Poverty in Rural India : A Decomposition Analysis

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SUMMARY

The present study based on NSS 28th round household budget data relating to October 1973-June 1974 examines the incidence of absolute poverty among different sections of the population in rural India. Households are classified by one or two of the following factors—states, social groups, occupations, land possessed and household size—and several indices of poverty are computed for households in each category. The contributions of different categories to the overall poverty in rural India are computed using the headcount ratio and another decomposable index due to Chakravarty (1984). These results are expected to reveal the concomitants of absolute poverty and help in the formulation of poverty-oriented policies.

1. INTRODUCTION

There have been a good number of studies on the incidence of poverty in the absolute sense in rural India. Most of these are based on household budget data thrown up by the Indian National Sample Survey (NSS) for different years starting from 1952-53. The usual procedure has been to utilize the size distributions of population by per capita consumer expenditure (PCE) per 30 days and to estimate the proportion of population falling a critical value, the poverty line. Such head-count ratio indices of poverty below have shown divergent time trends (during 1960-61 to 1967-58) in different studies, *vide* Minhas (1970), Bardhan (1971) and Vaidyanathan (1974), partly because of the use of different series of price indices and

partly because some authors adjusted the NSS data to bring them into line with official national income data before computing the head count ratio.[3]

Bhatty (1974) studied poverty in rural India using consumption and income data thrown up by a survey of Effectiveness of Employment conducted by the National Council of Applied Economic Research, New Delhi, during 1968-69. He computed Sen's index of poverty (Sen, 1974) besides the head-count ratio, separately for cultivators, agricultural labourers, and non-agricultural workers and by states, using alternative poverty lines.

Two time-series studies on the same subject using Sen's index may also be mentioned, viz. Ahluwalia (1978) and Dutta (1980).

Computing indices of poverty is only a first step in the analysis of poverty. To go deeper, one should inquire into the concomitants of poverty or better, the factors contributing to poverty by analysing time-series or cross-section data on distributions of income/PCE. One way of doing this is to compute indices of poverty for different segments of the population using an index which is additively decomposable in the sense that given a PCE/income distribution partitioned with respect to some regional/socio-economic characteristics, the poverty index for the entire population should be equal to the weighted average of the corresponding indices for the constituent groups, the weights being the respective proportions of the total population. If this is done, one can study the contributions of the different groups to the total poverty and such a decomposition can help in formulating poverty amelioration policies.[4]

The aim of this paper is to study the incidence of absolute poverty in rural India and its decomposition among various groups of the population. It is based on a special tabulation of NSS 28th round (October 1973-June 1974) household budget data carried out by the authors using a copy of the updated Honeywell tape supplied by the authorities of the NSS Organization, Government of India. Several indices of poverty, viz., the head-count ratio and another additively decomposable index introduced by Chakravarty (1983)[5], besides Sen's index which is not additively decomposable, are used in this study. The rural population of the country is divided into groups by (i) states, (ii) social groups, (iii) occupations, (iv) size classes of land possessed and (v) household size,

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[3]See also Dandekar and Rath (1971) for measurement of poverty in rural India in terms of minimum calorie requirements based on NSS budget data.

[4]Some of the studies mentioned earlier throw light on the characteristics of the rural poor like amount of land possessed or household size. Clearly, this approach is an alternative to that indicated in this paragraph.

[5]The Chakravarty index is referred to as the "new index" in the tables presented in this papers.

and groupwise and overall poverty indices are computed to create a profile of poverty, revealing those groups which are most afficated by poverty.

Section II describzs the data employed in the study; Section III explains the poverty lines and the methodology of computing the poverty indices; Sections IV and V present the main results on variation in poverty across states and across different socio-economic groups, respectively, Section VI discusses the contributions of variation among states and among various socio-economic groups to the total extent of rural poverty in the country. Finally, Section VII makes some concluding observations on the findings and the limitations of the study. The Appendix contains Tables A-1 to A-3 presenting head count ratio measures at the state level by social groups or classes of land possessed or occupation, besides Tables A-4 to A-7 which present Sen's index of poverty by various breakdowns. The Sen indices are not included in the main body of the present paper in view of their failure to meet the decomposability criteria.

II. THE DATA

As stated earlier, this paper is based on a special tabulation of NSS 28th round (October 1973-June 1974) household budget data for rural India, carried out by the authors. The data were collected by the interview method through a "consumer expenditure enquiry" schedule. A probability sample of households was drawn from practically the whole of India and each household was interviewed for collecting data on expenditure on all items of consumption during the "last 30 days" proceding the date of enquiry. Consumption consised of consumption of goods and services out of (a) purchases in cash and credit, (b) receipts in exchange of goods and services, (c) home-grown stock, (d) transfer receipts like gifts, loans, free collections, etc. A stratified multistage design was used for selecting the households with provision for two independent and inter-penetrating half-samples, each giving a valid estimate of population characteristics. The divergence between the two half-sample estimates indicates the margin of uncertainty associated with the combined sample estimate.

As the relevant sample sizes were small, poverty estimation had to be given up for the Union Territories of Delhi, Chandigarh, Pondicherry and Goa, Daman and Diu. However, all thess regions were included in the assessment of poverty for the entire rural population of the country.

As mentioned in Section I, the population has been divided into sub-groups using a number of socio-economic characteristics. Information on these characteristics was collected in the enquiry on consumer expenditure. Thus, for some analyses, the population has been divided into a number of social groups, viz. (a) Scheduled Castes (SC), (b) Scheduled Tribes

(ST), (c) 'Other' Hindus, (d) 'Other' Muslims, and (e) 'Others' comprising the remaining sections of the population. At the stage of tabulation, it was found that some non-Hindu households had reported themselves as SC. Actually, according to the instructions issued to field workers, only Hindu and Sikh households could be put in the SC category. In the present study, for the sake of simplicity, only Hindu SC households have been considered as forming the SC social group: the remaining SC households have been included in group (d) or group (e) depending on their religion. The other Hindus category was formed by excluding from all Hindu households those households which belonged to either SC or ST; and the other Muslims, by considering Muslim households which did not belong to ST. It should be mentioned that the social groups SC and ST are recognised in the Indian constitution as economically and socially depressed classes, and the Government of India follows a policy of reservation of educational facilities, employment prospects etc. for them.

Again, the codes given for household principal occupation as per National Classification of Occupations (Govt. of India, Central Statistical Organisation, 1968) for India have been employed to divide all households into eight occupation groups : (I) professional, technical, administrative, executive, managerial, clerical and related workers, (II) sales workers, (III) service workers, (IV) cultivators (owners,) (V) cultivators (tenants), (VI) agricultural labourers, (VII) other agricultural workers, and (VIII) production, transport and related workers. Approximately half of the rural population turned out to belong to owner cultivator households, with agricultural labourers making up the next largest number.

The households were also classified by household land possessed, defined as the total land owned by the household plus land leased in (homestead land is included) minus land leased out. Seven size classes of land possessed were chosen after some experimentation.

III. MEASUREMENT AND DOCOMPOSITION OF POVERTY—THE METHODOLOGY

In 1962, a distinguished study group of the Goverement of India recommended per capita monthly consumption expenditure (PCE) of Rs. 20 at 1960-61 all-India prices as representing a 'minimum level of living'[6]. It has been a common practice in Indian studies on absolute poverty to

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[6]It is generally overlooked that the study group, while recommending the minimum PCE of Rs. 20 excluded health and education, both of which were expected to be provided by the state.

adopt this value of PCE or a slightly different figure like PCE = Rs. 15, at 1960-61 prices, as the all-India poverty line. Unfortunately, the basis of this magic figure of Rs. 20 is obscure, (See Rudra, 1974 for a critical examination). For intertemporal comparisons of the incidence of poverty, however, any figure not far from Rs. 20 could yield similar conclusions, but there can be serious objections to the use of the same figure for all regions of the country.

Bardhan (1971) adopted PCE=Rs. 15 at 1960-61 rural prices as the poverty line for rural India, considering that rural prices tend to be lower than urban prices and derived separate poverty lines for rural areas of different states at 1960-61 prices utilizing the inter-state price differential indices estimated by Chatterjee and Bhattacharya (1974). More precisely, he averaged the Fisher price indices for the four bottom decile groups of the rural population of each state with the corresponding decile group of rural India as base provided by Chatterjee and Bhattacharya. He then used such averages to adjust the all-India rural poverty line of Rs. 15 at 1960-61 prices to get the poverty lines for the rural areas of different states. The Chatterjee and Bhattacharya indices were based on NSS 18th round household budget data relating to the year 1963-64, but Bardhan assumed that the interstate price differentials were the same during 1960-61.

