Jammu and Kashmir							
7	0.0	0.0	0.0	0.0	0.0	0.08	0.09
8	0.2	0.2	0.2	0.07	0.09	0.18	0.20
9	0.1	0.1	0.1	0.0	0.0	0.56	0.54
total	0.3	0.3	0.3	0.07	0.09	0.82	0.83
Haryana							
10	0.8	0.8	0.8	0.15	0.61	2.08	1.66
11	0.3	0.3	0.3	0.29	0.23	2.45	1.98
total	1.1	1.1	1.1	0.44	0.84	4.53	3.64
Himachal Pradesh							
12	0.3	0.3	0.3	0.19	0.26	0.93	1.10
Uttar Pradesh							
13	0.8	1.0	0.9	0.42	0.61	0.45	0.83
14	5.6	5.3	5.4	2.45	3.01	7.26	7.58
15	3.4	2.8	3.1	1.53	2.19	2.34	2.26
16	7.6	7.9	7.8	2.01	3.86	6.22	7.41
17	0.8	1.2	1.0	0.0	0.60	1.26	0.93
total	18.2	18.2	18.2	6.41	10.17	17.54	19.00
Madhya Pradesh							
18	3.3	2.8	3.0	2.70	2.87	1.96	1.88
19	2.2	2.4	2.3	2.55	2.63	0.92	0.76
20	1.0	1.7	1.4	0.75	1.00	1.87	1.67
21	1.6	1.9	1.7	1.48	1.47	2.53	2.27
22	1.1	0.9	1.0	0.64	0.79	1.86	1.71
total	9.2	9.7	9.4	8.18	8.76	9.14	8.29

B 2-13

TABLE 4 (*Contd.*). REGIONAL DISTRIBUTION OF SELECTED GROUPS OF THE POPULATION OF RURAL INDIA : NSS 28TH ROUND

State/region	region's share (%) in all-India count of rural population						
	below poverty line			in fractile group based on adjusted PCE*(%)			
	hs 1	hs 2	combined	0—10	0—20	90—100	80—100
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Bihar							
23	3.8	4.0	3.9	5.16	4.80	0.46	0.88
24	6.1	5.3	5.7	6.65	6.04	4.32	4.01
25	4.2	4.0	4.1	4.75	4.07	2.40	3.90
total	14.1	13.3	13.7	16.56	14.91	7.18	7.98
Orissa							
26	1.9	2.1	2.0	1.49	1.18	2.80	3.27
27	1.6	1.6	1.6	1.03	1.40	0.12	0.25
28	2.4	2.2	2.3	2.29	2.44	0.78	1.15
total	5.9	5.9	5.9	4.81	5.02	3.70	4.67
West Bengal							
29	1.5	1.4	1.5	1.92	1.50	0.23	0.28
30	4.0	3.7	3.8	6.90	5.78	0.43	0.87
31	3.6	3.8	3.7	5.79	4.77	1.97	2.21
32	2.4	2.8	2.6	4.76	3.78	1.29	1.48
total	11.5	11.7	11.6	19.45	15.83	3.92	4.84
Assam							
33	2.3	2.2	2.3	1.65	1.91	1.42	2.28
34	0.1	0.0	0.0	0.08	0.02	0.02	0.05
total	2.4	2.2	2.3	1.68	1.93	1.44	2.33
Manipur							
35	0.1	0.0	0.1	0.01	0.02	0.03	0.09
36	0.1	0.1	0.1	0.06	0.10	0.04	0.04
total	0.2	0.1	0.2	0.07	0.12	0.07	0.13
Tripura							
37	0.3	0.2	0.3	0.07	0.14	0.21	0.29
Meghalaya							
38	0.1	0.1	0.1	0.07	0.07	0.12	0.18
Andhra Pradesh							
39	2.2	2.4	2.3	2.29	2.27	5.29	5.19
40	2.4	3.5	2.9	3.39	2.87	1.94	2.14
41	1.0	1.2	1.1	0.46	0.83	2.21	2.04
total	5.6	7.1	6.3	6.14	5.97	9.44	9.37
Tamil Nadu							
42	2.0	2.0	2.0	1.97	1.78	1.42	1.29
43	2.1	2.1	2.1	1.06	1.38	1.86	1.85
44	2.0	2.6	2.3	2.41	2.54	3.54	3.12
total	6.1	6.7	6.4	5.44	5.70	6.81	6.26

