CHAPTER 2

REVIEW OF LITERATURE

INTRODUCTION:

Of late theoretical and empirical explorations in development studies have focussed attention on poverty and distributional aspects of economic growth. This is sought to be understood in terms of the interrelationship between economic growth, income inequality, poverty and welfare obtaining among the various regions and the socio-economic groups therein at national and international levels. Traditionally "development" has been associated with high rates of growth in aggregate and per capita incomes. As such in the earlier approaches to development problems, during the decades of 50s and 60s, exclusive emphasis was laid on raising the aggregate rates of growth of domestic product. This tendency was reinforced by international aid agencies which set growth targets and devised 'performance' indicators on the basis of which assistance was allocated. This focus on aggregate growth rates was prompted by the belief that rapid industrialization and structural transformation would spread the benefits of growth throughout the various strata of society eventually by 'trickle down' process. It was assumed that "reduction of poverty could only be tackled after a certain level of GNP had been reached; first the cake had to be produced and made bigger before it could be equally distributed." Once high
INCOME LEVELS were attained distribution would exert its leveling effect with greater case through rapid percolation. Hence greater inequality in earlier stages was postulated as a necessary precondition for rapid growth in the various influential growth models. This initial trade off between the objectives of growth and distribution was viewed as a transitional cost of successful development before their eventual complementarity was securely established.

But the development experience of a number of underdeveloped countries during the past quarter of a century did not uphold this expectation. Accumulated experience has cast doubt on the proposition that a skewed distribution of income would encourage saving and investment and therefore more rapid economic advance. Though growth rates did accelerate in many post-colonial countries it soon become apparent that they provided no guarantee of a secular rise in the material well-being of the masses. On the other hand many countries of the third world experienced a widening of inequalities among the regions and socio-economic groups and a worsening in the levels of living of the people, sometimes absolute, at the bottom of the socio-economic pyramid. Even in growing economies large number of people have failed to share the benefits of growth and only served "to absorb the political economic and political costs of change and growth".

The gradual realization that a large percentage of population in developing countries has been by-passed by economic growth led to the awareness that growth in average GNP is not a reliable indicator
of improvements in economic well-being. Further the growth of massive unemployment observed in these countries in the face of rapid population growth and the resulting erosion in the levels of living and participation in economic activity led development analysts to question the erstwhile strategies of growth. It became evident that economic growth, to be meaningful, must be attended by increasing participation of masses as it is the only meaningful way of transferring purchasing power and raising the general level of well being. This led to a search for development paths that would result in growth with equity and elimination of poverty. As a consequence emphasis on studies of income distribution, employment and growth has come to be increasingly laid in the current studies.

SCHEME OF PRESENTATION:

The presentation of the content under review is organised on the following lines. Section I focuses briefly on the studies and generalizations drawn from the international experience bearing on the behaviour of inequality with economic development. This is followed by a survey of studies (Section II) on income and expenditure inequalities in India. The third section summarizes inequalities in India. The third section summarizes the evidence revealed by various studies on poverty in the Indian context. The last section (IV) sets out the problem under study in its regional context commenting on the relevance of such explorations.

Section I: Distribution and Development – International Experience:

Systematic work on the distribution of income by size at different stages of development is of very recent origin. The works
of Kuznets,^12 Kravis,^13 Nicholson,^14 Soltow,^15 Stark,^16 Weisskoff, and Fishlow^18 focus on the trends in income inequalities in a number of countries. In fact our early insights into the relationship between economic development and income distribution were provided by Kuznets.^19

