SIZE AND AREAL DISTRIBUTIONS OF THE LEVEL
OF LIVING IN INDIA

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SUMMARY. An attempt has been made in the paper to explain the shifts in the national size distribution of personal income in terms of changes in size distributions of Indian States, as well as the areal distributions of income, between urban and rural areas and between States. The role of urban-rural variation appears to be important in 1963-64, the latest year studied. Following up the study of areal distribution, an attempt has been made to locate the poor and the rich, defined in the all-India context, in States and in NSS regions, yielding interesting maps. The densities of the poor and the rich, thus obtained, have been compared with areal estimates of per capita consumption expenditure.

1. CHANGES IN NATIONAL SIZE DISTRIBUTION

1. An examination of available Indian data on various distributions of national income indicates that there has been an increase in the disparity of the distribution of personal income by size when incomes are reckoned in real terms. On the other hand, the evidence is not conclusive when the estimates are taken at current prices. These conclusions are based on several types of data. First, the intersectoral disparity of average income per worker at current prices did not show any pronounced trend, though it was slightly higher in the recent past in comparison with more distant past. In contrast, the intersectoral disparity at constant prices steadily increased after the First Plan period. Second, the share of income from assets in national income increased during the period, the calculations having been made with estimates at current prices only. Third, the share of private savings in national income (also reckoned at current prices) remained at a low level till the middle of the First Plan period, and shifted to a higher level subsequently. In neither of the two sub-periods, the rate of savings exhibited a distinct trend. Finally, the disparity of size distribution of private consumption expenditure at current prices declined slightly both within urban and rural areas, and also at the national level. On the other hand, the disparities, when taken in real terms, probably remained relatively stable within both urban and rural areas, but increased at the all-India level, suggesting also some increase in real disparity between urban and rural areas.

2. In India, we do not have any time series of distributions of personal income by size. Consequently, the findings about changes in this distribution are based on an examination of the size distribution of household consumption expenditure and other data at several points of time. Also, even if we had the size distributions at current prices, inferences on shifts in real terms would have been hazardous in the absence of separate price deflators for different ranges of income. The indirect evidence used by us, however, are convincing. Since, consumption expenditure

plus saving equals personal income, and because cross section studies in many countries (including India) show that it is only the rich who save, a situation in which the distribution of consumption expenditure does not show a change but the rate of savings increases, should exhibit some increase in the disparity of the size distribution of personal incomes. This is exactly what has happened in India when we reckon the figures at constant prices. On the other hand, since the disparity of the distribution of consumption expenditure at current prices has declined, higher saving may or may not have led to an increase in the disparity of the size distribution of personal income at current prices.

3. These findings are corroborated by a study of changes in intersectoral disparity using completely different data. Unless offset by opposite movements in intrasectoral disparity, a change in intersectoral disparity in earnings per worker in a particular direction is indicative of a shift in the inequality of the distribution of personal income in the same direction. Under Indian conditions, the offsetting effect of changes in intrasectoral disparity cannot possibly be strong, and as such, the movements in intersectoral disparity and in disparity of income distribution are likely to be parallel. Since, intersectoral disparities can readily be computed from industrial distribution of labour force and national income, the latter at both current and constant prices, the corroboration of the earlier findings is reassuring, particularly because of the uncertainty attaching to deflation procedures used for obtaining real size distributions. Some weakness, however, attaches to the labour force data, and this affects the findings based on movements of intersectoral disparities. Still, our basic proposition about shifts in the personal income distribution appears to be a reasonable hypothesis based on all available information.

2. AREAL DISTRIBUTION

4. Available data thus enables us to form some impression about the temporal changes in the disparity of personal income distribution by size at the national level at both current and constant prices. It is more difficult to get a similar view about the shifts in areal distribution. Has the areal distribution become more or less equal ? But before we proceed to answer this question in the light of the available information, it is desirable to consider the question itself.

5. For any variable y, say income per capita of a household, a size distribution is obtained when y is grouped into a number of size classes, starting, say, from the lowest value of y observed, and the estimated number of households or the population is given by these size classes, preferably against the class means. Thus we can think of a size distribution not only for the country, but also for its various partitions. These,

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*It may be noted, however, that, with existing tabulated data, deflation of consumption expenditure by size classes can only be crude. A possible deflator could be the index number of cereals prices available by size classes. There is some justification in using this because cereals cover a large part of the consumption of the bulk of the population and cereals prices may show a parallel movement with a proper consumer price index number. However, obviously, this will be a crude deflator.

however, are not areal distributions. In areal distributions, y's are classified by some areal units and the number of households or population is given by these areal classes, against the means of areal classes. One could also study two (or more) alternative schemes of areal classification simultaneously, say by urban and rural areas and by states.

6. The point we would like to investigate is how far the shift in the size distribution at the national level has been influenced by areal variabilities of different types. This is important because, as we shall presently explain, areal variability is likely to increase in a country in the initial phase of its development.

3. AREAL VARIATIONS IN THE GROWTH PROCESS

7. In the initial phases of development, certain nodal points start growing. Some industries start, townships are set up, improved agriculture gets initiated in certain areas, localized outlays are made on construction, and current expenditures on education, health and other public services increase. Such measures have two-fold effect. Even at the stage of implementation, these lead to an increase in income flow which generates new demands for consumer goods, services and residential construction activities. New enterprises catering to these demands gradually get started leading to further increases in incomes. When the localized development projects are completed, they generate a new stream of incomes. To these are added the incomes of more unorganized enterprises started as a consequence of the development projects. But this process leads to an increase in income and consumption of certain groups of the population in a few areas, and the general population of the contry remains partly unaffected by what is happening in the nodal points. In order to attract resources to the development projects, and also in view of the fact that public sector plays a key role in getting the activities started, the rate of factor remuneration at nodal points is larger than that for the country at large. As a consequence of this, the size distribution of income becomes progressively more unequal in the initial phases of development. But when nodal points multiply, and many such points start at private initiative, a situation may arise in which the effect of development permeates throughout the economy, and resource scarcities develop in non-nodal enterprises as well. In a situation like this, the incomes in many non-nodal activities may also rise, and it is possible that there is no further increase of income inequality.