The present study being based on NSS 28th round household budget data relating to the period October 1973-June 1974, the statewise (rural) poverty lines at 1960-61 prices used by Bardhan were expressed at NSS 28th round prices using the average monthly value of the statewise Consumer Price Indix Numbers for Agricultural Labourers (published by the Govt. of India Labour Bureau) during the 28th round period. This is the most appropriate series of CPI numbers for the rural poor in India and has been frequently used for similar studies (*vide* Bardhan, 1971: Ahluwalia, 1978. [7,8]

It should be stated that while the statewise poverty lines were used for all the tables using state as a classification (Tables 1 and A.1 to A.3 in the appendix), only the all-India (rural) poverty line was used in the remaining tables (Tables) 2 to 6) for poverty in relation to social group, land possessed, occupation or household size. The head-count ratios for all-India rural in Tables A.1 to A.3 were computed as weighted averages of the statewise figures, with corresponding population estimates as weights;

[7]The poverty lines estimated here differ slightly from those in Ahluwalia (1978).

[8]The CPI for Agricultural Labourers for Assam covers Manipur, Tripura and Meghalaya in addition to Assam. Similarly, there is one index for Punjab Haryana, Himachal Pradesh and Delhi. In each case, therefore, the same poverty line is used for all the states/union territories covered in a composite CPI number.

these ratios are, therefore, different from, and more appropriate than, the corresponding ratios in Tables 2 to 4.

In Table 1, all the poverty indices in the bottom row were obtained as

TABLE 1

MEASURES OF POVERTY FOR THE RURAL POPULATION IN INDIA, BY STATES, BASED ON NATIONAL SAMPLE SURVEY 28TH ROUND HOUSEHOLD BUDGET ENQUIRY (OCTOBER 1973-JUNE 1974)

State (poverty line)	Half-sample	No. of sample households	Head-count ratio (H)	New index $e = 0.2$	$e = 0.9$
(1)	(2)	(3)	(4)	(5)	(6)
Andhra Pradesh	1	609	0.366	0.019	0.072
(Rs. 37.82)	2	627	0.422	0.028	0.104
	combined	1236	0.395	0.023	0.089
Assam	1	311	0.391	0.020	0.078
(Rs. 43.83)	2	289	0.381	0.018	0.072
	combined	600	0.386	0.019	0.075
Bihar	1	647	0.615	0.045	0.167
(Rs. 55.28)	2	641	0.590	0.049	0.180
	combined	1288	0.603	0.047	0.173
Gujarat	1	262	0.375	0.017	0.069
(Rs. 42.11)	2	268	0.326	0.017	0.064
	combined	530	0.351	0.017	0.067
Haryana	1	314	0.267	0.014	0.064
(Rs. 44.52)	2	289	0.284	0.012	0.047
	combined	603	0.275	0.013	0.051
Himachal Pradesh	1	192	0.188	0,007	0.027
(Rs. 44.52)	2	202	0.177	0.009	0 034
	combined	394	0.183	0.008	0.030
Jammu and Kashmir	1	332	0.302	0.016	0.061
(Rs. 40.68)	2	325	0.369	0.014	0.055
	combined	657	0.336	0.015	0.058
Karnataka	1	312	0.472	0.032	0.121
(Rs. 43.56)	2	309	0.502	0.032	0.121
	combined	621	0.488	0.032	0.121
Kerala	1	316	0.513	0.040	0.147
(Rs. 45.79)	2	329	0.493	0.033	0.125
	combined	645	0.503	0.038	0.142
Madhya Pradesh	1	653	0.572	0.041	0.153
(Rs. 45.14)	2	667	0.552	0.039	0.146
	combined	1320	0.561	0.040	0.149

Table 1 (*contd. from page* 154)

(1)	(2)	(3)	(4)	(5)	(6)
Maharashtra	1	574	0.506	0.032	0.123
(Rs. 44.39)	2	561	0.426	0.028	0.105
	combined	1135	0.466	0.030	0.114
Manipur	1	110	0.445	0.019	0.076
(Rs. 43.83)	2	112	0.281	0.012	0.050
	combined	222	0.369	0.016	0.064
Meghalaya	1	118	0.253	0.012	0.048
(Rs. 43.83)	2	107	0.184	0.012	0,034
	combined	225	0.219	0.012	0.041
Orissa	1	341	0.602	0.044	0.166
(Rs. 41. 57)	2	330	0·621	0.046	0.170
	combined	671	0.611	0.045	0.168
Punjab	1	340	0.189	0.009	0.034
(Rs. 44.52)	2	330	0.170	0.C05	0.022
	combined	670	0.179	0.007	0.028
Rajasthan	1	303	0.301	0.015	0.058
(Rs. 42.68)	2	310	0.278	0.017	0.064
	combined	613	0.289	0.016	0.061
Tamil Nadu	1	436	0.501	0.033	0.126
(Rs. 41.27)	2	474	0.490	0.033	0.125
	combined	910	0.495	0.033	0.126
Tripura	1	91	0.542	0.027	0.106
(Rs. 43.83)	2	96	0.331	0.019	0.074
	combined	187	0.435	0.023	0.090
Uttar Pradesh	1	892	0.505	0.029	0.112
(Rs. 46.61)	2	892	0.507	0.030	0.116
	combined	1784	0.506	0.029	0.114
West Bengal	1	521	0.685	0.065	0.233
(Rs. 52.01)	2	509	0.705	0.066	0.236
	combined	1030	0.695	0.C66	0.235
All-India	1	7729	(0.462)	(0.029)	(0.111)
rural	2		0.494	0.033	0.128
		7723	(0.460)	(0.030)	(0.114)
			0.486	0.035	0.127
(Rs. 43.57)	combined	15452	(0.461)	(0.030)	(0.113)
			0.491	0.034	0.127

NOTE : Figures in parentheses presented for all-India rural indicate the values of the measures of poverty when one poverty line is used for the entire country. These estimates take into account the Union Territories of Chandigarh, Delhi, Pondicherry and Goa, Daman and Diu. For all other figures statewise poverty lines were used.

weighted averages of the corresponding regionwise figures. For Sen's index, however, this relationship is not strictly valid.

The measurement of the phenomenon of poverty involves two questions. Assuming that an exogenously given poverty line represents the subsistence level of PCE/per capita income, it is possible to answer one of the questions—"who is poor?"—by saying that one is poor if and only if his PCE/per capita income is less than the poverty line. The second question—"what is the magnitude of poverty?"—requires for its answer a summary statistic measuring the severity of poverty in a population. In going from households, strictly individuals[9] to groups, new problems arise and many approaches to forming an aggregate measure have been proposed. To limit the choice, a number of axioms have been advanced which define conditions that a satisfactory index must obey. Even then there are several indices which satisfy most of these axioms and thus can be considered equally good for measuring poverty. Our strategy here has been to pick one index from among these on the basis of an analytical property which makes it covenient for empirical work.

Aggregate poverty indices presuppose an agreed upon poverty line z. Letting y_i represent the PCE/per capita income of the ith person $(i = 1, 2, \ldots, n)$, and assuming that y_i's are arranged in a non-decreasing order, i.e., $y_1 \leqslant y_2 \leqslant \ldots < y_n$,' we suppose that $q(\leqslant n)$ persons have PCE/per capita income below the poverty line z.

As already mentioned, there are several generally agreed upon properties or characteristics which poverty indices must possess. Sen (1976) formalised these properties into two important axioms :

Monotonicity Axioms (M) : Given other things, a reduction in the income of a poor person (household) must increase the poverty index.

Transfer Axiom (T) : Given other things, a transfer of income from a poor person (household) to a richer one must increase the poverty index.[10]

The head-count (HC) ratio, $H = q/n$, which is the oldest and still the

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[9] While the theoretical discussion proceeds in terms of persons, the available data on income or consumption expenditure generally relate to households. In practice, the difficulty is usually overcome by assuming the same per capita income or PCE for all the members of any given household.

