1. Fourth-Five-Year Plan - A Draft Outline, p.36.
   Planning Commission, Government of India.
   According to the Draft:
   "The existence of poverty is incompatible with the vision
   of an advanced, prosperous, democratic, egalitarian and
   just society implied in the concept of a socialist pattern
   of development." (p.6).

2. See Bardhan (1970), Dandekar and Rath (1971), Sinhas (1970),


4. On the concepts of poverty in absolute and relative senses,
   there exists a large literature, see Townsend (1970),
   Brownlee (1941), Sen (1970), Smolensky (1960) and
   Fitnass (1962).

   Brownlee defines poverty in absolute sense as follows:
   "My primary poverty line represented the minimum
   sum on which physical efficiency could be maintained.
   It was a standard of bare subsistence rather than
   living", (pp. 102-103).

   Again, Townsend defines poverty very broadly as inequities
   in the distribution of five resources, including income,
   capital assets, occupational fringe benefits, current public
   services and current private services.
He suggests that "needs which are unmet, can be defined satisfactorily only in terms relative to the society in which they are found". He does not accept the distinction between 'absolute' and 'relative' poverty or between 'basic' and 'cultural' needs, because he argues that the "needs which are believed to be basic or absolute can be shown to be relative." Here, he suggests that "Poverty must be regarded as a general form of relative deprivation which is the effect of the misdistribution of resources", and "that section of the population whose resources are so depressed from the mean as to be deprived of enjoying the benefits and participating in the activities which are customary in that society can be said to be in poverty."


7. Each normative approach to the measurement of income distribution has been developed by Atkinson (1970), Pinborgen (1970) and Bentzel (1970).


13. A welfare function is concave if the weighted average of social welfare levels from two income distributions \( x_1 \) and \( x_2 \) is less than or equal to the social welfare of the weighted average of the two distributions, when same weights are used, that is

\[
\int t f(x_1) + (1-t) f(x_2) \geq \int t f(x_1) + (1-t) x_2
\]

for any \( t \), \( 0 < t < 1 \)

A welfare function is quasi-concave when the minimum of the two social welfare levels from \( x_1 \) and \( x_2 \) respectively is less than or equal to the social welfare of the weighted average of the two distributions. Thus the weak inequality (\( \leq \) ) is replaced by strict inequality (\( < \) ), the function is strictly quasi-concave, that is

\[
\text{if } f(x_1), f(x_2) \text{ then } \int f(x_1), f(x_2) < \int f(x_1) + (1-t) x_2
\]

for any \( t \), \( 0 < t < 1 \)


These authors have generalized the result of Atkinson (1970) in situations where size of population varies in two countries.


15. Sen (1976)
Atkinson (1970)


Atkinson points out certain inegalitarian features of the Gini coefficient and Newbery (1970) buttresses the criticism by demonstrating that the Gini ordering over income distribution is not implied by any additive social welfare function when the individual utility function is strictly concave. Dasgupta, Sen and Starret (1973) demonstrate that the Gini ranking cannot be reflected by any group welfare function if it is strictly quasi-concave on individual incomes. Moreover, they maintain that the problem with the Gini Coefficient is that the marginal social rate of substitution between income accruing to individual $j$ and income accruing to individual $(j-1)$ is simply $j/(j-1)$, and is thus independent of the actual income difference between them. As a measure of inequality, this feature may well be unpalatable to some.


A value of the Index $I$, say $0.12$, means that the same level of social welfare could be reached with only 38 per cent, i.e., $1.00 - 0.12 = 0.88$ of the present total income. Alternatively, the gain from redistribution to bring about equality would be equivalent to raising total income by 12 per cent.

The income gap $g_i$ of any individual $i$ is the difference between the poverty line $z$ and his income $y_i$:

$$ g_i = z - y_i $$

The poverty gap measure is normalised by Sen into a per-person percentage gap $I^*$:

$$ I^* = \frac{\sum_{i \in s(z)} q_i}{q^*} $$

where $s(z)$ is the set of the poor. This $I^*$ is called the "income gap ratio."

25. Dadabhaji Naoroji read a paper "Poverty in India" in 1876 before the Bombay Branch of East India Association in which he worked out the per capita output of India.


Maddison was critical about the Indian authors' position on poverty during the British rule. He questioned the claim of some Indian nationalist historians that the Mogul period was a golden age. He quoted Abul Fazl to show the example of poverty in Orissa and Bengal, but the contrary view was provided by Bhargopal (1971).
Some studies (Rao (1963), Radhakrishnan, Srinivasan and Yaidyanathan (1974)) have compared for selected items the USG consumption estimates for individual commodities and commodity flow estimates from official output data. There are significant differences of coverage, differences in classification and differences in valuation between the two sets of figures.

27. Bardhan (1970) and Minhas (1970) described in detail the use of alternative price deflators.


Percentage of literacy in India was 33.8 in 1971 (Census).