8. It follows from this that areal variations may have an important role to play in bringing about larger inequality in the size distribution of personal incomes in the initial phases of development. Indian urban inequality has most probably increased as a consequence of reasons outlined above. But the inequality of the size distribution of personal income has not probably changed materially in rural areas. However, one of the factors tending to increase the income inequality in rural areas could be the localized nature of the agricultural development in the country.

9. So far, we have talked as if the incomes received are all real incomes. This, however, is not true. As we have mentioned, there has not been any sizable

increase in income inequality in India, when the incomes are reckoned at current prices; the inequality has, however, increased when the incomes are taken in real terms. The incomes at current prices got distributed in a particular manner and the prices generally discriminated against the poor. The general price level increased considerably during the period under consideration. It is likely that income increases were more than price increases in the nodal points in spite of the fact that price increases were probably larger than the national averages in these points. But taking the country at large, while the increase in income was slightly higher than the increase in prices even for the poorest decile, their increase in real income was smaller than that of the general population. This is partly because agricultural prices increased more sharply than non-agricultural prices, and even within agricultural prices, prices of items which the poor customarily consume increased more than the prices of items which the rich consume, and the fact that the family budget of the poor is heavily weighted by agricultural commodities. One way to reduce inequality in India is, therefore, to work for a relative reduction of agricultural prices.

10. Before taking up a study of the areal distribution, it is of considerable interest to study the size distributions of consumption expenditure available for the different states of India. It is also useful to observe the size distributions of other sections of the nation, for example, some major social classes. We proceed to this task in the next section.

4. Size distributions of states and social classes

11. Distributions by size of personal income are not available in India for different points of time, and as such one has to use the size distributions of household consumption expenditure available in all recent National Sample Survey (NSS) rounds. Naturally, the distributions are not available in real terms, and the surmises about changes in real distributions have to be made on circumstantial evidence. Distributions of consumption expenditure suit our purpose all right because they reflect the movement of the non-transitory component of income better than income itself. Also, if necessary, inferences can be drawn about income distribution on some plausible assumption about the size distribution of savings, on which some cross section data are available. The NSS distributions are given separately for urban and urual areas; they can, however, be combined, in a somewhat crude manner, giving some idea about the all-India distribution. We have worked with NSS distributions relating to the 13th (September 1957—May 1958) and the 18th (February 1963—January 1964) rounds.

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* See P. C. Mahalanobis (1962): A preliminary note on the consumption of cereals in India, *Bull. Int. Stat. Inst.*, 39(4) 53-76. After this prelimanary presentation of the idea of price discrimination against the poor, Professor Mahalanobis has undertaken more comprehensive analysis corroborating his earlier findings. N. S. Iyengar, N. Bhattacharya and some others have subsequently followed up his ideas and published on consumer price indices by fractile groups and on the effect of price adjustment on size distribution.

12. If estimates of population and aggregate consumption expenditure are available by certain size classes of per capita consumption expenditure, it is possible to convert these figures to percentages. Let c_i, p_i respectively be the percentage shares of consumption expenditure and population in the i-th size class and let there be n size classes. Then a measure of disparity d is given by the relation,

$$d = \frac{1}{2} \sum_{i=1}^{n} \left| c_i - p_i \right|$$

We have systematically worked with this measure of disparity. It will be observed that d is zero for an egalitarian distribution and increases with increasing disparity of the size distribution. We have made some comparison of this measure with the Gini-Lorenz measure of inequality, and observed that both the measures show exactly similar trends.

13. The main result about the country as a whole is presented below.

TABLE 1. DISPARITY OF SIZE DISTRIBUTIONS
OF CONSUMPTION EXPENDITURE

rounds	d		
	rural	urban	all-India
(1)	(2)	(3)	(4)
13th round	0.2351	0.2576	0.2470
18th round	0.2105	0.2636	0.2297

It will be seen that there has been some reduction in disparity in rural areas and in the country as a whole; on the other hand, there has been some increase in disparity in urban areas. The reduction of disparity, however, is small. The rate of savings increased from 6.6 p.c. in 1957-58 to 9.3 p.c. in 1963-64 according to Reserve Bank of India estimates. Since, it is only the rich who save, the above figures suggest stability or some rise in the inequality of distribution of personal income at current prices, at the all-India level, and particularly in urban areas, where bulk of the savings is located. Further, if we take account of the fact that prices generally discriminated against the poor, it can be inferred that real size distributions must have become more unequal in urban India and also probably at the all-India level.

14. In order to observe the areal variations of the disparity, we have worked out the measure separately for the Indian states. The estimates are presented in the table below.

The following main conclusions can be drawn from the estimates presented in the table :

   (i) Urban disparities are systematically higher than rural disparities, there being only 4 exceptions for the 13th and one exception for the 18th round.