[10] In later works, Sen (1977, 1979, 1981) questioned the merit of using an unrestricted transfer axiom that allows the possibility of changing the number of persons below the poverty line, when the recipient of a transfer crosses the poverty line, and opted for a *Weak Transfer* axiom. Sen stated his *weak* transfer axiom as: Given other things, a transfer of income from a poor person to a richer person must increase the poverty index unless the number of persons below the poverty line is reduced by the transfer.

most popular poverty index, does not satisfy either axiom M or axiom T. Its appeal lies in its simplicity and obvious interpretation. However, the fact that it does not conform to either axiom makes its value as a poverty index rather doubtful. As an alternative to H, the income gap ratio

$$I = \sum_{i=1}^{q} \text{`}\tag{1}$$

is frequently used. The income gap ratio I is sensitive to the degree of deprivation, but fails to satisfy axiom T.

Sen (1976) introduced an index of poverty which is clearly based on welfare considerations and meets the criteria almost fully. This index is given by

$$S = H (1 - (1 - G_p) \, \bar{y}_p/z),\tag{2}$$

where, $\bar{y}_p$ = mean income of the poor, and
  G_p = the Gini coefficient of the incomes of the poor

$$= 1 + \frac{1}{q} - \frac{2}{q^2 \bar{y}_p} \sum_{i=1}^{q} (q + 1 - i) \, y_i\tag{3}$$

Various generalisations of the Sen index have been proposed by Kakwani (1980), Blackorby and Donaldson (1980) and Chakravarty (1983a). All such indices satisfy the monotonicity and weak transfer axioms, but they are discontinuous and violate axiom T when a disequalising transfer enables its recipient to cross the poverty line (for a proof, see Chakravarty 1983a, 1983b).

The measure which is adopted for the present empirical study

$$p = \frac{1}{n} \sum_{i=1}^{q} \left(1 - \left(\frac{y_i}{z} \right) e, \right)\tag{4}$$

where $0 < e < 1$. This index was introduced by Chakravarty (1984). It satisfies axioms M and T fully. The parameter 'e' here determines the degeee of sensitivity of P to transfers of income : as e decreases the index attaches greater weight to transfers lower down the income scale. The index increases as e increases. The main advantage of P from a policy-maker's viewpoint is that it is additively decomposable. Thus, if the population is divided into k groups (according to some characteristic like occupation), the ith group having population n_i, $i = 1, 2, \ldots, k$, and q_i

poor persons, then the overall poverty index can be written as,

$$p = \sum_{i=1}^{k} \frac{n_i}{n} p_i, \tag{5}$$

where P_i is the poverty index in (4) for group i. This helps one study the contribution of each group to overall poverty, and hence to identify factors contributing to poverty. It may be mentioned that most of the existing indices of poverty including Sen's index are *not* additively decomposable.[11] The head count ratio is, however, an exception.

While equation (4) uses a single poverty line z for all the individuals, one can use different poverty lines for different states on the ground that in doing this one is really correcting the y_i's for price variation across states. The same can be done for computing the statewise head-count ratios. Clearly, relation (5) holds for both the indices which are decomposable, and percentage contributions of different states to total poverty can be easily evaluated.

IV VARIATION ACROSS STATES

Table 1 presents the different indices of poverty—the head-count ratio and Chakravarty's indices for $e = 0.2$ and 0.9[12]—for the rural areas of the states, separately by half samples and combined (*Vide* Table A-4 for the values of the Sen index). The Union Territories are left out on consideration of sample size. They are, however, included in the results for all-India rural. For the sake of interest, the mean and Lorenz ratio (also called Gini coefficient) of PCE of the poor are also presented. It should be recongnised that the picture relates to a particular year (1973-74) and in India, dominated by rainfed agriculture, the incidence of poverty and the pattern of interstate variation in poverty varies from year to year.

Three of the poorest States (West Bengal, Bihar, and Orissa) are in the eastern region. West Bengal is the worst off among these with nearly 70% of the rural population below the poverty line. The picture is also dismal for several other states like Kerala, Madhya Pradesh and Uttar Pradesh, where about half the population existed under subsistence level. As is well

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[11]The Sen indices of poverty were also computed, because of their general interest. They are presented in Appendix Tables A-4 to A-7. They are not included in the main body of the paper because they do not possess the property of decomposability. In general, the ranking of states or sections of population are nearly the same for Sen's index and for the new indices for any value of e.

[12]The values of e chosen are admittedly arbitrary. They merely serve to show the range of values of the new index for two near extreme values of e.

known, some of the relatively prosperous States are found to be in the north-western region of the country. The head-count ratio is about 18% for the Punjab and Himachal Pradesh and slightly below 30% for Haryana and Rajasthan.

The ranking of States by Chakravarty's indices agree very well with that based on the HC ratio. The same can be said about the ranking by Sen's index. If one uses the combind sample estimates for different states, Spearman's rank correlation coefficient is about 0.98 between the HC ratio and Sen's index or Chakravarty's index for any value of e, while that between Sen's and Chakravarty's index, for any e, is about 0.99.

Half-sample figures agree fairly well except for some States with small sample sizes. Ranking by HC ratio or any other index is markedly different for the two half-samples only for Tripura and Manipur, where half-sample divergences are large presumably because of small sample sizes. For most of the regions, ranking by any of the indices is nearly the same for the two half-samples and for the combined sample.

V VARIATION ACROSS SOCIO-ECONOMIC GROUPS

The measures of poverty among different socio-economic categories of the rural population mentioned earlier are presented in Tables 2 to 6 at all-India level. Statewise HC ratios are given in the appendix Tables A.1 to A.3, but these are briefly discussed in the text. Appendix Tables A.4 to A.7 present Sen's indices, for the sake of interest, even though the Sen index is not decomposable.

Tables 2 to 6, it may be noted, are based on one poverty line for rural India, while the appendix Tables A.1 to A.3 are based on Statewise poverty lines. The all-India rural results are somewhat different in the two sets of tables and those in the appendix are to be taken as more accurate.

V.I *The Social Groups*

Poverty measures for the different Social groups are presented in Table 2 for rural India as a whole (See also the Sen indices in Table A.5). The Scheduled Castes (SC) and Scheduled Tribes (ST) are by far the poorest among these groups, followed by other Muslims who are somewhat poorer than the general (all-groups) level. Other Hindus are somewhat better off than the average while Others are the most prosperous of the five social groups. The head-count ratio is about 62 to 63% for SC or ST and about 35% for Others.

The corresponding figures in Table A.1 are about 66% for SC or ST, 55% for other Muslims, 42% for other Hindus and 36% for Others. The overall HC ratio is 49%.

TABLE 2

MEASURES OF POVERTY FOR THE RURAL POPULATION IN INDIA, BY SOCIAL GROUPS, BASED ON NATIONAL SAMPLE SURVEY 28TH ROUND HOUSEHOLD BUDGET ENQUIRY (OCTOBER 1973-JUNE 1974)

| Social group | Half-sample | No. of sample households | Head count ratio | New index | |
				$e = 0.2$	$e = 0.9$
(1)	(2)	(3)	(4)	(5)	(6)
Scheduled	1	1348	0.614	0.045	0.167
Castes	2	1343	0.645	0.047	0 174
	combined	2691	0.629	0.046	0.171
Scheduled	1	843	0.616	0.044	0.164
Tribes	2	771	0.629	0.051	0 189
	combined	1614	0.622	0.047	0.176
Other Hindus	1	4147	0.397	0.022	0.086
	2	4232	0.387	0.023	0 088
	combined	8379	0.392	0.023	0.087
Other Muslims	1	841	0.493	0.034	0.128
	2	833	0.468	0.028	0.104
	combined	1674	0.481	0.031	0.116
Others	1	550	0.338	0.020	0.077
	2	544	0.363	0.024	0.091
	combined	1094	0.350	0.022	0.084
All groups	1	7729	0.462	0.029	0.111
	2	7723	0.460	0.030	0.114
	combined	15452	0.461	0.030	0.113

If one pools SC and other Hindus one gets a HC ratio of about 44.6% from Table 2 and about 47.0% from Table A.1. Some Hindus are still left out, being in the ST group. Clearly, all Hindus taken together would have poverty measures close to the general level.

The ranking of the social groups by Chakravarty's indices agree closely with that by the HC ratio. The ranking by Sen's index is also very similar. The rankings based on half-samplewise figures are also quite stable and similar.