Kuznets clarified a number of conceptual issues involved in interspatial and intertemporal comparisons of income distribution and provided tentative answers to the question of changes in income distribution in the process of development. In a classic discussion of historical trends in income distribution he pointed out that a marked feature of economic growth was a shift from the agricultural sector to the non-agricultural sector to be accompanied by an increase in inequality. He examined the shift in terms of inter-sectoral differences, in average incomes, distribution of income within each sector and the migration of work force from agriculture to the non-agricultural sector to be accompanied by an increase in inequality. He examined the shift in terms of inter-sectoral differences, in average incomes, distribution of income within each sector and the migration of work force from agriculture to the non-agricultural sector. The tendency for income distribution to worsen in the earlier phases of development is accounted for by two reasons. The higher per capita incomes in the non-agricultural sector grow faster than in the agricultural sector and the inequality of incomes in the former is greater than in the latter and may grow faster. He pointed out the various factors instrumental in widening the inequalities and argued that the greater proportional accumulation of assets by the rich than by the poor
the urbanization associated with development tend to concentrate distribution over time with reversal coming only later as low income groups gain political influence. He concluded that there probably was "a long swing in the inequality characterizing the secular income structure widening in the early phases of growth when the transition from the pre-industrial to the industrial civilization was rapid, becoming stabilized for a while, and then narrowing in the latter phases." Kuznets did not assert that this period of increasing inequality, lasting some fifty to seventy years, must be repeated by the developing countries. But he pointed out that the underdeveloped countries might have a degree of inequality greater than the advanced countries have now, and that many of them were much poorer than the advanced countries were when they embarked on industrialization. So if the less developed countries experience the same growth in inequality during industrialization, the hardships the poor may have to undergo are likely to be severe.

Kuznets hypothesis sparked many empirical explorations into the relationship between economic growth and inequality. Kravis made an early attempt to compare income inequality cross nationally and to search for reasons why income inequality generally appeared greater in less developed countries than in developed ones and confirmed Kuznets' hypothesis of greater inequality in developing countries.
Kravis computed four measures of inequality\cite{24} for Pretax income among consumer units for ten developed and developing countries in the early 1950s; taking the United States as the basis of comparison, he found that in three countries there was less inequality (Denmark, Netherlands and Israel), in three other countries there was about the same degree of inequality (Great Britain, Japan and Canada) and in four countries inequality was considerably greater (Italy, Puerto Rico, El Salvador and Srilanka). He concluded that the degree of equality tends to be positively correlated with the level of per capita income but that the correlation was not a simple one. Kravis was able to confirm Kuznets' statement that the share of the lowest income groups tends to be higher in the poor countries than in the developed ones. The explanation of the greater inequality in developing countries was therefore to be sought in the greater dispersion in the upper part of the distribution scale.\cite{25}

Harry T. Oshima\cite{26}, joined the debate with a fourfold classification of the stages of development — undeveloped, underdeveloped, semi-developed and fully developed — and suggested that inequality was generally low at the underdeveloped stage and that the dispersion of income grows as countries advance to the next stage. He further suggested that inequality increases during the semi-developed stage, but reaches its peak there and declines during the fourth stage. The main contribution of Oshima's article was that it laid the blame for income inequality on the shoulders of dualism. In his words, "the major determinant of the dispersion of quintile shares between countries is the weight
of farm or rural sector in the total economy" as well as the extent to which the agricultural and urban areas are economically integrated. Secondly, he found that within the rural and urban sectors the standard deviation of quintile shares was largely influenced by the dispersion of land holdings within the rural sector and the dispersion of capital per worker in the rural sector and the dispersion of capital per worker in the urban sector. In an attempt to compare income distributions cross-nationally, Kuznets reentered the discussion in 1963 by generating usable data on sixteen countries, nine of them developing. Classifying pretax family income in these countries by quintiles he made the following observations.27

(a) The share of the upper income groups was distinctly larger in the underdeveloped than in the developed countries. This finding was very clear in the case of the top 5 per cent of the families which typically accounted for 30 per cent of the total income or more in developing countries and for only 20 or 25 per cent in developing countries, and it still held good even if the top 10 per cent or indeed the top 20 per cent of families was taken into account.

(b) The income share of the lowest quintiles is about the same in developed and developing countries. The poorest 60 per cent of families in developed countries received about 29-33 per cent of income, while in less developed countries they received 25-32 per cent.
From these two findings followed a third one, namely that with greater concentration of income in the top group in the developing than in the developed countries and with the share of the lowest group being about the same in both, the share of the middle group was lower in the developing than in the developed countries and that, generally, in the developing countries income distribution was more equal below the level of the top 5 or 20 per cent of families.