TABLE 2. DISPARITY OF CONSUMPTION EXPENDITURE WITHIN STATES (d)

states	rural		urban		combined	
	13th	18th	13th	18th	13th	18th
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Andhra Pradesh	0.2395	0.2149	0.2190	0.2375	0.2412	0.2224
2. Assam	0.1880	0.1575	0.2870	0.2302	0.1968	0.1753
3. Bihar	0.2231	0.2044	0.2768	0.2446	0.2301	0.2104
4. Bombay	0.2091	0.2055	0.2530	0.2633	0.2367	0.2401
5. Jammu and Kashmir	0.2046	0.1760	0.2071	0.1755	0.2061	0.1782
6. Kerala	0.2573	0.2157	0.2692	0.2719	0.2632	0.2278
7. Madhya Pradesh	0.2061	0.2536	0.2505	0.2573	0.2975	0.2584
8. Madras	0.2261	0.2196	0.3039	0.2401	0.2628	0.2307
9. Mysore	0.2062	0.2038	0.2129	0.2370	0.2506	0.2168
10. Orissa	0.2232	0.1955	0.2897	0.2465	0.2329	0.2066
11. Punjab	0.2307	0.2140	0.2430	0.2750	0.2326	0.2271
12. Rajasthan	0.2034	0.2339	0.2556	0.2602	0.2873	0.2341
13. Uttar Pradesh	0.2093	0.2100	0.2786	0.2830	0.2205	0.2214
14. West Bengal	0.1860	0.1885	0.2376	0.2243	0.2220	0.2255
15. all-India	0.2351	0.2105	0.2576	0.2630	0.2470	0.2297

(ii) Rural disparities reduced in all but two states; all-India rural disparity also reduced.

(iii) In 8 out of 14 states, urban disparities increased; all-India urban disparity also increased. The increase in all-India urban disparity thus could be partly due to an increase in disparity between states.

(iv) All-India disparity reduced, as well as the disparity of 11 out of 14 states; only for 3 states, within state disparities increased, but only very slightly. This suggests some small increase in variations between states; otherwise, reduction in all-India disparity could probably have been larger.

(v) The movement of disparity of states generally followed the movement of rural disparity that has larger weight. Since urban disparities showed a different pattern of change, this suggests that there could be large variation in disparities between urban and rural areas, in the states. We shall present later some other evidence supporting this.

15. It is interesting to observe the disparities for different social classes. Existing tabulations usually do not permit this. We have, however, attempted a fresh tabulation for the rural areas only for the 18th round. This tabulation gives the following estimates of d.

TABLE 3. DISPARITIES BY SOCIAL CLASSES

cultivators	0.2137
agricultural labour	0.1768
other agricultural classes	0.2437
non-agricultural classes	0.2087
total rural	0.2134
urban	0.2656

It may be observed first that the overall rural disparity comes out to be 0.2134 instead 0.2105 according to general NSS tabulation and likewise the urban disparity comes out to be 0.2656 instead of 0.2030. The differences are small, and arises out of the fact that for our tabulation there was fresh scrutiny of data and some doubtful values were left out. It will be seen that the disparities of cultivators and non-agricultural classes are close to the rural average, while agricultural labourers have a considerably lower disparity and the other agricultural classes have a very high disparity. Relative egalitarianism among agricultural labourers arises out of their extreme poverty. However, it is important to note that different well-defined social classes may have different levels of disparity. Consequently, a change in the disparity at the national level can be brought about either by changing disparities within social classes or by changing the average incomes of different social classes, or by changing the weight of different social classes in the total population. The problem, therefore, is complex particularly because the ultimate result will depend on the interplay of all three types of action.

16. In the tabulation mentioned, we have studied not only the disparity of aggregate consumption expenditure but also the disparities of cash expenditure and consumption in kind of own produce. The resulting estimates of disparties are presented in Table 4 below.

TABLE 4. DISPARITIES OF TOTAL CONSUMPTION EXPENDITURE, CASH EXPENDITURE AND CONSUMPTION IN KIND OF OWN PRODUCE (NSS, EITHTEENTH ROUND, RURAL)

(Classification by per capita total consumption expenditure)

items	groups of population					urban
	rural					
	cultivators	agricultural labour	other agricultural	non-agricul-tural	total rural	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. total cons. exp.	0.214	0.177	0.244	0.200	0.213	0.266
2. cash exp.	0.205	0.198	0.243	0.227	0.236	0.281
3. cons. in kind	0.162	0.138	0.245	0.291	0.081	0.130

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It will be seen from the table that the disparity of cash expenditure is generally higher than that of total expenditure while the disparity of kind expenditure generally lower. There are two exceptions to this: for other agriculture, the disparity of cash and total expenditure are dimensionally similar and for non-agriculture, the disparity of kind consumption is highest. Thus, expenditure in cash appears to be more unequally distributed and consumption in kind more equally distributed among households, in comparison with their aggregate consumption expenditure. There is, therefore, a possibility of increased disparity of aggregate consumption expenditure with development which will be accompanied with higher monetization.