TABLE 4 (*Contd.*). REGIONAL DISTRIBUTION OF SELECTED GROUPS OF THE POPULATION OF RURAL INDIA : NSS 28TH ROUND

state/region	region's share (%) in all-India count of rural population						
	below poverty line			in fractile group based on adjusted PCE*(%)			
	hs 1	hs 2	combined	0—10	0—20	90—100	80—100
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Kerala							
45	1.9	1.5	1.7	2.34	1.77	1.43	1.46
46	2.5	2.8	2.7	4.02	3.41	4.00	3.18
total	4.4	4.3	4.4	6.36	5.18	5.43	4.64
Gujarat							
47	1.0	0.9	0.9	0.79	1.04	0.51	0.50
48	1.0	1.1	1.0	2.11	1.60	0.36	0.58
49	0.6	0.2	0.4	0.00	0.23	0.77	0.80
50	0.2	0.2	0.2	0.28	0.24	0.47	0.54
51	0.7	0.5	0.6	0.45	0.81	0.65	0.70
total	3.5	2.9	3.1	3.63	3.92	2.76	3.12
Maharashtra							
52	0.7	0.8	0.8	1.32	1.26	0.92	0.77
53	1.7	1.5	1.6	2.62	2.55	2.29	2.01
54	1.4	1.0	1.2	1.47	1.63	0.68	0.39
55	2.2	1.5	1.9	2.79	2.84	0.61	0.60
56	1.3	1.5	1.4	2.09	2.24	0.85	1.01
57	0.7	0.6	0.6	0.78	0.82	0.23	0.33
total	8.0	6.9	7.5	11.07	11.94	5.53	5.11
Karnataka							
58	0.1	0.2	0.2	0.07	0.14	0.28	0.45
59	0.7	0.6	0.7	0.73	1.05	0.35	0.47
60	1.0	1.3	1.2	1.56	1.84	1.51	1.58
61	2.9	3.2	3.0	4.90	4.30	1.23	1.32
total	4.7	5.3	5.1	7.26	7.33	3.37	3.82
India	100.0	100.0	100.0	100.00	100.00	100.00	100.00

Adjusted PCE means PCE expressed at all-India rural prices to eliminate the effects of inter-state consumer price differentials.

All the figures in Table 4, it may be stressed, make allowances for inter-state variation in consumer prices.

Map (1) shows the average *adjusted* PCE for all the regions of rural India, rounded off to the nearest Rupee. It may be compared with Map (3) of Mukherjee (1969) which, however, presents the *nominal* averages of PCE.

Also no attempt is made here to show the clusters of regions having similar values of average PCE.

Map 1 : Regionwise averages of PCE (in Rs.) for rural areas at all-India rural prices (*vide* col.(8) of Table 1) ; NSS 28th round (October 1973-June 1974).
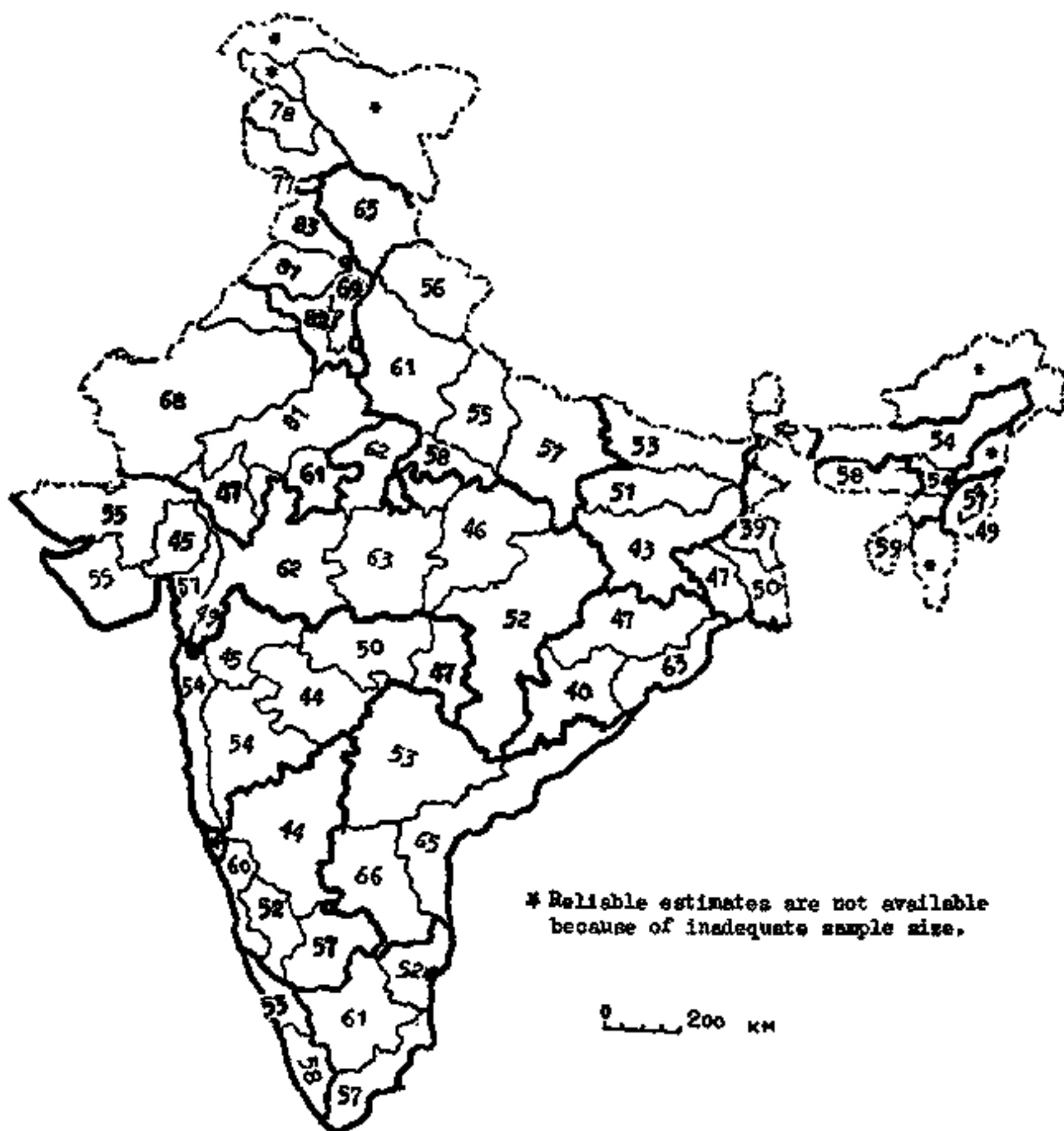
Map (2) shows the areal distribution of poverty as measured by the head-count ratio based on *adjusted* PCE (*vide* col. (11) of Table 1). The regions of rural India are classified into four levels of the head-count ratio index and the four classes are distinguished by the scheme of hatching/shading adopted. The areal patterns in Maps (1) and (2) are closely related as could be expected.