A number of studies comparing income distribution in countries at different levels of economic development followed. Paukert examined data on income distribution in fiftysix countries and found a sharp increase in inequality (as revealed by Gini indices) as one moved from the lowest per capita GDP countries upto those in the $300-$500 per capita range. (The $300-$500 range represents those countries with the most extreme inequality). As higher per capita income levels were approached, inequality became progressively less. He pointed out that one should not generalize from the simple fact that the share of the poorest 20 per cent of families in countries below $500 per capita falls as income increases. Subsistence certainly sets a floor to family income; and, in each of these countries, if the poorest 20 per cent are at subsistence level, their share of total income must fall as income increases.
It has also been observed that countries experiencing the most rapid rates of economic growth suffer from increasing inequality; Adelman and Morris, Fishlow, and Wells point to the increasing inequality accompanying rapid growth in Brazil in the late 60s and Arndt finds similar trends in Indonesia. Trends towards inequality along with economic growth have been witnessed by Chenery et al. in many countries.

Adelman and Morris examined data for fortythree developing countries, searching for relationships between patterns of income distribution and thirty one indices of economic, political and social forces which could be expected to influence it. Their findings confirm the hypothesis that, at the lowest levels of development, growth tends to increase inequality. Broadly speaking, in the poorest countries, growth works against the poorer segments of the population. The allocation of income to the poorest 60 per cent of the population is best 'explained' by the extent of socio-economic modernization and the expansion of educational services. Of the variables found important in the Adelman and Morris study, improvement of human resources and direct government economic involvement seem to offer the most promise for greater equity in income distribution.

Ahlawalia's study, a summarised version of the recent work by the World Bank, gave some weak evidence that increasing inequality did not necessarily accompany economic growth. He compared the growth in income of the poorest 40 per cent income
recipients with the GDP growth rate in 18 developing countries and found no clear pattern. It is of interest that the World Bank study turned up two variables related to the quantity and quality of human resources as being most closely related to relative income shares. The level and availability of education was positively related to the income shares of the poorest 80 per cent. Primary School enrolment rates most significantly explained the share of the poorest 40 per cent, and the rates of enrolment in secondary schools played a similar role for the middle 40 per cent of income recipients. In a study of inequality in Asian countries, Oshima found that changes in income distribution are not a result of economic growth perse in explaining changing income distribution. His main conclusion was that undue policy emphasis on industrialization can lead to unemployment, excessive urbanization, regional imbalance and widening inequality. Thus he laid the blame for inequality squarely in the lap of dualistic development.

They selves only to consumer expenditure while others have tried to derive size distribution of personal income by incorporating simple hypotheses about saving behaviour.

The Reserve Bank of India study by Ojha and Bhatt is the first of its kind in building a meaningful pattern from unrelated data from different sources. It relied on integrating income tax data with the consumer expenditure data from NSS in its method of estimation. Analysing the income structure in terms of three groups of three groups...
and comparing the pattern of income distribution in India with some of the developed as well as underdeveloped countries in terms of the concentration ratio, the study indicated that "contrary to general impression, the degree of inequality in income distribution in India does not seem to be higher than in some of the advanced countries."

The National Council of Applied Economic Research conducted two comprehensive studies, one on the urban income and saving and the other on rural income and saving. The former was undertaken for the year 1960 and the latter for 1962. Subsequently the two were put together and the size distribution of income for the country as a whole was estimated. The results of the two studies briefly, are as follows:

Among the rural household the top 10 per cent of the population had a share of 22 per cent of the total household income not very much different from the share of the bottom 50 per cent which had 22.7 per cent to its credit: to put it another way, the top 1 per cent of the rural households had a per capita income which was 12 times the
per capita income of the poorest 5 per cent of the households.

In the urban areas also the results showed a similar situation. While the top 10 per cent of the urban households had a share of more than 40 per cent of the total household income the share of the bottom 50 per cent was of the order of 17.5 per cent.

Another study by NCAER in 1964 provided data on income distribution for both rural and urban areas. If these data are compared with the data for 1962 it would appear that the inequality in income in the rural areas has somewhat declined. In the urban areas, on the other hand, there seemed to be no definite indication of a change. The board conclusion from this data would be that while there is some trend towards reduction in inequality in rural areas, this is not true in the case of urban sector. But for the country as a whole the changes are so small that no definite conclusion can be drawn.

In an elaborate study focussing on the trends in income
distribution, (1953-54 to 1959-60) Ranadive indicated two broad conclusions.

"1. The income structure in India is comparable to that in other underdeveloped countries. The contention that Kuznets' hypothesis of greater income inequality in the underdeveloped countries than in the developed countries is not borne out in the case of India does not seem to be valid.