17. It is possible to work out the contributions of states and urban-rural areas to the overall variability in a little more exact manner than we have attempted earlier. We have undertaken this analysis both for the 13th and the 18th rounds. The analysis shows that the overall variability was affected more by variations between states in the 13th round. But the position subsequently has changed remarkably and in the 18th round a much larger part of the total variability was accounted for by the rural-urban variation. It is interesting to observe that variability between states, on the other hand, has reduced to some extent, and the variability within states and within urban and rural regions has also declined. This is brought out by the figures presented below :

TABLE 5. CONTRIBUTIONS TO ESTIMATES OF VARIANCE

	rounds	
	13(1957-58)	18(1963-64)
(1)	(2)	(3)
between states	8.38	6.88
between urban and rural areas	5.00	13.42
interaction	3.80	3.29
	17.18	23.59

Note : The figures in the table are based on sample estimates of population and a \
consumption expenditure given separately for fourteen states of India by rural and urban areas. For the i-th state, let e_{ir}, e_{iu} respectively stand for the rural and urban average expenditure and n_{ir}, n_{iu} the corresponding population estimates. Also let $\bar{e}_i$, n_i stand respectively for the average expenditure and estimated population of the state. Further, let $\bar{e}_{\cdot r}$, $\bar{e}_{\cdot u}$ be the respective overall average for rural and urban areas, $\bar{e}_{\cdot\cdot}$ the general mean, $n_{\cdot r}$ the rural, $n_{\cdot u}$ the urban and $n_{\cdot\cdot}$ the total estimated population. Then, the between states sum of squares is $\sum_i n_i(\bar{e}_i - \bar{e}_{\cdot\cdot})^2$, the between urban and rural areas sum of squares is $n_{\cdot r}(\bar{e}_{\cdot r} - \bar{e}_{\cdot\cdot})^2$ $+ n_{\cdot u}(\bar{e}_{\cdot u} - \bar{e}_{\cdot\cdot})^2$ and the total sum of squares is $\sum_{i=1}^{14} \sum_{j=r,u} n_{ij}(e_{ij} - \bar{e}_{\cdot\cdot})^2$. The interaction sum of squares is obtained as the residual. Since the entire Indian population is involved while getting the sum of squares, the variances are obtained by dividing the sums of squares by the Indian population.

18. It should be clear that in the previous paragraph we have dealt with areal variations of consumption expenditure and not merely the size distributions in different areas. In fact, we tried to understand how areal variation could affect size distributions, and found that in 1963-64 urban-rural variations within states had greater effect on the national size distribution than the variation between states. In policy context, this would suggest that reduction of statewise urban-rural variation may be a more promising line of action than an attempt at reducing interstate variation. One way to do this is to create a situation in which agricultural prices increase more sharply than non-agricultural prices. As is well known, in the recent past, i.e., from 1962-63 onwards, the ratio of agricultural to industrial prices is continually rising. Thus, it is likely that in 1966-67 or 1967-68, urban-rural disparity is considerably lower. It is difficult, however, to state categorically whether this has led to any reduction of the inequality of the national size distribution in real terms, because as we have observed earlier, rise in agricultural prices adversely affects the real consumption expenditure of the poorer sections of the population.

5. AREAL DISTRIBUTION: SOME FINDINGS

19. One interesting problem in the subject of areal distribution of poverty and affluence is to locate the poor and the rich on a map and study their geographical distributions. This kind of a study is permitted by NSS data. Let us pose the problem in the following manner to start with. Where are the rich and poor in India located? To answer this, it is necessary first to define the rich and the poor. For our purpose, we have defined the rich and the poor separately for rural and urban areas. The rural poor, for us, constitute the households contributing bottom 10 per cent of the all-India rural population, all households being ranked first according to their per capita consumption expenditure. Similarly, we have defined urban poor, and rural and urban rich, the households contributing top 10 per cent of the population in the case of the rich. Next, it is necessary to think about the areal units where we locate these people. We have worked with some 350 strata, some 50 NSS regions and, of course, the states. Ultimately, we have decided to present our results by regions, because it is only at the regional level that a rough combination of the NSS urban and rural data is possible. Also, while we have presented some data by states, it is more interesting to observe the rich and the poor by somewhat smaller areal units and observe whether some areas, predominantly rich or predominantly poor, could be demarcated irrespective of the state boundaries. Given the estimates, in the manner just indicated, it would be possible to build up groups of regions containing specified percentages, say, of the all-India poor (or rich). Our areal analysis is based on NSS 18th round data and relates to 1963-64. The estimates used are given in Table 6.

20. Since the regions are of unequal size, the figure giving the percentage of all-India poor (or rich) residing in a region, does not look very interesting on a map. We have, therefore, divided the poor (or rich) in a region by the population of the region, giving the more interesting map of the density of the poor and the rich. Such a map has been drawn only for rural India, because urban areas are disconnected in nature.

TABLE 6. SHARES OF POOR, RICH AND GENERAL POPULATION, DENSITY OF POOR AND RICH POPULATION AND PER CAPITA CONSUMPTION EXPENDITURE BY REGIONS : NSS EIGHTEENTH ROUND, 1963-64, RURAL AND URBAN

state and region	rural						urban						rural and urban :
	p.c. share of population in the all India fractile group obtained in region			population in group as p.c. of population of region		average per capita consumption expenditure in Rs.	p.c. share of population in the all India fractile group obtained in region			population in group as p.c. of population of region		average per capita consumption expenditure in Rs.	average per capita consumption expenditure in Rs.
	0-10	90-100	0-100	0-10	90-100		0-10	90-100	0-100	0-10	90-100		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1. Rajasthan													
1	0.91	2.29	1.42	5.43	16.12	23.83	2.16	0.32	1.61	13.41	1.97	20.95	24.48
2	0.09	4.41	2.45	4.04	18.03	26.97	1.62	3.11	1.78	8.64	17.44	37.87	28.64
3	2.72	0.20	0.81	33.76	2.64	14.18	0.00	0.29	0.20	0.00	0.99	38.41	16.87
4	0.92	0.56	0.69	13.42	8.20	19.01	0.57	0.08	0.53	10.84	1.20	30.13	21.19
total/average	5.55	7.47	5.36	10.35	13.93	23.27	4.20	3.78	4.21	10.11	8.97	32.02	24.70
2. Punjab													
5	0.73	6.44	2.55	2.80	25.27	31.37	3.48	2.90	2.89	12.05	10.04	48.74	34.95
6	0.83	3.77	1.97	4.20	19.12	26.20	3.33	2.42	2.61	12.70	9.27	39.31	28.55
total/average	1.56	10.22	4.52	3.44	22.58	29.11	6.81	5.32	5.49	12.39	9.67	42.84	32.10
3. Jammu and Kashmir													
7	0.02	0.30	0.19	1.19	15.77	25.75	0.15	0.05	0.18	8.20	2.55	29.08	26.37
8	0.05	0.20	0.19	2.84	10.36	21.08	0.00	0.00	0.05	0.00	0.00	27.08	22.29
9	0.00	1.05	0.45	0.00	23.10	31.44	0.14	0.34	0.44	3.32	7.89	33.00	31.72
total/average	0.08	1.54	0.83	0.92	18.52	27.99	0.29	0.39	0.67	4.41	5.80	31.45	28.54
4. Himachal Pradesh													
10	0.00	0.25	0.20	0.00	9.84	25.75	0.00	0.05	0.02	0.00	28.05	31.58	27.28