Map 2 : Classification of regions in rural India by head-count ratio index of poverty (*vide* col. (11) of Table 1); NSS 28th round (October–June 1974.)

head-count ratio

above 60%

40% – 60%

25% – 40%

below 25%

* Reliable estimates are not available because of inadequate sample size.

0 _____ 200 KM
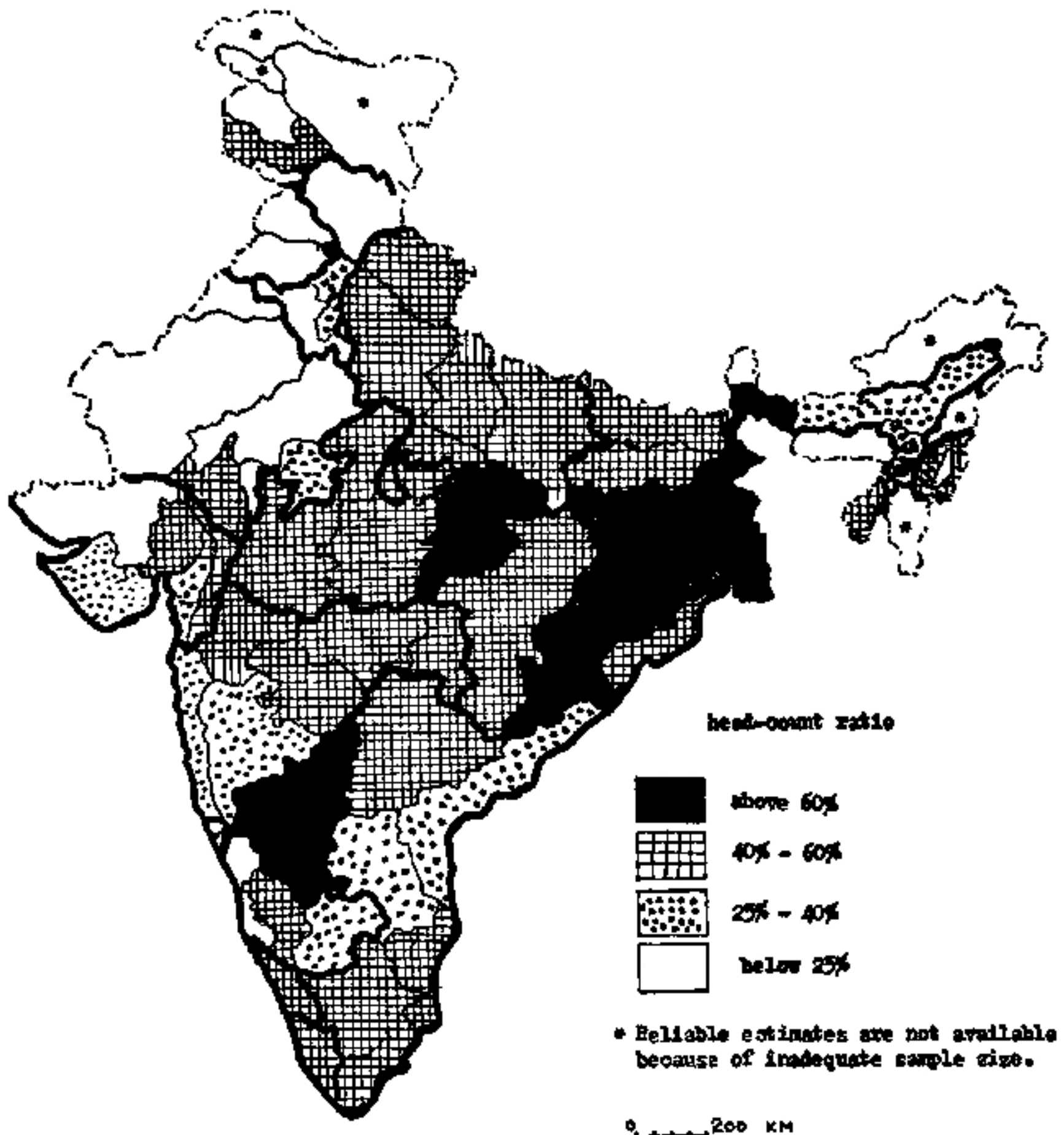
Map (3) presents the densities of the poor and the rich in different regions. It is the analogue of Mukherjee's (1969) Map (2), and the hatching scheme is similar. But figures adjusted for inter-state consumer price differentials are presented here as against *nominal* figures shown by Mukherjee (1969).

Tables 5A and 5B compare the results of the present study based on NSS 28th round (1973–74) data with those of Mukherjee (1969) based on NSS 18th round (1963–64) data. Each sets out a number of measures of level of

Map 3 : Classification of regions in rural India by densities of "poor" and "rich" (vide cols. (6)
and (10) of Table 3) :   NSS 28th round (October 1973—June 1974)**.

density of poor

		above 10%
		above 10%
		below 10%
		below 10%

density of rich

below 10%
above 10%
below 10%
above 10%

* Reliable estimates are not available
  because of inadequate sample size.