The relative positions of the different social groups observed at all-India level appear to be repeated, in a broad manner, in all the states (*vide* Table A.1). There are, however, some noteworthy exceptions. Thus, in Assam the ST seem to be the least poor, while other Hindus appear to be slightly poorer than 'Other' Muslims. For Madhya Pradesh,

TABLE 3
MEASURES OF POVERTY FOR THE RURAL POPULATION IN INDIA,
BY CLASSES OF LAND POSSESSED, BASED ON NATIONAL SAMPLE
SURVEY 28TH ROUND HOUSEHOLD BUDGET ENQUIRY
(OCTOBER 1973-JUNE '74)

Household land possessed (in acres)	Half sample	No. of sample households	Head count ratio	New index $e = 0.2$	$e = 0.9$	Average house-hold size
(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*
landless	1	333	0.557	0.039	0.146	4.10
(< .005)	2	352	0.504	0.036	0.134	4.07
	combined	685	0.529	0.038	0.140	4.09
0.005-1.00	1	2766	0.583	0.043	0.159	4.60
	2	2784	0.585	0.044	0.164	4.52
	combined	5550	0.584	0.044	0.162	4.56
1.00-2.50	1	1345	0.506	0.030	0.116	5.09
	2	1375	0.515	0.031	0.119	5.04
	combined	2720	0.510	0.031	0.118	5.06
2.50-5.00	1	1421	0.411	0.021	0.081	5.52
	2	1315	0.426	0.025	0.097	5.61
	combined	2736	0.419	0.023	0.089	5.56
5.00-7.50	1	720	0.366	0.019	0.076	6.17
	2	753	0.347	0.021	0.081	6.10
	combined	1473	0.357	0.020	0.079	6.13
7.50-15.00	1	698	0.341	0.020	0.077	6.68
	2	704	0.333	0.018	0.069	6.55
	combined	1402	0.337	0.019	0.073	6.61
15.00-	1	446	0.262	0.014	0.056	7.82
	2	440	0.235	0.011	0.043	7.47
	combined	886	0.249	0.013	0.050	7.64
All classes	1	7729	0.462	0.029	0.111	5.34
	2	7723	0.460	0.030	0.114	5.27
	combined	15452	0.461	0.030	0.113	5.30

the ST group is much poorer than the SC, and the SC is not too far below the 'Other' Hindus. In Maharashtra, the Others seem to be just as poor as the SC and ST groups. In Orissa, again the ST group is

TABLE 4

MEASURES OF POVERTY FOR THE RURAL POPULATION IN INDIA,
BY OCCUPATIONAL GROUPS, BASED ON NATIONAL SAMPLE
SURVEY 28TH ROUND HOUSEHOLD BUDGET ENQUIRY
(OCTOBER 1973-JUNE 1974)

Household occupation	Half sample	No, of sample households	Head count ratio	New index	
				$e = 0.2$	$e = 0.9$
I professional, technical and related administrative, executive and managerial workers, clerical and related workers	1	512	0.328	0.020	0.076
	2	530	0.342	0.022	0.083
	combined	1042	0.335	0.021	0.080
II sales workers	1	235	0.360	0.021	0 078
	2	224	0.400	0.024	0.091
	combined	459	0.379	0.022	0.084
III service workers	1	149	0.539	0.033	0.126
	2	149	0.501	0.035	0.128
	combined	298	0.520	0.034	0.127
IV cultivators (owners)	1	3863	0.369	0.020	0.077
	2	3743	0.356	0.020	0.077
	combined	7606	0.363	0.020	0.077
V cultivators (tenants)	1	126	0.453	0.025	0.096
	2	133	0.577	0.034	0.128
	combined	259	0.521	0.030	0.113
VI agricultural labourers	1	1977	0.673	0.051	0.189
	2	2083	0.672	0.052	0.192
	combined	4060	0.673	0.051	0.191
VII other agriculture, fishermen, hunters, loggers and related workers	1	198	0.615	0.043	0.162
	2	192	0.520	0.034	0.128
	combined	390	0.569	0.039	0.146
VIII production and related workers, transport equipment operators and labourers	1	669	0.484	0.031	0.117
	2	669	0.462	0.029	0.110
	combined	1338	0.473	0.030	0.113
All occupations	1	7729	0.462	0.029	0.111
	2	7723	0.460	0.030	0.114
	combined	15452	0.461	0.030	0.113

appreciably poorer than the SC. In West Bengal, Other Muslims are nearly as poor as the SC and ST. In Jammu and Kashmir, on the other hand, 'Other' Muslims are the most prosperous group.

TABLE 5

HEAD COUNT RATIO MEASURES OF POVERTY FOR THE POPULATION
IN RURAL INDIA, BY HOUSEHOLD OCCUPATION AND HOUSEHOLDS
SIZE, BASED ON NSS 28TH ROUND HOUSEHOLD BUDGET ENQUIRY
(OCTOBER 1973-JUNE 1975)[a]

Household size	Professional, tech. and related executive managerial, adm. and all clerical and related workers	Household occupation			
		Owner cultivators	Agricultural labourers	Production and related workers, transport equipment workers and labourers	All occupation[b]
(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*
1	0.216 (281)	0.068 (211)	0.212 (213)	0.033 (89)	0.147 (895)
2	0.156 (82)	0.142 (550)	0.356 (455)	0.168 (122)	0.228 (1330)
3	0.263 (90)	0.263 (773)	0.492 (627)	0.216 (150)	0.347 (1836)
4	0.272 (128)	0.349 (984)	0.625 (684)	0.317 (180)	0.447 (2159)
5	0.328 (121)	0.357 (1207)	0.686 (697)	0.445 (206)	0.473 (2485)
6	0.404 (131)	0.418 (1114)	0.737 (554)	0.567 (203)	0.533 (2172)
7	0.370 (86)	0.403 (928)	0.758 (378)	0.543 (162)	0.513 (1696)
8	0.417 (51)	0.391 (624)	0.755 (212)	0.637 (107)	0.510 (1104)
9	—	0.391 (417)	0.796 (106)	0.512 (58)	0.482 (666)
10 and above	—	0.338 (798)	0.773 (134)	0.513 (61)	0.416 (1109)
All sizes	0.335 (1042)	0.362 (7606)	0.673 (4060)	0.473 (1338)	0.461 (15452)

[a]Figures in parenthesis indicate number of sample households
[b]including those not covered in cols. (2) to (5).

TABLE 6
HEAD COUNT RATIO MEASURES OF POVERTY FOR THE POPULATION
IN RURAL INDIA, BY HOUSEHOLD LAND POSSESSED AND
HOUSEHOLD SIZE, BASED ON NSS 28TH ROUND
HOUSEHOLD BUDGET ENQUIRY
(OCTOBER 1973-JUNE 1974)[a].

| House-hold size | Landless household | Household land possessed (in crores) | | | | | | All classes |
		0 005-1	1-2.5	2.5-5.0	5.0-7.5	7.5-15.0	15.0-	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	0.104 (147)	0.194 (509)	0.067 (118)	0.068 (53)	—	—	—	0.147 (895)
2	0.308 (86)	0.300 (608)	0.189 (250)	0.119 (198)	0.088 (93)	0.138 (61)	—	0.228 (1330)
3	0.350 (84)	0.406 (825)	0.375 (353)	0.261 (301)	0.245 (127)	0.174 (96)	0.236 (50)	0.347 (1836)
4	0.436 (92)	0.552 (871)	0.439 (416)	0.378 (388)	0.276 (173)	0.321 (156)	0.221 (63)	0.447 (2159)
5	0.633 (79)	0.621 (892)	0.438 (509)	0.404 (452)	0.343 (233)	0.280 (215)	0.154 (105)	0.473 (2485)
6	0.623 (78)	0.678 (710)	0.538 (422)	0.464 (450)	0.403 (195)	0.388 (217)	0.260 (100)	0.533 (2172)
7	0.505 (52)	0.641 (507)	0.608 (279)	0.510 (348)	0.427 (203)	0.290 (180)	0.247 (127)	0.513 (1696)
8	—	0.667 (301)	0.621 (162)	0.461 (242)	0.384 (138)	0.329 (130)	0.298 (92)	0.510 (1104)
9	—	0.711 (159)	0.648 (88)	0.412 (116)	0.338 (89)	0.399 (111)	0.230 (88)	0.482 (666)
10 and above	—	0.593 (168)	0.627 (123)	0.400 (188)	0.363 (188)	0.373 (212)	0.266 (217)	0.416 1109)
All sizes	0.530 (685)	0.584 (5550)	0.510 (2720)	0.418 (2736)	0.356 (1473)	0.337 (1402)	0.249 (886)	0.461 (15452)

[a]figures in parentheses indicate number of sample households.