TABLE 6 (contd.). SHARES OF POOR, RICH AND GENERAL POPULATION, DENSITY OF POOR AND RICH POPULATION AND PER CAPITA CONSUMPTION EXPENDITURE BY REGIONS: NSS EIGHTEENTH ROUND, 1963-64, RURAL AND URBAN

	rural						urban						rural and urban:
state and region	p.c. share of population in the all India fractile group obtained in region			population in group as p.c. of population of region		average per capita consumption expenditure in Rs.	p.c. share of population in the all India fractile group obtained in region			population in group as p.c. of population of region		average per capita consumption expenditure in Rs.	average per capita consumption expenditure in Rs.
	0-10	90-100	0-100	0-10	90-100		0-10	90-100	0-100	0-10	90-100		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
5. Uttar Pradesh													
11	0.12	1.07	0.09	1.70	15.52	26.82	0.25	0.61	0.43	5.08	14.23	40.34	28.60
12	3.15	6.00	6.64	5.58	10.65	23.18	12.08	3.56	6.88	17.67	5.18	28.63	24.36
13	5.67	2.78	3.25	17.43	8.55	20.86	5.63	2.62	3.11	18.14	9.08	31.65	22.79
14	9.78	4.11	5.93	16.50	6.93	20.10	6.71	3.16	2.98	22.53	7.35	26.32	20.74
15	3.09	0.92	2.01	16.39	4.61	18.99	0.60	0.26	0.67	12.03	3.88	26.85	19.63
total/average	21.80	14.88	17.61	12.45	8.50	21.37	25.47	9.43	14.07	18.13	6.71	29.02	24.25
6. Madhya Pradesh													
16	4.09	2.07	2.80	16.79	7.39	26.86	1.34	0.63	1.13	11.82	4.67	27.13	21.12
17	1.31	1.63	1.17	11.13	13.00	23.00	0.60	0.83	0.68	10.46	14.45	25.99	24.12
18	1.95	2.35	2.05	9.48	11.43	23.98	1.24	1.31	1.87	8.65	7.00	30.52	25.11
19	3.92	3.68	2.00	14.61	18.46	25.68	2.46	1.08	2.38	10.80	8.69	31.66	25.93
total/average	10.86	9.71	8.03	13.53	12.09	23.21	5.64	4.65	5.85	9.64	7.94	29.87	24.10
7. Bihar													
20	6.59	1.03	3.27	20.12	3.16	17.03	0.37	1.33	1.32	2.77	10.08	23.08	18.39
21	4.90	5.13	5.37	9.14	9.55	21.71	1.10	0.70	0.99	11.08	7.12	27.97	21.97
22	1.68	4.16	3.57	4.72	11.66	24.39	1.15	1.38	1.90	6.04	7.28	28.62	24.86
total/average	13.18	10.32	12.21	10.70	8.46	21.24	2.61	3.42	4.21	6.20	8.12	28.37	21.88
8. Orissa													
23	0.06	1.67	2.00	4.79	7.90	22.48	0.64	0.68	0.76	11.27	7.39	31.19	23.19
24	3.08	0.23	1.19	25.82	1.92	15.69	0.00	0.07	0.11	8.33	6.25	27.25	15.63
25	0.00	0.93	0.00	0.00	10.38	21.70	0.25	0.27	0.23	10.78	11.75	34.99	22.45
26	2.55	0.14	0.75	34.01	1.89	14.04	0.00	0.02	0.03	0.00	4.76	30.57	15.17
total/average	7.19	2.88	4.83	14.86	5.95	19.47	1.20	0.93	1.15	10.43	8.06	31.56	20.10