** Density of poor in solid and
   that of rich in ordinary type.

0 ____ 200 KM
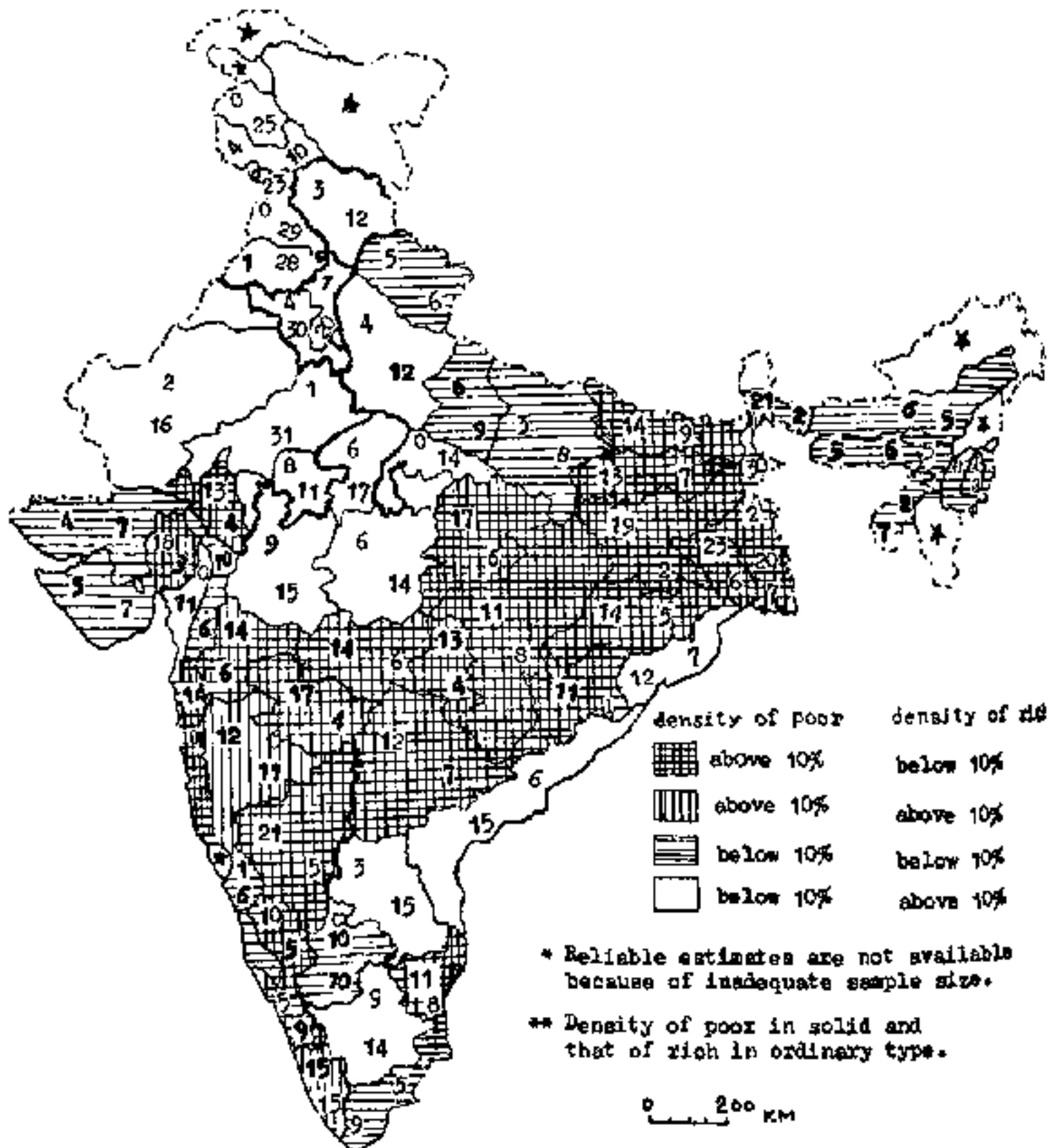
living and poverty or relative affluence of the rural population. The figures
in Table 5A relate to the states of India while those in Table 5B relate to the
13 NSS regions which were, at least approximately, the same in the two periods.
The 28th round results are given in *nominal* terms as well as after adjustment
for price variation across states. Mukherjee's results, as noted earlier,

TABLE 5A. COMPARATIVE STUDY OF LEVEL OF LIVING IN RURAL AREAS OF DIFFERENT STATES: NSS ROUNDS 18 (1963-64) AND 23 (1973-74).