2. Ten years of planning have not had any impact on the income structure in the direction of narrowing the dispersion. It needs to be borne in mind that our estimates relate to the size distribution of money income and makes no allowance for the possibility of differential increases in the cost of living. Given the generally held belief that the impact of rising cost of living has been more severe on the low income groups, the fact that during the period covered in the study, the richest 2 per cent have improved their relative position would therefore merit further scrutiny."

This has been followed up by another study where she estimated various measures of inequality for income and consumption expenditure separately for all India with rural urban breakup.

In another study Ahmed and Bhattacharya estimated the personal income distribution in India for three different periods 1956-57, 1960-61 and 1963-64 by integrating the size
distribution of consumer expenditure obtained from NSS with the size distribution of income before tax obtained from income tax data on certain simplifying assumptions. Their estimated distributions of per capita personal income (at current prices) indicated a decline in disparities between 1956-57 and 1963-64.

In a cross section study focusing on inequalities in personal income distribution in India, Sarma found higher income disparities in the urban households sector than in the rural. He looked into the income concentration among various socio-economic groups also. Further, in an inter country comparison of income distributions found the degree of concentration of income in India higher than in the economically advanced countries, a finding in conformity with Kuznets earlier results. Examining the changes in income distribution among rural households in India during 1968-69 to 1970-71, Sarma found a decline in inequality over time. His Gini concentration ratios are 0.43 for 1968-69, 0.39 for 1969-70 and 0.38 for 1970-71.

Focussing on the consumer expenditure distribution we may begin with the study of Swamy. He examined the trend in the household consumer expenditure inequalities over the first decade of planning when there was price stability and the economy registered considerable growth. He concluded that the size distribution of income or consumer expenditure widened over the fifties. The size distribution "stretched" at least at its end points, indicating a possible widening of inequality
in the all India size distribution... The Lorenz ratio has shifted away from the line of equality, the index rose from 0.37 in the plan I to 0.39 in the plan II. He attributed 85 per cent of this increase in the size distribution of consumer expenditure to structural changes and the rest to intersectoral changes.

In an extensive study Radhakrishna and Atul Sarma estimated the disparities in consumer expenditure over a long period for 17 different years (1952-53 to 1968-69), adopting quintile shares and Gini concentration ratio for both rural and urban India separately. The inequality measures have been computed for total expenditure at current prices as well as at constant prices; adjustments were also made for differential price impact across decile classes. They concluded that "differential price effects have started operating against the bottom decile classes at a progressively higher pace down the rung ever since 1963-64. As against this trend differentials, while the average per capita expenditure of all classes at current prices has been increasing both for rural and urban India, the real per capita expenditure in urban areas has fallen and that in rural areas has increased marginally. Inequalities in the level of living considered in terms of current prices have narrowed down whereas those measured at constant prices (Base: 1952-53) taking into account price differentials have widened in the period beginning from 1963-64. With no appreciable improvement in real per capita expenditure on the one hand and widening disparities
on the other, the level of living of the people in the bottom decile classes has fallen in absolute terms.49

SECTION III: EVIDENCE ON POVERTY IN INDIA

Poverty is not a recent phenomenon in India.50 The debate on India poverty in the last century vividly brought out the socio-economic conditions of the time and the mercenary impact of the British rule in deepening the poverty of the masses.51 After the advent of independence sustained attempts have been made at planned development and the elimination of structural imbalances and constraints in improving the levels of living of the masses. Also evaluations of the policies of development have been undertaken from time to time.52

In the recent past various empirical studies bearing on the measurement of poverty in India relied on 'absolute poverty' as the frame of reference and adopted an objective boundary poverty line,53 defined in terms of per capita household consumer expenditure 54 (See Table I.4). In 1962, a distinguished study group55 recommended that a per capita consumption of Rs. 20 per month at 1960-61 prices (excluding expenditure on health and education, both of which "are expected to be provided by the state according to the constitution and in the light of its other commitments") should be deemed as the nationally desirable minimum level of consumer expenditure.56 This per capita consumption of Rs. 20 per month has been adopted as the poverty line and the proportion of people below this standard has been
investigated in various studies. Sometimes the lines have been slightly redrawn say at Rs. 180/- or Rs. 200/- per capita per year at 60-61 prices, making a rural and urban distinction also.