TABLE 6 (contd.). SHARES OF POOR, RICH AND GENERAL POPULATION, DENSITY OF POOR AND RICH POPULATION AND PER CAPITA CONSUMPTION EXPENDITURE BY REGIONS : NSS EIGHTEENTH ROUND, 1963-64, RURAL AND URBAN

	rural						urban						rural and urban : average per capita consump- tion expendi- ture in Rs.
state and region	p.c. share of population in the all India fractile group obtained in region			population in group as p.c. of popula- tion of region		average consump expenditure in Rs.	p.c. share of population the all India fractile group obtained in region			population in group as p.c. of popula- tion of region		average per capita consump- tion expenditure in Rs.	
	0-10	00-100	0-100	0-10	90-100		0-10	90-100	0-100	0-10	90-100		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
9. West Bengal													
27	0.00	0.80	0.49	0.00	16.31	20.80	0.00	0.00	0.23	0.00	0.00	37.23	30.52
28	1.33	3.86	3.86	3.64	10.53	23.57	2.80	13.75	7.81	3.88	17.01	42.73	29.86
29	1.56	2.95	3.14	4.98	9.39	23.20	0.51	1.21	1.40	3.64	8.67	33.73	24.18
total/average	2.89	7.00	7.29	3.97	10.43	23.83	3.30	15.01	9.44	3.60	15.91	41.33	27.82*
10. Assam													
30	0.00	3.70	2.43	0.00	15.23	26.97	0.00	0.70	0.56	0.00	12.41	43.26	27.80
31	0.38	0.27	0.36	10.61	7.65	21.60	0.00	0.44	0.09	0.00	49.33	68.66	24.16
total/average	0.38	3.97	2.78	1.38	14.25	26.28	0.00	1.14	0.65	0.00	17.34	33.82	27.33
11. Manipur													
32	0.02	0.12	0.15	1.36	7.69	22.20	0.04	0.09	0.09	4.17	9.90	33.52	23.52
12. Tripura													
33	0.01	0.24	0.29	0.20	8.35	23.66	0.02	0.17	0.18	1.40	10.67	38.16	25.29
13. Andhra Pradesh													
34	3.18	2.53	3.36	9.42	7.53	20.69	3.41	2.67	4.02	8.47	6.64	29.61	22.02
35	2.62	1.16	1.74	15.02	6.67	22.18	2.45	0.68	1.28	19.11	5.28	29.47	23.23
36	2.95	1.81	2.68	11.40	7.01	20.35	4.74	1.35	3.22	14.73	4.20	25.79	21.57
total/average	8.74	5.50	7.67	11.39	7.16	20.91	10.60	4.70	8.52	12.44	5.51	28.15	22.39

*includes one more region in urban.

TABLE 6 (contd.). SHARES OF POOR, RICH AND GENERAL POPULATION, DENSITY OF POOR AND RICH POPULATION AND PER CAPITA CONSUMPTION EXPENDITURE BY REGIONS: NSS EIGHTEENTH ROUND, 1963-64, RURAL AND URBAN

state and region	rural						urban						rural and urban average per capita consumption expenditure in Rs.
	p.c. share of population in the all India fractile group obtained in region			population in group as p.c. of population of region		average per capita consumption expenditure in Rs.	p.c. share of population in the all India fractile group obtained in region			population in group as p.c. of population of region		average per capita consumption expenditure in Rs.	
	0-10	90-100	0-100	0-10	90-100		0-10	90-100	0-100	0-10	90-100		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
14. Madras													
37	3.33	4.59	3.83	8.68	11.97	23.98	4.47	5.68	6.22	7.18	9.13	31.04	26.14
38	2.86	3.11	2.99	8.58	10.39	22.92	0.51	2.66	3.91	1.32	6.81	31.16	24.83
total/average	6.19	7.60	6.82	9.07	11.28	23.62	4.98	8.33	10.12	4.92	8.23	31.64	25.58
15. Kerala													
39	2.46	1.12	1.84	15.04	8.88	19.57	0.37	0.78	0.46	8.08	17.00	34.81	20.49
40	3.04	2.08	2.32	13.12	8.93	21.08	4.58	1.66	2.11	21.67	7.85	29.11	21.94
total/average	5.50	3.60	3.95	13.92	8.10	20.45	4.95	2.44	2.57	19.27	9.49	27.05	21.38
16. Gujarat													
41	3.01	1.90	2.34	12.84	8.12	20.00	2.81	4.04	4.19	6.71	9.64	45.27	27.98
42	0.65	2.04	1.84	3.63	11.04	25.03	1.44	2.64	2.95	4.86	8.04	31.75	20.84
43	0.06	0.11	0.13	4.85	8.48	21.78	—	—	—	—	—	—	21.76
total/average	3.72	4.05	4.32	8.63	9.38	22.69	4.24	6.63	7.14	5.94	9.35	39.68	27.36*
17. Maharashtra													
44	1.52	0.68	1.62	0.98	4.48	19.41	1.22	18.10	8.38	1.91	28.53	52.53	33.65
45	1.25	2.00	2.62	4.76	7.61	21.78	8.49	1.12	4.92	17.23	2.27	24.80	22.71
46	1.69	1.38	1.60	9.99	8.67	21.64	2.63	0.68	1.46	17.30	4.67	30.09	23.11
47	2.35	2.60	2.04	11.47	12.72	23.52	1.50	2.01	2.79	5.62	7.21	30.84	25.27
total/average	0.70	6.64	7.78	8.01	8.64	21.75	13.81	22.00	15.54	8.80	14.16	37.78	26.79
18. Mysore													
48	0.32	0.06	0.93	3.44	10.33	23.19	0.45	0.50	0.03	7.18	7.91	30.08	24.12
49	3.35	1.97	2.50	13.43	7.87	20.81	4.50	4.74	4.22	10.60	11.24	30.57	23.54
50	2.09	0.60	1.60	11.22	3.22	18.34	6.69	0.65	2.29	30.15	2.83	20.20	18.75
total/average	5.77	3.53	5.29	10.90	6.67	20.35	11.84	5.89	7.14	10.60	8.25	27.21	21.98

*excludes one less region in rural.

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The way NSS sample designs are prepared, it is difficult to work out an areal distribution of all-India poor, in which the urban-rural classification is obliterated. Also, it should be clear why it is not meaningful to combine the rural and urban poor (or rich) in a region, the former contributing bottom 10 per cent of the rural and the latter bottom 10 per cent of the urban population, the ranking of households being done separately for rural and urban areas.