state	average PCE (nominal) (Rs.)		average PCE (adjusted*) (Rs.)		density of poor (0-10%)			density of rich (90-100%)			head-count ratio(adjusted*)
	18th round	23th round	18th round	23th round	18th round	23th round nominal	adjusted*	18th round	23th round nominal	adjusted*	23th round
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Andhra Pradesh	20.91	50.69	20.89	50.90	11.89	13.02	7.32	7.15	8.05	11.98	0.395
Assam**	26.28	52.01	26.46	53.98	1.38	5.84	5.78	14.25	5.81	4.92	0.386
Bihar	21.24	56.91	21.09	50.97	10.79	8.04	14.02	8.48	11.69	6.45	0.603
Gujarat	22.89	54.54	20.49	51.74	8.68	4.84	8.29	9.38	9.21	6.64	0.361
Haryana	—	79.01	—	74.64	—	2.16	2.84	—	24.88	24.00	0.275
Himachal Pradesh	25.76	71.85	25.18	64.79	0.00	1.36	2.50	9.34	23.71	12.15	0.163
Jammu and Kashmir	27.99	54.14	28.27	70.52	0.92	4.44	1.64	18.52	7.81	10.01	0.356
Karnataka	20.85	52.29	21.04	50.42	10.90	10.82	14.29	6.67	8.90	6.60	0.488
Kerala	20.45	55.82	20.77	55.44	13.92	18.07	14.80	8.10	15.13	12.70	0.503
Madhya Pradesh	23.21	50.84	24.73	55.04	13.53	12.77	9.95	12.09	10.13	11.09	0.561
Maharashtra	21.75	52.01	20.54	49.43	9.61	9.07	14.06	8.54	8.45	7.01	0.466
Manipur**	22.20	52.88	21.51	58.21	1.86	2.10	3.27	7.59	3.42	3.19	0.369
Meghalaya	—	58.89	—	57.51	—	2.82	8.83	—	9.22	5.98	0.219
Orissa	19.47	43.61	20.79	53.17	14.86	19.30	10.14	5.96	3.82	7.79	0.611
Punjab (incl. Haryana)	29.11	75.09	28.46	78.73	3.44	1.39	1.47	28.58	26.74	26.59	0.221
Rajasthan	24.27	68.98	24.10	69.88	10.35	5.02	3.80	13.98	12.32	20.47	0.239
Tamil Nadu	23.52	47.08	22.26	57.11	9.07	14.52	8.58	11.28	9.56	10.73	0.405
Tripura**	23.66	50.15	22.92	58.78	0.20	7.07	2.46	8.35	5.01	7.07	0.485
Uttar Pradesh	21.87	51.50	22.93	58.10	12.45	5.87	8.84	8.60	7.08	9.94	0.506
West Bengal	23.53	47.47	20.74	44.94	8.97	17.91	23.69	10.48	8.04	4.77	0.696
Punjab (excl.Haryana)	—	76.66	—	81.87	—	0.80	0.80	—	28.81	29.58	0.179
India	22.88	55.90#	22.88	55.90#	10.00	10.00	10.08	10.00	9.99	10.00	0.461

Note : The 18th round results are reproduced from Mukherjee (1969).

* The adjustment consisted in expressing PCE at all-India rural prices.

** A single Passche type consumer price index has been used separately for Assam, Manipur and Tripura to obtain adjusted average PCE for 18th round.

\# U.T.'s have not been considered.

TABLE 5B. COMPARATIVE STUDY OF LEVEL OF LIVING IN RURAL AREAS OF SELECTED NSS REGIONS: NSS ROUNDS 18 (1963-64) AND 28 (1973-74).

region (only those remaining same over 19th and 28th rounds)	average POE (Rs.) (nominal)		average POE (Rs.) (adjusted)*		density of poor (0-10 percent)			density of rich (90-100 per cent)			head count ratio : 28th round
	18th round	28th round	18th round	28th round	18th round	28th round		18th round	28th round		
						nominal	adjusted*	round	nominal	adjusted*	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
*Assam***											
Plains (38, 30)	26.27	52.02	26.18	53.94	0.00	5.65	5.81	15.23	5.63	4.06	0.389
Jammu and Kashmir											
Mountainous (7, 7)	25.75	58.91	26.01	76.74	1.19	1.89	0.00	15.77	7.04	23.57	0.222
Outer Hills (8,8)	21.93	45.54	22.20	59.32	2.84	10.66	4.04	10.34	4.96	10.46	0.568
Jhelum Valley (9, 9)	31.44	60.20	31.75	78.43	0.00	0.00	0.60	23.10	10.08	25.82	0.132
Kerala											
Northern (45, 89)	19.57	52.88	19.88	53.34	16.04	14.48	14.91	6.86	9.59	9.08	0.537
Southern (48, 40)	21.06	57.09	21.80	53.25	13.12	13.69	14.89	8.98	15.19	14.80	0.463
Maharashtra											
Inland, Central (55, 46)	21.64	46.63	20.43	43.56	9.99	10.17	16.69	8.57	5.42	3.65	0.551
Orissa											
Coastal (26, 23)	22.48	60.39	24.01	52.88	4.79	10.19	6.66	7.90	6.06	12.95	0.420
Southern (27, 24)	15.59	32.37	16.65	40.40	25.82	28.41	11.27	1.92	0.49	1.27	0.933
Uttar Pradesh											
Himalayan (12, 11)	28.32	49.77	28.78	56.05	1.70	10.14	5.30	15.53	5.07	5.75	0.587
Western (14, 12)	23.18	54.25	24.87	51.11	5.59	5.21	4.15	10.65	9.01	12.28	0.461
Central (15, 16)	20.86	48.61	22.38	54.75	17.43	6.91	4.68	8.55	6.38	8.69	0.564
West Bengal											
Himalayan (29, 27)	20.80	48.84	25.94	41.50	0.00	14.86	20.62	16.81	8.26	2.43	0.774

*Note : See note below Table 5A.