V.2 *Size classes of land possessed*[13]

Table 3 shows that landed households possessing less than one acre (and more than 0.005 acre) of land appear to be the poorest with about 58% of the population in them lying below the poverty line (*Vide* col. (4)). Increstingly, landless households may be some what better off with the head-count ratio around 53%. There is a clear trend in poverty over the size classes. For landed households, as one moves to higher size classes of land possessed, the incidence of poverty decreases. Thus, the head-count ratio falls to about 25% for households possessing 15 acres or more of land.

Chakravarty's indices (*vide* cols. (5) and (6) and Sen's index (*vide* Table A.6) depict a similar picture. Ranking of the size classes are nearly the same whichever measure of poverty is used; also, the half-samplewise figures show satisfactory agreement and lead to very similar rankings.

The trend in poverty over size classes of landholdings noticed at all-India level is observed, in a rough way, for most of the states (*vide* Table A.2), with some variations. Thus, Jammu and Kashmir show higher head-count ratios for the size classes 2.5-5 acres and 5-7.5 acres than for 0.005-1 acre or 1-2.5 acres. Again, in Karnataka, there is hardly any decline in the poverty index over the size classes starting from 1-2.5 acres. For Maharashtra, the index is nearly equal, about 55%, for the three lowest size classes of land-holding.

For the same of interest, we present in col. (7) of Table 3 the average size of households in different classes of land possessed. It may be noted that the average rises monotonically from about 4.1 for the landless to 7.5 to 8 for those with 15 acres or more.

V.3 *Household Occupational Classes*

Table 4 shows that the agricultural labourers were the poorest (HC ratio =67%) among the eight occupational classes covered in the table, followed by 'other agricultural households', 'tenant cultivators' and 'service workers'. Judging by the head-count ratio, the households of occupational class I (viz, professional, technical etc.) were the least poor (HC ratio 34%) with 'owner cultivators', and 'sales workers' coming close in the ranking with HC ratio around 36 to 38%. The rankings by Chakravarty's indices and by Sen's indices (*vide* Table A. 7) deviate slightly from the ranking by head-count ratio. The half-sample differences are small

[13]Sea Visaria (1981) for a study of correlation between land possessed and PCE of a household in rural areas of two states in India.

except for occupational classes like cultivators (tenants) where the sample size is small. On the whole, therefore, the poverty indices clearly depict a picture of marked variation in poverty across the major occupational classes.

More or less the same picture of occupational variation emerges from the state level estimates set out in Table A.3. Among differences in detail, one may point to Madhya Pradesh where the gulf between owner cultivators and agricultural labourers is quite narrow.

V.4 Household Size Classes

The association between the head-count ratio measure of poverty and household size is studied through Tables 5 and 6 which present the head-count ratio by classes of household size either by household occupation (Table 5) or land possessed (Table 6) for all-India rural as a whole.

Col. (6) of Table 5 shows the head-count ratios for households with sizes varying from 1 to 10+ for all occupational classes taken together. It appears that the incidence of poverty steadily increases with household size upto households of size 6, after which it decreases although by a smaller amount. Table 5 and 6 were prepared to investigate the causes underlying this trend, particularly the decline in HC ratio over large sizes.

Table 5 shows the effect of household size on the head-count ratio *within* each of four major occupational classes (viz., classes I, IV, VI and VIII of Table 4) having substantial sample size. It appears that within any of these classes, broadly speaking, the head-count ratio rises with household size upto six members but thereafter it seems to stabilize without showing much rise or fall with further increase in household size. The decline in head-count ratio for large-sized households noted above for all occupations taken together (vide col. (6)) is *largely* due to the increasing proportion of owner cultivators (and the decreasing proportion of agricultural labourers) over large household sizes and the lower level of the head-count ratio for owner cultivators compared to that for agricultural labourers. The authors refrain from making further comments on figures in Table 5. Some of them merit attention like the relatively low head-count ratio for owner cultivators with household size 10 or more.

Table 6 is analogous to Table 5 and shows the effect of household size on head-count ratio separately for the different size classes of household land possessed. Here also one finds that for any given size class of land holding the head-count ratio rises more or less steadily with house-

hold size upto household size 5, 6 or a little more,[14] but thereafter it shows no further rise or fall, at least in any marked degree. These findings are quite consistent with those based on the preceding tables.

VI. Contribution of States and Socio-economic Groups to Overall Rural Poverty in India

The poverty indices estimated above give some idea about the relative concentration of poverty in the different states and socio-economic groups. The obvious question is: what is the contribution of each of these States/ Socio-economic groups to overall poverty in rural India? Sen's index cannot be utilized for answering this question as it is not "decomposable." However, the head-count ratio and Chakravarty's index for any e being additively decomposable can serve the purpose. In terms of equation (5) about $(n_i\ n)/p_i$, is the contribution of the ith group to overall poverty.

The contributions of different states to overall rural poverty in India are presented in Table 7 (*a*) using head-count ratio and Chakravarty's index (for $e = 0.2$ and 0.9). The corresponding decompositions by social groups, by size classes of land possessed and by household occupation are set out in Tables 7(*b*)-(*d*). Some of the major findings are given below. A general observation is that the percentage contributions based on Chakravarty's index are insensitive to the value of e.

It should be noted that in each of Tables 7(*a*)-(*d*) the percentage contributions to overall poverty based on the head-count ratio are nothing but the percentages of all-India (rural) poor belonging to the different States or socio-economic groups.

VI. *States*

Table 7(*a*) shows that the three poorest states, namely, West Bengal, Orissa and Bihar, all of which are in the eastern region, constitute 24% of the total population and report 31.2% of the poor in rural India judged by head-count ratio. Their contribution to overall poverty rises to 37 or 38% if one uses any of the Chakravarty indices. The higher contribution of these three states according to the Chakravarty index compared to the HC-ratio is partly due to higher than average Lorenz ratio of PCE among

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[14]It may be noted that for the highest size class of 15 acres or more, the head-count ratio shows little trend over classes of household size. Also, in class 0.005-1 acre, the head-count ratio seems to fall to some extent after a point as household size is further increased.

TABLE 7(a)

CONTRIBUTION OF DIFFERENT STATES TO OVERALL RURAL
POVERTY IN INDIA BASED ON NSS 28TH ROUND
HOUSEHOLD BUDGET ENQUIRY
(OCTOBER 1973-JUNE 1974)

States	Percentage of all-India population	Percentage contributions to total poverty based on		
		Head-count ratio	New index	
			$e = 0.2$	$e = 0.9$
(1)	(2)	(3)	(4)	(5)
Andhra Pradesh	7.9	6.3	5.5	5.5
Assam	2.9	2.3	1.7	1.7
Bihar	11.1	13.7	15.7	15.3
Gujarat	4.4	3.1	2.2	2.3
Haryana	1.9	1.1	0.7	0.8
Himachal Pradesh	0.8	0.3	0.2	0.2
Jammu and Kashmir	0.4	0.3	0.2	0.2
Karnataka	5.1	5.1	4.8	4.8
Kerala	4.3	4.4	4.9	4.9
Madhya Pradesh	8.2	9.4	9.7	9.8
Maharashtra	7.9	7.5	7.0	7.2
Manipur	0.2	0.2	0.1	0.1
Meghalaya	0.2	0.1	0.1	0.1
Orissa	4.7	5.9	6.4	6.3
Punjab	2.5	0.9	0.5	0.6
Rajasthan	4.9	2.9	2.3	2.4
Tamil Nadu	6.4	6.4	6.3	6.3
Tripura	0.3	0.3	0.2	0.2
Uttar Pradesh	17.7	18.2	15.4	16.0
West Bengal	8.2	11.6	16.1	15.3
INDIA*	100.0	100.0	100.0	100.0

*Does not include the Union Territories of Pondicherry, Delhi, Chandigarh, and Goa, Daman and Diu.