32. Sukhatme (1965).


34. Consumption of foodgrains increases from the poorest to the relatively better-off expenditure brackets and this occurs much more rapidly in rural areas than in the urban areas.
Table: Per Capita Daily Consumption of Foodgrains and substitutes at Consumption Levels below the average * (1960-61)

<table>
<thead>
<tr>
<th>Monthly per capita expenditure (Rs.)</th>
<th>Rural</th>
<th>Urban</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 3</td>
<td>356</td>
<td>352</td>
</tr>
<tr>
<td>3 - 11</td>
<td>420</td>
<td>377</td>
</tr>
<tr>
<td>11 - 13</td>
<td>560</td>
<td>388</td>
</tr>
<tr>
<td>13 - 15</td>
<td>616</td>
<td>412</td>
</tr>
<tr>
<td>15 - 18</td>
<td>625</td>
<td>418</td>
</tr>
<tr>
<td>18 - 21</td>
<td>675</td>
<td>445</td>
</tr>
<tr>
<td>21 - 24</td>
<td>705</td>
<td>435</td>
</tr>
<tr>
<td>24 - 28</td>
<td>690</td>
<td>506</td>
</tr>
</tbody>
</table>


Table abridged

The per capita daily consumption of foodgrains and substitutes in rural area reaches 616 grams for households with per capita monthly expenditure of Rs. 13 - 15. If one gram of foodgrains and substitute gives 3.3 Calories, then 2033 Calories can be obtained from 616 grams of foodgrains. According to the estimate of Dandekar and Rath, this takes up nearly 60 per cent of total consumption expenditure of these households. They spend another 20 per cent on other items of food which together
give another 300 calories per day. Thus the entire food at this level gives about 2250 calories per capita per day. Thus in 1960-61, a monthly expenditure of Rs. 13 - 15 was essential to give a diet adequate at least in respect of calories.

As the urban households spend less on food than their rural counterpart, they derive proportionately more calories from food other than foodgrains and substitutes. The NSS data suggest that the urban household secure the minimum calorie requirement of 2250 at levels where their consumption of foodgrains and substitute reaches 490 grams per person per day.

35. Bardhan (1973)

Table: Cost of Minimum diet for the month for an Individual consuming the items as in Column (1) on Daily Basis

<table>
<thead>
<tr>
<th>Daily use</th>
<th>Cost of Diet over a month</th>
<th>1963-69 (Rs.)</th>
<th>1960-61 (Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td></td>
<td>(2)</td>
<td>(3)</td>
</tr>
<tr>
<td>Cereals</td>
<td>15 0z.</td>
<td>10.30</td>
<td>5.20</td>
</tr>
<tr>
<td>Pulses</td>
<td>3 &quot;</td>
<td>3.35</td>
<td>1.51</td>
</tr>
<tr>
<td>Milk</td>
<td>4 &quot;</td>
<td>3.16</td>
<td>1.53</td>
</tr>
<tr>
<td>Gur</td>
<td>1.5 &quot;</td>
<td>2.06</td>
<td>0.72</td>
</tr>
<tr>
<td>Edible Oil</td>
<td>1.25 &quot;</td>
<td>5.06</td>
<td>2.86</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>24.48</td>
<td>11.87</td>
</tr>
</tbody>
</table>

Source: Bardhan (1973)
Assuming that an average person is usually equal to 0.81 adult unit, the minimum diet for an average person in rural India costs Rs. 19.70 per month in 1968-69 and Rs. 9.61 per month in 1960-61. From NSS data it is seen that in 1960-61 total per capita expenditure for the expenditure group which has roughly an amount of food expenditure equal to the minimum diet above was 46 per cent above that on cereals, pulses, milk, sugar - and gur and edible oil taken together; in 1963-69 the former was 42 per cent above the latter. As proper norms for non-food items are not available, these percentages are used to obtain the blow-up estimates of per capita expenditure based on the cost of minimum diet. Thus the estimated rural minimum level of living was Rs. 14.00 in 1960-61 and Rs. 23.00 in 1968-69.

39. The estimate of Minhas is based on data from Second and Third Agricultural Labour Enquiry conducted in the 11th, 12th and 13th rounds of NSS. The numbers of 1960-61 are based on crude guess work and rough interpolation. (Minhas (1970); Appendix.)
42. Data from NSS, 13th round, covering the period September 1957 to May 1958 suggest that the per capita intake of calories for the lowest 20 per cent of Indian population is about 40 per cent less than the All India average. The corresponding percentage for protein is 33 per cent less, for fat 38 per cent less (roughly). The study of Chatterjee, Sarkar and Paul (1971) reveals that the concentration Co-efficient for calories was 0.175 for the above period, for protein it was 0.187 and for fat 0.288.