Figures in parentheses in col. (1) indicate the serial number of the region in Table 1 of the present paper followed by its serial number in Table 6 of Mukherjee (1969).

made no such allowance for price variation. However, in col. (4) of each table are presented Mukherjee's averages of PCE after adjustment for inter-state consumer price differentials, using the statewise Paasche indices of consumer prices (base : all-India rural) estimated by Chatterjee and Bhattacharya (1974) on the basis of NSS 18th round data.[6]

4. DISCUSSION OF RESULTS

The first thing to notice is the wide variation across the 61 regions in rural India in respect of each of the indicators of level of living. Thus, the densities of the poor (bottom 0–20% based on PCE *adjusted* for inter-state consumer price differentials) varied from near 0 to 49% across the 61 regions during the 28th round. The frequency distribution of these densities may be broadly summarised as follows :

density :	0—10%	10—20%	20—30%	30—40%	40—50%
no. of regions :	17	17	15	11	1

The highest density 49% was observed for region 30 in West Bengal.

The density of the rich (top decile group, based on *adjusted* PCE) was distributed over the regions as follows :

density :	0—5%	5—10%	10—15%	15—20%	20—25%	25—30%	30—35%
no. of regions :	14	24	13	4	1	4	1

The highest density (31%) was observed for region 2 in Rajasthan.

The distribution of the 61 regions by head-count ratio measure of poverty based on *adjusted* PCE is shown below :

Head-count ratio	no. of regions	regions (codes)
10—20	6	5, 9, 11, 12, 50, 58
20—30	8	1, 2, 6, 7, 34, 35, 38, 49
30—40	9	4, 10, 33, 39, 41, 51, 52, 53, 60.
40—50	10	14, 21, 22, 26, 37, 44, 46, 48, 56, 59.
50—60	19	3, 8, 13, 15, 16, 17, 18, 20, 24, 25, 36, 40, 42, 43, 45, 47, 54, 55, 57.
60—70	3	31, 32, 61.
70—80	4	19, 23, 28, 29.
80—	2	27, 30.

[6]Some details of the procedure may be noted here. The same index had to be used for the Punjab, Haryana, and Himachal Pradesh, and another common index was employed for Assam, Manipur and Tripura. In Table 5B for any region, the index used was that for the state to which the region belonged.

D 2–14

Maps (1) to (3) depict this inter-regional variation in poverty and level of living in a most striking manner and reveal large clusters of regions falling in different levels of living and poverty.

As expected, the averages and head-count ratios based on *adjusted* PCE are negatively correlated to a marked extent. The 28th round figures for the 20 states are presented in cols. (5) and (12) of Table 5A. The correlation coefficient r between the two measures is -0.729. (The corresponding Spearman coefficient of rank correlation is -0.680.) The regionwise figures for for the 61 regions shown in cols. (8) and (11) of Table 1 show that $r = -0.771$.

It appears, particularly from Map (2), that the poorest regions (with head-count ratio above 60 per cent) form one cluster covering West Bengal, Southern Bihar and northern and western parts of Orissa. Two pockets of extreme poverty exist in Madhya Pradesh and Karnataka. If one considers regions which have head-count ratios above 40 per cent, most of them are connected and together they cover much of the country's geographical area. While the most affluent areas lie in the Punjab and Haryana, many regions in the north-western and western states, in the north-eastern region and along the east coast also appear to be relatively affluent.

Comparisons with Mukherjee's maps show that the areal distributions of poverty/level of living differ to some extent between the two time periods. This can be explained by year-to-year fluctuations in the economy, by sampling errors affecting NSS data and by the fact that Mukherjee worked with *nominal* figures while the present paper has concentrated on figures *adjusted* for inter-state consumer price differentials. Time trends and cyclical variation may also have contributed to some extent. Anyway, this is an important finding of the present study and will be taken up later for further examination.

Intra-state variation across regions. Table 1 shows very clearly how the average of *nominal* PCE varies across regions *within* some of the states. Such variation is marked for a number of states like Rajasthan, Madhya Pradesh and Orissa. Thus, for Rajasthan, the average varies from Rs. 43 to Rs. 74, broadly speaking ; half-sample divergences not being large, there is very little doubt about the statistical significance of such intra-state variation. For states like the Punjab, on the other hand, the variation across regions is small and non-significant. Uttar Pradesh, surprisingly, falls in this category. Variation between East Uttar Pradesh and West Uttar Pradesh is rather well-known and Mukherjee (1969) found appreciable inter-regional variation within Uttar Pradesh based on NSS 18th round data. Such inter-temporal fluctua-

tions in the relative positions of different regions may occur due to fluctuations in weather and other factors.

The *adjusted* averages of PCE in cols. (6) to (8) corroborate the conclusions drawn in the foregoing paragraph.

While the existence of variation between regions within states is quite well known, the point is often overlooked in presentation and analysis of survey results. The NSS seldom presents even the average of *nominal* PCE by regions, although the sample size seems to be fairly adequate for many regions. Note that for intra-state comparisons across regions *nominal* PCE appears to be sufficiently safe.

The range of variation of the *adjusted* PCE averages for the states is from Rs. 45 for West Bengal to Rs. 82 for the Punjab. The corresponding range for the region-wise figures is slightly wider, from Rs. 39 for region 30 of West Bengal to Rs. 83 for region 5 of the Punjab.

The head-count ratios also show marked variation across regions within a number of states. For Rajasthan, they vary from 20% to 59%, for Gujarat from 15% to 54%, and for Orissa from 43% to 88%. Considerable spread is also seen for other states like Haryana and Jammu and Kashmir. While the statewise head-count ratios vary from 18% for the Punjab to 70% for West Bengal, the region-wise ratios vary from 15% (Gujarat, region 50) to 88% (Orissa, region 27). In fact, many states show individual regions with head-count ratio of the order of 20% ; quite a few regions, on the other hand, show ratios of the order of 70% or more. These results underline most emphatically the need of releasing region-wise NSS results, at least the average of *nominal* PCE. Half-samplewise and combined sample results may be presented, besides the sample size to give the user some indication of the reliability of the estimates.