21. Apart from the two variables already considered, we have also used the average per capita consumption expenditure of the regions, for rural areas as well as for urban areas. Thus, we have maps of India showing per capita consumption expenditures by regions for rural India and urban India. The map for urban India, however, is not interesting because urban India is not connected. In addition, since urban and rural averages can be combined at the regional level, we have also obtained a map of India giving the aggregate regional per capita expenditures. In our scheme of things, poverty of a region can be measured by :

   (i) a high density of all-India poor in the local population;

   (ii) a low density of all-India rich in the local population;

   (iii) a low per capita rural consumption expenditure; and

   (iv) a low per capita consumption expenditure.

22. We may first consider the basic variables, i.e., the percentages of all-India rich and poor residing in a region. These measures say nothing about the poverty or affluence of a region because of unequal sizes of regions. They, however, enable us to answer questions of the following type : Where are the poor (or rich) in rural India located ? Arbitrarily, we have tried to identify regions in which half of the poor and half of the rich in India are located. It is interesting to observe that only 11 regions out of 50 in U.P., Bihar, Orissa, Madhya Pradesh, Andhra Pradesh, and Mysore contain 51.09 per cent of the poor in India. Except for one region in U.P. and one region in Mysore, the 9 other poor regions are connected. A little more than half (52.96 per cent) of the rich are located in only 12 regions in Punjab, Rajasthan, U.P. Bihar, Bengal, Maharashtra, Andhra and Madras. In only 18 regions, all these 50 per cent rich and poor reside, showing that they do not reside in 32 remaining regions. In four regions in U.P., Bihar and Madras, both the poor and rich among those 50 per cent reside showing wider variability. The attached map (1) brings out the position clearly.

23. More interesting results emerge when we observe the densities of the rich and poor by regions. If the all-India rural rich and poor defined in our sense were spread evenly over the country, the percentages would have been 10 in every case. In the actual case, density of the poor will be more than 10 in poor regions and less than 10 in rich regions, and the density of the rich will be more than 10 in rich and less than 10 in poor regions. In map (2), vertical hatching denotes regions with 10 per cent or more of density of the poor and horizontal hatching, with 10 per cent or

MAP (1) : PERCENTAGES OF ALL-INDIA RURAL RICH AND POOR BY NSS REGIONS
18TH ROUND : 1963–64

Percentage of the poor in solid and that of the rich in ordinary type. Vertical hatching
in regions with 3.1 p.c. or more of the poor and horizontal hatching in regions with 3 p.c.
or more of the rich.

MAP (2) : DENSITIES OF ALL-INDIA RURAL RICH AND POOR BY NSS REGIONS
18TH ROUND : 1963–64

Density of the poor in solid and that of the rich in ordinary type.   Vertical hatching in regions
with 10 p.c. or more of the poor and horizontal hatching in regions with 10 p.c. or less
of the rich.

MAP (3) : PER CAPITA CONSUMPTION EXPENDITURE IN RUPEES PER MONTH BY NSS
REGIONS : 18TH ROUND : 1963–64 : RURAL URBAN COMBINED.

Figures give per capita consumption expenditure in Rupees per month. Horizontal hatching
demarcates a large cluster in which boundaries of Rs. 2 or less are neglected.

less of the density of the rich. Regions with cross hatchings, therefore, will show regions with high density of the poor and low density of the rich and regions with no hatchings, high density of the rich and low density of the poor. From the map we find that 19 out of 50 regions, show high density of the rich and low density of the poor. Out of the remaining 31 regions, 17 show high density of the poor and low density of the rich. But there are 11 regions which show low density of both rich and poor and 3 regions showing high density of both rich and poor. Thus, the areal distribution of the rich and poor is far from even in India, and there are as many as 15 regions in India in which either many rich and many poor or a few rich and a few poor reside. The regions of the former type are located in Madhya Pradesh, while of the latter type in parts of Gujarat, Maharashtra, Andhra, Orissa, West Bengal and Bihar.

24. Finally, we may consider the per capita consumption expenditure. For this, we have used the combined estimates pooling the rural and urban averages. The regional per capita expenditures do not show wide variations though the range is from Rs. 15 to Rs. 36 per capita per month. If we consider that a difference of Rs. 2 or less is negligible, then some 25 regions of India form a single cluster of moderate level of per capita expenditure in which the variation between contiguous regions is low. This leaves out half of the regions. Out of these, there are three distinct rich areas : parts of Punjab, Rajasthan and Jammu and Kashmir; eastern areas including parts of West Bengal and Assam; and areas adjoining Bombay. These account for some 10 regions. Then there are some pockets of low and moderate per capita consumption expenditure in Bihar, Assam, Orissa, Mysore, Rajasthan, Gujarat and Jammu and Kashmir and a poor area in Kerala; these account for another 15 regions. Thus, 50 per cent of the regions comprise a connected area with little expenditure variations, 20 per cent of regions could be grouped into three well-defined "rich" areas and the remaining 30 per cent of regions are generally "pockets" of poor and moderate per capita consumption. The position has been clearly brought out in map (3).

25. It is clear from the above that there are relatively homogeneous clusters of regions which cut across the boundaries of the states. For a study of the areal distribution, even smaller units, the NSS strata, would perhaps be better, though stratum-wise estimates of characters will have fairly large margins of uncertainty. However, it is of some interest to present the results by the states as well, because the states are familiar areal units and we are accustomed to think in terms of the states. The estimates by states are presented in Table 7.