43. We find from NSS 13th round (February 1963 to January 1964) data that urban price level was, on the whole, 15 per cent above the rural price level for the general population. This differential is 11 or 12 per cent for cereals and cereals substitute, 14 per cent for other food items, 13 per cent for all food items and nearly 26 per cent for the non-food items.

Chatterjee and Bhattacharyya in Dardhan and Srinivasan (eds) (1974).

44. Dandekar and Rath - (1971).


The underestimation in the 1723 estimate of the consumption expenditure of the rich is, according to Rudra, for the fact that skewed income distribution in the country has been reflected in higher emphasis on the consumption pattern of the poorer section of the population than the average consumption pattern. This is seen in the lower figures for the estimates of the consumption items of the rich. Estimates of the purchase of gadgets and other durable consumer goods based on the HCS data are seen to be underestimates when compared with the corresponding supply figures based on production and import statistics. As the income distribution is highly skewed, the probability is extremely high that the upper tail area representing the richer sections of the population will remain unrepresented in the sample.

Bardhan finds that the "green revolution" has brought prosperity in Punjab but that is true only for a handsome few i.e., big peasants. It is seen that technological improvement in agriculture has not been associated with diminution of rural poverty as inequality in income distribution perpetuates. See Nitra, A. (1977), p.144.


Centre of Development Studies, (1975).

Kuznets, S. (1966)

There exists a downward bias in the estimation of national income as production for own consumption is not properly represented. Kuznets makes an approximate estimate of the extent of exaggeration in the national income accounts in the developed country. Assuming that the net missing output in the developing country would be a quarter of the total product of the agricultural sector, and that this, in turn, represents about 40 per cent of output in such countries, Kuznets concludes that their relative per capita income should be raised by roughly one-tenth.


It is held that the exchange rates do not adequately represent goods and services which are not exchanged internationally, even if those reflect the relative prices of goods entering into foreign trade.
In fact, real income per head in developing countries is much higher compared with America than is suggested by estimates obtained simply by converting per capita incomes into dollars at the official exchange rate (Usher 1963).

60. Kuznets (1963)

61. Morgan (1953).
Morgan shows greater inequality in Ceylon and Puerto-Rico than in USA and UK. He generalises his conclusion as follows:

"... that it will be found ... that income distribution in 'under-developed' economies, by size, by occupations and by national groups, is more unequal than in developed economies. The persisting cause is immobility in the widest sense: High incomes, and surpluses in general, are less subject to erosion in a traditional than in a commercial industrial society."


63. Here the implication is that the cumulative frequency distribution of incomes, when drawn on double-logarithmic paper, follows the path of a reasonably straight line for income above the mode.

64. The index number of wholesale prices in 1959 was 123.4 for food articles (1953=100), 121.0 for industrial raw materials, 113.2 for semi-manufactures, 106.3 for manufactures and 117.3 for all commodities.
Source: Office of the Economic Adviser to the Government of India.


66. This is shown in the table below (Swamy (1907).

Sources of Increase in Inequality in the Size Distribution: All India 1951-52 - 1959-60

<table>
<thead>
<tr>
<th>Source</th>
<th>Percentage Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Intra-Sectoral Inequality</td>
<td>15.40</td>
</tr>
<tr>
<td>Rural</td>
<td>0.00</td>
</tr>
<tr>
<td>Urban</td>
<td>15.40</td>
</tr>
<tr>
<td>2. Inter-Sectoral Inequality</td>
<td>47.50</td>
</tr>
<tr>
<td>3. Sectoral Heights</td>
<td>37.10</td>
</tr>
<tr>
<td>Total Increase</td>
<td>100</td>
</tr>
</tbody>
</table>


For each year, three estimates are given; two for sub-samples and one is the combined estimates of the two. Here the combined estimates are considered.

68. In the literature dealing with the duality of the developing countries with a modern exchange sector and an indigenous subsistence sector it is assumed that supply of labour in the subsistence sector is unlimited with wage rate often below the subsistence level. Thus a decrease in the number of workers as a result of migration to modern
sector would not lower the average product of labour and might even raise it.


According to these authors:

"The basic pattern of asset-holding . . . . has not undergone any significant change as judged by the assets distribution on June 30, 1971. If at all, the share of top asset-holding has registered varying increases in most of the states resulting in marginally higher magnitudes of overall inequality" (p.317).


75. A number of studies have supported this view; viz., Hanumantha Rao (1976), and Laxminaraya and Tyagi (1976).


This study reveals that, in India, the share of wages and salaries were lower than poorest countries covered by Kuznets (1953), while the share of the unincorporated business enterprises is considerably higher. The share of income from assets is higher than the average for poorer countries, (pp. 266-67).
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31. NSS 25th Round Survey of the weaker section of rural population (1970-71) give the daily wage at Rs. 2.08 per person at 1970-71 prices.
34. NSS, No. 215, 26th Round, July 1971 - September 1972: Table on land-holding, All India, February, 1972.