From Table 2 it is found, as expected, that the densities of population in the bottom fractile groups 0—10% and 0—20%, vary considerably and significantly across regions in a number of states like Rajasthan, Jammu and Kashmir, Madhya Pradesh, Karnataka and Orissa. Thus, for the 0—20% group, the densities vary from 18% to 61% for the regions within Orissa. In contrast, some states like Maharashtra appear to be relatively homogeneous in respect of these densities of the poor.

As regards the density of the rich, the regional variation is large for some states like Rajasthan and Haryana but not for states like the Punjab and Uttar Pradesh.

TABLE 6 : RANGE OF REGIONWISE DENSITIES OF POOR (0-10% GROUP) BASED ON NSS 18th and 28th ROUNDS.

state	no. of regions		range of regionwise densities of poor (0-10%)		
	18th round	28th round	18th round	28th round	
			nominal	nominal	adjusted*
(1)	(2)	(3)	(4)	(5)	(6)
Rajasthan	4	4	29.72	12.49	11.69
Punjab	2	2	1.34	0.85	0.85
Jammu and Kashmir	3	3	2.84	10.66	4.04
Haryana	—	2	—	1.78	2.20
Uttar Pradesh	5	5	15.73	5.52	5.68
Madhya Pradesh	4	5	7.31	13.56	10.96
Bihar	3	3	15.40	2.29	5.90
Orissa	4	3	29.22	18.26	7.81
West Bengal	3	4	4.98	6.11	9.65
Assam	2	2	10.61	0.77	0.93
Manipur	I	2	—.	4.62	5.63
Andhra Pradesh	3	3	5.60	8.54	8.80
Tamil Nadu	2	2	0.90	5.27	5.97
Kerala	2	2	1.92	0.77	0.02
Gujarat	3	5	9.31	12.18	18.09
Maharashtra	4	6	6.71	4.06	4.40
Karnataka	3	4	9.99	16.12	19.60

*The adjustment consisted in expressing all PCE's at all-India rural prices.

Turning now to Table 3, one gets more or less the same picture as in Table 2, but here the comparisons across states can be made with some degree of confidence. The densities for the 0—20% group vary from 6% to 37% for the different regions in Karnataka. Other states showing large variation in the same density are Rajasthan, Madhya Pradesh, Orissa and Gujarat. States like Uttar Pradesh and Maharashtra present a pattern of relative homogeneity. The densities of the rich (80–100% or 90—100% group), on the other hand, vary markedly within many states like Rajasthan, Jammu and Kashmir, and Orissa.

The following shows the joint distribution of 61 regions by density of poor and density of rich :

density of poor	density of rich	
	below 10%	above 10%
below 10%	15	21
above 10%	23	2

While Table 3 is more important, the results in Table 2 deserve special attention as they are comparable with those of Mukherjee (1969). The range of densities of poor population (0—10% group) over the regions of each state, based on *nominal* PCE, is presented in Table 6 for both 18th and 28th rounds; the ranges of densities based on *adjusted* PCE are also presented for the 28th round. There were interesting similarities and divergences in this regard between 18th round and 28th round results. Thus, regions in Uttar Pradesh were markedly different in their density of the poor during the 18th round; but fairly homogeneous during the 28th. Rajasthan also showed a similar shift towards homogeneity if one looks at the density of the poor. The densities of the rich move in the opposite direction. *Nominal* and *adjusted* figures based on 28th round also showed some divergence. For example, the range of the regionwise *nominal* density of the poor was 18.26 for Orissa, while the corresponding range for density based on *adjusted* PCE was only 7.81. It is possible to examine these aspects in greater depth using the half-samplewise results for the 28th round, but such results are not available for the earlier (18th) round.

The figures in Table 4 may be examined in conjunction with the percentages of population presented in cols. (2)—(4) of Table 2. One may rank the regions in descending order of the head-count ratio shown in Table 1 and accumulate the regional shares in the population of rural India starting from the poorest region (region 27 in Orissa). One then finds that 26 regions from the bottom taken together account for 50% of the population in rural India and for 62% of the rural poor in the country.

Comparative study of results from NSS 18th and 28th rounds. One may now turn to Tables 5A and 5B to compare the findings of the present study with those of Mukherjee (1969). This would reveal the stability or otherwise over time of the pattern of inter-state or inter-regional variation in level of living.

In Table 5A, the density of the poor shows considerable agreement between the two rounds—*vide* cols. (6)—(8)—at the level of the states. There are, however, large discrepancies for two of the states—Uttar Pradesh and West Bengal.

The correlations between State or regionwise average PCE's during the two rounds of NSS are of the greatest interest. The results are as follows :

		correlation coefficient (r)	Spearman's coefficient (r_s)
statewise	*nominal* averages of PCE (18th vs 28th rounds)	0.63	0.26
–do–	*adjusted* averages	0.86	0.65
regionwise	*nominal* averages of PCE (13 regions) (18th vs 28th rounds)	0.51	0.31
–do–	*adjusted* averages	0.62	0.53

The rank correlations do not follow the same pattern as the ordinary correlations and the latter should be given greater importance.