TABLE 7(*b*)
CONTRIBUTION OF DIFFERENT SOCIAL GROUPS TO OVERALL
RURAL POVERTY IN INDIA BASED ON NSS 28TH ROUND
BUDGET DATA (OCTOBER 1973-JUNE 1974)

Social group	*Percentage of all-India population*	*Percentage contributions to total poverty based on*		
		Head-count ratio	*New index*	
			e = 0.2	*e = 0.9*
(*1*)	(*2*)	(*3*)	(*4*)	(*5*)
Scheduled Castes	16.8	22.5	26.6	26.2
Scheduled Tribes	9.7	13.1	14 9	14.7
Other Hindus	58.4	49.6	44.3	45.0
Other Muslims	9 7	10.9	9.9	9.8
Others	5.3	3.9	4.2	4.2
All groups	100.0	100.0	100.0	100.0

NOTE : (i) The Union Territories were left out in computing the figures in cols. (2) and (3).

(ii) Head-count ratios in Table A.1 yielded the figures in col. (3), but cols. (4) and (5) are based on the corresponding figures in Table 2.

TABLE 7(*c*)
CONTRIBUTION OF DIFFERENT SIZE CLASSES OF HOUSEHOLD LAND
POSSESSED TO OVERALL RURAL POVERTY IN INDIA BASED ON
NSS 28TH ROUND BUDGET ENQUIRY (OCTOBER 1973-JUNE 1974)

Land possessed (in acres)	*Percentage of all-India population*	*Percentage contributions to total poverty based on*		
		Head-count ratio	*New index*	
			e = 0.2	*e = 0.9*
(*1*)	(*2*)	(*3*)	(*4*)	(*5*)
0-0.005	3.7	4.1.	4.6	4.6
0.005-1	31.8	40.0	46.6	45.7
1-2.5	16.6	18.6	17.2	17.3
2.5-5.0	17.5	16.4	13.5	13.8
5.0-7.5	10.8	8.8	7.5	7.6
7.5-15.0	11.2	8.0	7.0	7.2
15.0-	8.4	4.1	3.6	3.7
All classes	100.0	100.0	100.0	100.0

NOTE : (i) The Union Territories were left out in computing the figures in col. (2)

(ii) Head-count ratios obtained in Table A.2 yielded the figures in col. (3), while cols. (4) and (5) are derived from Table 3.

TABLE 7(d)
CONTRIBUTION OF DIFFERENT OCCUPATIONAL GROUPS TO OVER ALL RURAL POVERTY IN INDIA BASED ON NSS 28TH ROUND BUDGET DATA (OCTOBER 1973-JUNE 1974)

Household occupation	Percentage of all-India population	Percentage contributions to total poverty based on		
		Head-count ratio	New index	
			$e = 0.2$	$e = 0.9$
(1)	(2)	(3)	(4)	(5)
I professional, technical and reltd., administrative, executive, managerial, clerical and related workers	4.9	3.5	3.5	3.5
II sales workers	2.8	2.4	2.1	2.1
III service workers	1.7	1.9	1.9	1.9
IV cultivators (owners)	52.9	42.6	35.2	36.0
V cultivators (tenants)	1.7	1.9	1.7	1.7
VI agricultural labourers	25.9	36.7	44.7	43.8
VII other agriculture, fishermen, hunters, loggers and related workers	2.2	2.6	2.9	2.9
VIII production and related workers, transport equipment operators and labourers	7.9	8.4	8.0	8.0
All occupations	100 0	100.0	100.0	100.0

NOTE : (i) The Union Territories were left out in computing the figures in col. (2)
(ii) Head-count ratios in Table A.3 yielded the figures in col. (3), while cols. (4) and (5) are derived from corresponding figures in Table 4.

the poor for these three states (*vide* Table 1). Madhya Pradesh and Uttar Pradesh come next in the ranking by the head-count ratio. The five states mentioned above account for about half of the rural population, and for about 59% of the total poverty according to the head-count ratio and for about 62-63% of total poverty by Chakravarty's indices.

VI.2 *Social Groups*

According to Table 7(*b*), of the poor in rural India 22.5% belonged to the Scheduled Castes who made up 16.8% of the population. The Scheduled Castes and Scheduled Tribes taken together formed 26.5% of the rural population and accounted for 35.6% of the rural poor. The corresponding figures for other Muslims are quite close (9.7% and 10.9%).

According to Chakravarty's indices, the Scheduled Castes and Scheduled Tribes taken together contributed nearly 41% to the total poverty in rural India.

In contrast other Hindus who constituted 58% of the population contributed about 50% to total poverty according to the head-cound ratio and about 44 to 45% according to Chakravarty's indices.

VI.3. *Size Classes of Household Land Possessed*

Table 7(*c*) shows that households with small holdings (.005-1.00 acre) having about 32% of the total population contributed 40% to total poverty according to the head-count ratio and approximately 46% of the same according to Chakravarty's indices. In fact, the three poorest size classes, namely, the "landless households" and households possessing upto 2.5 acres of land accounts for 68% of total poverty according to Chakravarty's indices and 63% of the same according to the head-count ratio, as against 52% of the total population in rural India. The contribution of "landless households" taken separately is, however, quite small, mainly because such households covered only 3.7% of the rural population.

VI.4 *Household Occupation*

Table 7 (*d*) shows that households of agricultural labourers showing the highest head-count ratio formed about 26% of the rural population and included nearly 37% of the poor in rural India. Their contribution to rural poverty by Chakravarty's indices was of the order of 44%. Cultivators (owners) made up 53% of the total population and accounted for 43% of the poor according to head-count ratio and approximately 35 to 36% of total poverty by Chakravarty's indices.

VII. CONCLUDING OBSERVATIONS

The present study is based on household budget data for only one round of the NSS, namely, the 28th round, conducted from October 1973-June 1974. It, therefore, suffers from the well-known limitations of NSS data which are affected by sampling and non-sampling errors (*vide* Rudra, 1972;

Srinivasan *et al.* 1974, Dandekar and Rath, 1971). Levels of living in rural India are subject to considerable fluctuations from year to year mainly owing to vagaries of the weather. The present study gives the picture for the survey period from October 1973 to June 1974 and the picture could be appreciably different in even the preceding or the following year.

As is obvious from the title, the urban sector of the country is left out altogether. This of course, is a serious limitation.

The concomitants of poverty have been studied one or two at a time. In principle, a joint study of all of them would have been far more illuminating. It would be desirable to set up for this purpose probability functions expressing the probability of a household being poor as a function of the place of residence (rural or urban, state, region within state, size class of town etc.), household occupation, land possessed, household size and composition etc. (Alternatively, the PCE of a household can be expressed in terms of these factors). Unfortunately the tape supplied to the authors does not contain information on age, or education, or occupations of individual members of the sample households, and it is not possible to do a very satisfactory job in this direction.

Finally, as mentioned in the text, for some of the tables, viz. Tables 2 to 6, the same poverty lines for rural India was used for classifying all households irrespective of the state of residence. While this may not have vitiate the results appreciably, more satisfactory estimates, based on statewise poverty lines, have been presented in the Appendix tables A.1 to A.3 for the more important categories.

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TABLE A.1
HEAD COURT RATIO MEASURES OF POVERTY FOR THE RURAL
POPULATION IN DIFFERENT STATES OF INDIA, BY SOCIAL
GROUPS, BASED ON NSS 28TH ROUND HOUSEHOLD BUDGET
ENQUIRY (OCTOBER 1973-JUNE 1974)

States	Social groups					
	Scheduled Castes	Scheduled Tribes	Other Hindus	Other Muslims	Others	All groups
(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*
Andhra Pradesh	0.642 (207)	0.665 (52)	0.315 (831)	0.421 (71)	0.390 (75)	0.395 (1236)
Assam	0.476 (108)	0.295 (87)	0.405 (227)	0.370 (164)	—	0.386 (600)
Bihar	0.801 (241)	0.753 (134)	0.515 (756)	0.678 (149)	—	0.603 (1288)
Gujarat	—	0.638 (101)	0.260 (349)	—	—	0.351 (530)
Haryana	0.458 (138)	—	0.225 (398)	—	—	0.275 (603)
Himachal Pradesh	0.255 (88)	—	0.162 (284)	—	—	0.183 (394)
Jammu and Kashmir	0.571 (66)	—	0.414 (167)	0.274 (406)	—	0.336 (657)
Karnataka	0.712 (91)	—	0.439 (455)	—	—	0.488 (621)
Kerala	0.660 (70)	—	0.465 (312)	0.606 (121)	0.418 (135)	0.503 (645)
Madhya Pradesh	0.581 (217)	0.729 (350)	0.477 (704)	—	—	0.561 (1320)
Maharashtra	0.568 (86)	0.583 (157)	0.414 (744)	—	0.574 (102)	0.466 (1135)
Manipur	—	0.493 (64)	0.281 (123)	—	—	0.368 (222)
Meghalaya	—	0.204 (181)	—	—	—	0.219 (225)