26. Cols. (2) and (5) of the table show that for rural India, only four states, U.P. Bihar, Madhya Pradesh and Andhra Pradesh contribute more than half of the poor (54.58 per cent); on the other hand, five states, Madras, Madhya Pradesh, Punjab, Bihar and Uttar Pradesh contribute half of the rich. Thus, U.P., Madhya Pradesh and Bihar make large contribution both to the rich and the poor. Similarly, only 3 states, U.P., Maharashtra and Mysore contribute half of the urban poor (51.12 per cent) and four states, Madras, U.P., West Bengal and Maharashtra contribute a little more than half of the urban rich (54.77 per cent). Thus Maharashtra and Uttar Pradesh make large contributions to both the rich and the poor of urban areas.

TABLE 7. STATEWISE SHARES OF THE POOR AND THE RICH, DENSITIES OF THE POOR AND THE RICH, AND PER CAPITA CONSUMPTION EXPENDITURE, NSS EIGHTEENTH ROUND, 1963-64, RURAL AND URBAN

Columns (2)–(9): **rural**; columns (10)–(17): **urban**; columns (18)–(19): **rural and urban**. Within rural and urban the groups are *poor* (per cent, den-sity, rank) and *rich* (per cent, den-sity, rank), followed by per capita expenditure and its rank.

states (1)	poor per-cont (2)	poor den-sity (3)	rank of (3) (4)	rich per-cent (5)	rich den-sity (6)	rank of (6) (7)	per capita expend. in Rs. (8)	rank of (8) (9)	poor per-cont (10)	poor den-sity (11)	rank of (11) (12)	rich per-cont (13)	rich den-sity (14)	rank of (14) (15)	per capita expend. in Rs. (16)	rank of (16) (17)	per capita expend. in Rs. (18)	rank of (18)
1. Andhra Pradesh	8.74	11.39	10	5.50	7.16	12	20.01	11	10.00	12.44	11	4.70	5.51	14	28.15	12	22.30	10
2. Assam	0.38	1.36	1	3.07	14.25	2	20.28	2	0.00	0.00	1	1.14	17.34	1	33.82	5	27.33	4
3. Bihar	13.18	10.79	8	10.32	8.46	10	21.24	10	2.61	6.20	5	3.42	8.12	10	29.87	9	21.88	12
4. Gujarat	3.72	8.63	5	4.05	9.38	7	22.00	7	4.24	5.94	4	6.68	9.35	6	39.68	3	27.36	3
5. Kerala	5.50	13.92	13	3.50	6.10	11	20.45	13	4.95	10.27	14	2.44	9.49	5	27.45	13	21.39	13
6. Madhya Pradesh	10.86	13.53	12	9.71	12.09	4	23.21	6	5.64	9.64	7	4.65	7.94	12	20.86	10	24.16	9
7. Madras	6.19	9.07	6	7.59	11.23	5	23.52	4	4.98	4.92	7	8.33	8.23	8	31.04	7	25.58	6
8. Maharashtra	6.70	8.01	4	6.64	8.54	8	21.75	8	13.81	8.80	6	22.00	14.16	3	37.78	4	26.70	5
9. Mysore	5.77	10.00	9	3.63	6.67	13	20.35	12	11.84	16.60	12	5.89	8.25	8	27.21	8	21.98	11
10. Orissa	7.19	14.86	14	2.88	5.05	14	19.47	14	1.20	10.43	9	0.93	6.06	11	31.50	8	20.10	14
11. Punjab	1.56	3.44	2	10.22	22.58	1	29.11	1	6.81	12.39	10	5.32	9.67	1	42.84	1	32.10	1
12. Rajasthan	5.55	10.35	7	7.47	13.93	3	23.27	3	4.26	10.11	8	3.78	8.97	7	32.02	6	24.70	7
13. Uttar Pradesh	21.80	12.45	11	14.88	8.60	9	21.37	9	25.47	18.13	13	9.43	6.71	13	29.02	11	24.25	8
14. West Bengal	2.80	3.97	3	7.60	10.43	6	23.83	3	3.20	3.50	2	6.71	15.91	2	41.33	2	27.82	2
15. other states covered	0.11	—	—	2.15	—	—	—	—	0.35	—	—	0.17	—	—	—	—	—	—

Note : Ranking from rich to poor.

27. In so far as rural areas are concerned, Punjab and Assam appear to be rich states on all counts : they have low density of the poor, high density of the rich and high per capita expenditure. On the other extreme, we have Orissa and Kerala with high density of the poor, low density of the rich and low per capita expenditure. Fairly large divergence exists between ranking by densities of the rich and the poor in Madhya Pradesh and Rajasthan; these states should have large inequality in their size distributions : this is corroborated by figures given in Table 2 earlier. In many states, densities of the rich and the poor tell a coherent story, i.e., where density of the poor is low, density of the rich is high, and vice versa. The urban picture is a little more chaotic. But here again, Andhra Pradesh, Uttar Pradesh and Mysore have generally low ranks on all counts; and a fairly high density of the rich in Kerala is compensated by an extremely high density of the poor. On the other side, Assam and West Bengal come out as rich on all counts. Punjab, the richest state according to per capita expenditure, however, surprizingly shows a high density of urban poor. Maharashtra and Gujarat are two other states with moderately rich urban areas on all counts. The estimates of per capita expenditure for the entire area of the states are given in col. (18) and their ranks in the last column. This shows that taken as a whole, Punjab, Assam, West Bengal and Gujarat were the rich states in India in 1963-64 while Orissa, Kerala, Bihar, Mysore and Andhra Pradesh were among the poorer states.

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