Note that the correlations are higher for the statewise figures than for the regionwise figures. This could be partly because the regionwise *estimates* are more affected by sampling errors. It is, however, likely that the intertemporal variation of the underlying *true* values was also greater at the region level than at the state level. What is more important is that the correlations tend to be appreciably higher for the *adjusted* averages than for the *nominal* ones. This could be because the relative price levels in different states varied

State	Paasche price index (base : rural India)	
	18th round period	28th round period
Andhra Pradesh	100.1	83.2
Bihar	100.7	112.4
Jammu and Kashmir	99.0	76.8
Orissa	93.6	80.1
Tamil Nadu	105.6	83.5
West Bengal	114.9	105.6

considerably between the two time periods. Such variation was mainly due to fluctuations in weather affecting agriculture and related activities, but time trends and cycles cannot be ruled out completely. The following shows some of the most discordant Paasche-type price indices for the states (base : all-India rural) compiled from the papers by Chatterjee and Bhattacharya (1974) and Bhattacharyya *et al* (1980).

In fact, if one examines these price indices for all the states one finds poor correlation between the two sets of indices for the two time periods. This probably reflects an important aspect of the inter-temporal variations in the rural sector of the Indian economy. This also underlines the need of constructing indices of inter-state consumer price differentials from NSS budget data for as many rounds as possible. The assumption that the indices estimated for one NSS round (year) can be used for a different NSS round (year) seems to be quite risky[7,8].

The effects of adjustment for inter-state consumer price differentials may also be seen from the following correlations (*r*) between *adjusted* and *nominal* averages of PCE :

		18th round		28th round	
		no. of states/ regions	value of r	no. of states/ regions	value of r
statewise average of PCE :	*adjusted vs nominal*	18	0.71	20	0.77
regionwise average of PCE :	–do–	50	0.92	61	0.82

The moderate correlations between *adjusted* averages of PCE based on 18th and 28th round results point to considerable geographical shifts in relative poverty or affluence between the two time periods. Investigations like the present one covering many time periods would probably reveal that that some regions are chronically poor or relatively prosperous, while others occupy shifting positions in the ranking from year to year. Region-level studies should be more rewarding from this point of view than studies conducted at the state-level because state-level figures tend to mask interesting inter-regional variations.

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[7]See, for example, Bardhan (1973) where the inter-state price-differential indices estimated for the 18th round period (February 1963-January 1964) were assumed to hold for the year 1960-61 in an effort to derive statewise poverty lines from a single poverty line for rural India at 1960-61 prices.

[8]The same point should be discernible in the series of CPI numbers for agricultural labourers (base : 1960-61) available for different states of India.

Sample size needed for region level estimates. Standard errors of the head-count ratios presented in col. (11) of Table 1 were computed from the corresponding half-samplewise estimates using the formula

$$SE(t_c) = \frac{|t_1 - t_2|}{2} ,$$

where t_1, t_2 and t_c denote half-sample 1, half-sample 2 and combined sample estimates of the true head-count ratio. Although extremely rough, each estimated s.e. being based on only 1 d.f., these estimates led to some important observations.

The s.e.'s were generally lower for a region/state for which the sample size was larger. Taking the regionwise results first, a summary picture is presented below :

Sample size (no. of households) :	upto 100	101—200	201—300	301—400	401—500	501—600
no. of regions :	12	12	20	9	3	5
avg. SE (head-count ratio) :	0.068	0.046	0.030	0.018	0.043	0.016

Thus, the s.e. of the head-count ratio was about 2%, on the average, for regions with sample size 300 or more.

The corresponding picture for the statewise s.e.'s shown is below :

sample size (no. of households) :	below 500	500—1000	1001—
no. of states :	4	10	6
average s.e. (head-count ratio) :	0.057	0.013	0.017

Considering the pattern and extent of variability of the head-count ratio across regions (or over time), a s.e. of 2% should be considered sufficiently small for purposes of spatial and inter-temporal comparisons. One might, therefore, release the regionwise figures for those regions where the sample size is 300 or more. One may go farther and release head-count ratios of regions with sample size 200 or more allowing the (average) s.e. to go up to 3%[9]. Statewise estimates seem to be fairly dependable when the sample size is 500 or more.

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[9]The unusually high average standard error (0.043) for the interval 401-500 of sample size is based on only three regions and is believed to be affected by large sampling errors. The statement made here is based on a *smoothing* of the average s.e.'s for the different class-intervals with a view to obtaining a plausible pattern.

Out of the 61 regions, as many as 37 had sample size exceeding 200. If one adds up the shortfall of the sample size of the remaining 24 regions from 200, one gets the figure 2108. This means one might have attained a sample size of 200 households for all these regions with a total sample size of 20,000 households for rural India.

The NSSO has been following a flat rule of releasing only the statewise estimates and *none* of the regionwise estimates, although the sample size for states like Tripura, Manipur and Meghalaya are typically smaller than those of many regions of the larger states. Many of the regionwise estimates are fairly dependable, judged by margin of error[10]. Reliable results can be obtained for the remaining regions also if either Central and State samples be pooled or the sample size for the smaller regions be raised to 200 (say) as suggested in the foregoing paragraph.

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[10]For the 32nd round enquiry on consumer expenditure the sample size was 99,766 households for rural India, which is more than six times that for the corresponding 28th round enquiry. None of the region-level estimates was published even though many of the rural regions had sample size above 1000 households in the 32nd round enquiry.

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