(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*
Orissa	0.692 (113)	0.842 (184)	0.483 (345)	—	—	0.611 (671)
Punjab	0.355 (106)	— —	0.214 (90)	—	0.133 (463)	0.179 (670)
Rajasthan	0.421 (107)	0.467 (96)	0.213 (369)	—	—	0.290 (613)
Tamil Nadu	0.643 (216)	—	0.441 (612)	—	—	0.495 (910)
Tripura	—	0.639 (53)	0.303 (76)	—	—	0.435 (187)
Uttar Pradesh	0.683 (419)	—	0.446 (1067)	0.481 (232)	—	0.506 (1784)
West Bengal	0.808 (316)	0.800 (83)	0.547 (374)	0.762 (244)	—	0.695 (1030)
All-India	0.656 (2669)	0.661 (1614)	0.417 (8311)	0,550 (1670)	0 362 (1077)	0.491 (15341)

NOTE : Figures in parentheses indicate number of sample households.

TABLE A.2

HEAD COUNT RATIO MEASURES OF POVERTY FOR THE RURAL
POPULATION IN DIFFERENT STATES OF INDIA, BY SIZE CLASSES
OF HOUSEHOLD LAND POSSESSED, BASED ON NSS 28TH
ROUND HOUSEHOLD BUDGET ENQUIRY
(OCTOBER 1973-JUNE 1974)

State	Household land possessed (in acres)							
	Landless (< 0.005)	0.005- 1.00	1.00- 2.50	2.50- 5.00	5.00- 7.50	7.50- 15.00	15.00-	all classes
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Andhra Pradesh	—	0.435 (590)	0.509 (202)	0.393 (187)	0.279 (84)	0.267 (87)	0.194 (68)	0.395 (1236)
Assam	—	0.571 (184)	0.464 (139)	0.284 (188)	—	—	—	0.386 (600)
Bihar	0.712 (78)	0.748 (541)	0.631 (238)	0.548 (216)	0.497 (113)	0.371 (69)	—	0.603 (1288)
Gujarat	0.513 (113)	0.505 (90)	0.505 (53)	0.277 (50)	0.282 (74)	0,232 (83)	0.169 (67)	0.351 (530)
Haryana	—	0.471 (234)	—	—	0.314 (73)	0.168 (120)	0.032 (72)	0.075 (603)
Himachal Pradesh	—	0.248 (84)	0.181 (159)	0.170 (98)	—	—	—	0.183 (394)
Jammu and Kashmir	—	0.279 (140)	0.255 (193)	0.373 (195)	0.418 (93)	—	—	0.336 (657)
Karnataka	—	0.606 (215)	0.437 (77)	0.437 (92)	0.453 (66)	0.443 (83)	0.433 (61)	0.488 (621)
Kerala	—	0.593 (412)	0.423 (120)	—	—	—	—	0.503 (645)
Madhya Pradesh	0.568 (71)	0.615 (264)	0.621 (149)	0.619 (207)	0.545 (207)	0.525 (262)	0.487 (160)	0.561 (1320)
Maharashtra	0.553 (141)	0.557 (254)	0.549 (144)	0.503 (168)	0.387 (108)	0.449 (181)	0.298 (139)	0.466 (1135)
Manipur	—	—	0.412 (60)	0.332 (91)	—	—	—	0.369 (222)
Meghalaya	—	—	0.254 (54)	0.191 (110)	—	—	—	0.219 (225)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Orissa	—	0.750 (249)	0.633 (128)	0.550 (141)	0.509 (86)	—	—	0.611 (671)
Punjab	—	0.297 (344)	—	0.123 (51)	0.054 (62)	0.103 (107)	0.017 (57)	0.179 (670)
Rajasthan	—	0.429 (78)	0.484 (62)	0.388 (113)	0.266 (99)	0.255 (93)	0.176 (138)	0.290 (613)
Tamil Nadu	—	0.575 (508)	0.519 (164)	0.378 (133)	—	—	—	0.495 (910)
Tripura	—	0.523 (84)	—	—	—	—	—	0.435 (187)
Uttar Pradesh	—	0.624 (608)	0.583 (457)	0.522 (353)	0.318 (179)	0.311 (121)	—	0.506 (1784)
West Bengal	—	0.873 (523)	0.665 (193)	0.481 (193)	0.626 (54)	—	—	0.695 (1030)
All-India	0.546 (681)	0.617 (5477)	0.549 (2705)	0.460 (2727)	0.396 (1467)	0.351 (1399)	0.242 (885)	0.491 (15341)

NOTE : (1) Figures in parentheses indicate the number of sample households
(2) No estimate is presented in a cell if the No. of sample households is below 50.

TABLE A.3

HEAD-COUNT RATIO MEASURES OF POVERTY FOR THE RURAL
POPULATION IN DIFFERENT STATES OF INDIA BY HOUSEHOLD
OCCUPATIONAL CLASSES, BASED ON NSS 28TH ROUND HOUSE-
HOLD BUDGET ENQUIRY (OCTOBER 1973-JUNE 1974)

States	*Household occupation*								
	Professional, techni- cal, executive, mana- gerial, administrative, clerical and related workers	*Sales workers*	*Service workers*	*Cultivators (owners)*	*Cultivators (tenants)*	*Agricultural labourers*	*Other agricultural workers*	*Production, transport and related workers*	*All occupations*
(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*	*(9)*	*(10)*
Andhra Pradesh	0.406 (77)	—	—	0.287 (429)	—	0.536 (513)	—	0.367 (95)	0.395 (1236)
Assam	—	—	—	0.304 (349)	—	0.605 (50)	0.797 (71)	0.481 (51)	0.386 (600)
Bihar	0.527 (64)	—	—	0.469 (579)	—	0.804 (443)	—	0.691 (84)	0.603 (1288)
Gujarat	—	—	—	0.219 (273)	—	0.656 (145)	—	—	0.351 (530)
Haryana	0.193 (57)	—	—	0.171 (301)	—	0.576 (88)	—	0.400 (81)	0.275 (603)
Himachal Pradesh	—	—	—	0.195 (283)	—	—	—	—	0.183 (394)
Jammu and Kashmir	—	—	—	0.348 (500)	—	—	—	0.349 (79)	0.336 (657)
Karnataka	—	—	—	0.407 (300)	—	0.701 (215)	—	—	0.488 (621)
Kerala	0.261 (83)	—	—	0.330 (143)	—	0.712 (173)	—	0.591 (126)	0.503 (645)
Madhya Pradesh	—	—	—	0.540 (799)	—	0.669 (361)	—	0.470 (63)	0.561 (1320)
Maharashtra	0.356 (76)	—	—	0.352 (472)	—	0.653 (425)	—	0.493 (98)	0.466 (1135)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Manipur	—	—	—	0.364 (162)	—	—	—	—	0.369 (222)
Meghalaya	—	—	—	0.197 (167)	—	—	—	—	0.219 (225)
Orissa	—	—	—	0.532 (303)	—	0.803 (260)	—	—	0.611 (671)
Punjab	0.133 (65)	—	—	0.073 (269)	—	0.338 (194)	—	0.296 (69)	0.179 (670)
Rajasthan	—	—	—	0.272 (470)	—	—	—	0.374 (53)	0.290 (613)
Tamil Nadu	0.328 (64)	—	—	0.369 (276)	—	0.646 (387)	—	0.456 (89)	0.495 (910)
Tripura	—	—	—	0.340 (72)	—	—	—	—	0.435 (187)
Uttar Pradesh	0.403 (99)	0.573 (51)	—	0.441 (1091)	—	0.699 (319)	—	0.618 (140)	0.506 (1784)
West Bengal	0.542 (83)	—	—	0.513 (342)	—	0.926 (361)	—	0.706 (99)	0.695 (1030)
All-India rural	0.351 (1028)	0.425 (455)	0.548 (296)	0.395 (7580)	0.545 (255)	0.696 (4025)	0.570 (383)	0.518 (1319)	0.491 (15341)

NOTES : (1) Figures in parenthesis indicate the number of sample households.

(2) No estimate is presented in a cell if the number of sample households is below 50.

(3) The all-India estimate ignores the U.T.S. of Delhi, Chandigarh, Pondicherry, and Goa, Daman and Diu.

TABLT A.4
SEN'S INDEX OF POVERTY (WITH ASSOCIATED MEASURES) FOR THE
RURAL POPULATION IN INDIA, BY STATES, BASED ON NSS 28TH
ROUND HOUSEHOLD BUDGET ENQUIRY
(OCTOBER 1973-JUNE 1974)

States	Half-sample	Sen's index	Mean PCE of the poor (Rs.)	LR of PCE of the poor
(1)	(2)	(3)	(4)	(5)
Andhra Pradesh	1	0.109	29.68	0.105
	2	0.156	27.71	0.140
	combined	0.134	28.60	0.126
Assam	1	0.118	34.33	0.107
	2	0.107	34.79	0.094
	combined	0.113	34.55	0.101
Bihar	1	0.241	39.07	0.141
	2	0.255	37.00	0.151
	combined	0.248	38.09	0.147
Gujarat	1	0.102	33.64	0.089
	2	0.097	33.07	0.104
	combined	0.100	33.38	0.096
Haryana	1	0.079	34.64	0.097
	2	0.068	36.41	0.070
	combined	0.074	35.52	0.085
Himachal Pradesh	1	0.037	37.58	0.046
	2	0.054	35.19	0.116
	combined	0.045	36.44	0.080
Jammu and Kashmir	1	0.106	31.68	0.107
	2	0.103	34.02	0.078
	combined	0.105	33.00	0.092
Karnataka	1	0.171	31.41	0.117
	2	0.173	32.17	0.111
	combined	0.172	31.80	0.114
Kerala	1	0.211	31.60	0.147
	2	0.196	32.02	0.138
	combined	0.204	31.81	0.142
Madhya Pradesh	1	0.215	32.05	0.121
	2	0.209	32.17	0.130
	combined	0.212	32.11	0.126

Table A.4 (*contd. from page* 180)

(1)	(2)	(3)	(4)	(5)
Maharashtra	1	0.175	32.62	0.108
	2	0.152	32.50	0.122
	combined	0.163	32.56	0.115
Manipur	1	0.117	35.71	0.095
	2	0.070	35.27	0.064
	combined	0.095	35.55	0.085
Meghalaya	1	0.072	34.80	0.098
	2	0.054	35.31	0.122
	combined	0.064	35.01	0.113
Orissa	1	0.237	29.12	0.135
	2	0.244	29.24	0.138
	combined	0.241	29.17	0.137
Punjab	1	0.048	35.67	0.070
	2	0.030	38.26	0.040
	combined	0.040	36.89	0.059
Rajasthan	1	0.085	33.70	0.091
	2	0.093	32.06	0.111
	combined	0.089	32.91	0.101
Tamil Nadu	1	0.180	29.98	0.119
	2	0.182	29.80	0.129
	combined	0.181	29.89	0.125
Tripura	1	0.156	34.45	0.095
	2	0.108	33.19	0.112
	combined	0.133	33.97	0.103
Uttar Pradesh	1	0.158	34.63	0.093
	2	0.165	34.27	0.103
	combined	0.161	34.46	0.098
West Bengal	1	0.324	32.90	0.168
	2	0.332	33.26	0.172
	combined	0.328	33.07	0.170
All-India	1	(0.162) 0.179	(32.19) —	(0.123) —
rural	2	(0.168) 0.182	(31.85) —	(0.131) —
	combined	(0.165) 0.180	(32.00) —	(0.127) —

NOTE : See note below Table 1.

TABLE A.5
SEN'S INDEX OF POVERTY (WITH ASSOCIATED MEASURES) FOR THE
RURAL POPULATION IN INDIA BY SOCIAL GROUPS, BASED ON NSS
28TH ROUND HOUSEHOLD BUDGET ENQUIRY
(OCTOBER 1973-JUNE 1974)

Social group	Half sample	Sen's index	Mean PCE of the poor (Rs.)	LR of PCE of the poor
(1)	(2)	(3)	(4)	(5)
Scheduled Castes	1	0.239	30.68	0.132
	2	0.255	30.82	0.145
	combined	0.247	30.76	0.138
Scheduled Tribes	1	0.234	30.98	0.129
	2	0.267	29.37	0.148
	combined	0.250	30.22	0.139
Other Hindus	1	0.127	33.33	0.112
	2	0.130	32.74	0.118
	combined	0.123	33.04	0.115
Other Muslims	1	0.186	31.32	0.133
	2	0.157	33.03	0.124
	combined	0.172	32.14	0.130
Others	1	0.115	32.73	0.120
	2	0.135	32.68	0.135
	combined	0.125	32.19	0.128
All groups	1	0.162	32.19	0.123
	2	0.168	31.85	0.131
	combined	0.165	32.00	0.127

TABLE A.6
SEN'S INDEX OF POVERTY (WITH ASSOCIATED MEASURES) FOR THE
RURAL POPULATION IN INDIA, BY CLASSES OF LAND POSSESSED,
BASED ON NSS 28TH ROUND HOUSEHOLD BUDGET ENQUIRY
OCTORER 1973-JUNE 1974)

Household land possesred (in acres)	Half-sample	Sen's index	Mean PCE of the poor (Rs.)	LR of PCE of the poor
(1)	*(2)*	*(3)*	*(4)*	*(5)*
Landless	1	0.212	31.20	0.134
(< 0.005)	2	0.200	31.04	0.153
	combined	0.206	31.12	0.144
0.005 — 1.00	1	0.228	30.67	0.135
	2	0.237	30.36	0.146
	combined	0.232	30.52	0.140
1.00 — 2.50	1	0.172	32.66	0.119
	2	0.177	32.61	0.122
	combined	0.174	32.64	0.120
2.50 — 5.00	1	0.121	34.19	0.101
	2	0.141	32.79	0.112
	combined	0.131	33.49	0.107
5.00 — 7.50	1	0.112	33.70	0.102
	2	0.121	32.52	0.125
	combined	0.117	33 11	0.114
7.50 — 15.00	1	0.111	32.90	0.109
	2	0.100	33.79	0.099
	combined	0.106	33.34	0.104
15.00 —	1	0.084	33.51	0.119
	2	0.067	34.81	0.106
	combined	0.076	34.11	0.114
All classes	1	0.162	32.19	0.123
	2	0.168	31.85	0.131
	combined	0.165	32.00	0.127

TABLE A.7
SEN'S INDEX OF POVERTY (WITH ASSOCIATED MEASURES) FOR THE
RURAL POPULATION IN INDIA BY OCCUPATIONAL GROUPS BASED
ON NSS 28TH ROUND HOUSEHOLD BUDGET ENQUIRY
(OCTOBER 1973-JUNE 1974)

Household occupation	Half-sample	Sen's index	mean PCE of the poor (Rs.)	LR of PCE of the poor
(1)	(2)	(3)	(4)	(5)
1. professional, technical and reltd., administrative, executive and managerial workers, clerical and reltd. Workers	1	0.113	32.56	0.121
	2	0.124	32.10	0.135
	combined	0.118	32.33	0.128
II. sales workers	1	0.117	33.33	0.117
	2	0.133	32.73	0.112
	combined	0.125	33.03	0.115
III. service workers	1	0.181	32.46	0.108
	2	0.188	31.54	0.135
	combined	0.184	32.03	0.122
IV. cultivators (owners)	1	0.114	33.73	0.107
	2	0.114	33.31	0.112
	combined	0.114	33.53	0.109
V. cultivators (tenants)	1	0.146	33.56	0.119
	2	0.196	33.12	0.130
	combined	0.173	33.30	0.126
VI. agricultural (labourers)	1	0.269	30.30	0.137
	2	0.276	30.09	0.146
	combined	0.273	30.19	0.142
VII. other agriculture, fisherman, hunters, loggers and related workers	1	0.227	31.08	0.116
	2	0.192	31.94	0.140
	combined	0.211	31.46	0.128
VIII. production and reltd. workers, transport equipment operators and labourers	1	0.171	32.17	0.122
	2	0.163	32.35	0.127
	combined	0.167	32.25	0,125
All occupations	1	0.162	32.19	0.123
	2	0.168	31.85	0.131
	combined	0.165	32.00	0.127