Adopting the national averages of per capita consumption at 60-61 prices worked out by Tiwari and applying the NSS ratio of rural of urban consumption, Minhas estimated the per capita overall consumption in rural India in 60-61 prices. Using the NSS estimates of percentage shares of different fractile groups of the population in total consumer expenditure, he derived the average per capita consumption (60-61 prices) of each fractile group of population year by year. His estimates of the number and percentage of persons in rural India consuming less than Rs. 240 as well as Rs. 200 per annum at 60-61 prices are presented below.

The number of people below the poverty line (Rs. 240) did not change much while the proportion of such people below the poverty lines declined steadily. This decline is largely explained by the growth in the average per capita consumption in real terms rather than by the slight fall in the concentration index of consumer expenditure (NSS). Minhas' estimates of poverty have been seriously contested.

Ojha's estimates showed a rise in the proportion of poor people. Adopting a calorie norm of 2250 per capita per day for an average Indian, he assumed that 66 per cent of this must be obtained from food grains, cereals and pulses, in urban areas; 80 per cent was the corresponding figures
for the rural sector. These percentages worked out to 518 gm. and 432 gm. per person per day in rural and urban areas respectively. Ojha adopted these standards for studying the incidence of poverty and found that nearly 52% of all persons in rural areas (184 Million) and 8% in urban areas (6 Million) fell below the poverty line. For the year 67-68 he concluded that 70% of the rural population were below the minimum level of foodgrains consumption.

Dandekar and Rath based their estimation of poverty on a method similar to Ojha with two differences. They use the NSS estimates of consumption of foodgrains (and substitutes) without any correction; secondly they assumed a yield of 200 calories per capita per day from other items of food. They found that for rural areas, in 1960-61, an annual per capita consumer expenditure of Rs.170/- was needed to ensure a diet adequate at least of 2250 calories per capita per day. The equivalent annual per capita expenditure was Rs. 271/- for urban areas, about 60 per cent higher than the corresponding figure for rural households. It was accordingly estimated that in 60-61, about one third (33.12) of the rural population and nearly half (48.64) the urban population lived on diets inadequate even in respect of calories.

In difference to the annual minimum of Rs.240/- per person suggested by the study group (D.R.Gadgil et.al), Dandekar and Rath revised their rural minimum, slightly upwards to Rs.180/- per annum and the urban minimum to Rs.270/- per person per year.
It was found then that about 40 per cent of the rural population lived below the poverty line, the desirable minimum in 1960-61. The current price data into 1960-61 prices is open to objection.

Bardhan's time series profile of the rural poor showed a sharp rise in the incidence of poverty over time. He worked out the proportion of the rural people below an annual per capita expenditure of Rs.180 at 60-61 prices. His estimates are:

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage of poor in rural population</th>
<th>Consumer price Index</th>
<th>Current value of goods worth Rs.15 (per month) at '60-61 price (Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960-61</td>
<td>38</td>
<td>100</td>
<td>15.0</td>
</tr>
<tr>
<td>1964-65</td>
<td>45</td>
<td>144</td>
<td>21.6</td>
</tr>
<tr>
<td>1967-68</td>
<td>53</td>
<td>200</td>
<td>30.0</td>
</tr>
<tr>
<td>1968-69</td>
<td>54</td>
<td>196</td>
<td>29.4</td>
</tr>
</tbody>
</table>


In the absence of consumer price index number for the rural poor, Bardhan used the official agricultural labour consumer price index for deflating the consumption of the rural poor and the official working class consumer price index for deflating that of the urban poor. The former is
constructed on the basis of NSS rural retail prices and the weighing diagrams worked out by the second agricultural labour enquiry. In absolute numbers, Bardhan found a 'staggering' rise in the number of rural poor from about 135 million to 230 million between 60-61 and 68-69. The high incidence for the 67-68 was understandable in view of the preceding exceptionally bad crop years; but the consumer price indices must have been partly responsible for the high percentage of 68-69. Bardhan defended these indices by computing several alternative more appropriate than the national income deflator implicitly used by Minhas.65

When Bardhan computed the cost of minimum diet recommended for an adult in moderate activity by the Central Government employees pay commission (57-59) with slight modification,66 its cost (at current prices) in rural areas worked out to Rs. 9.61 in 60-61. This approach too led to a similar conclusion regarding the incidence of poverty; the percentage of rural poor below the alternative minimum went up from somewhat less than 38% in 60-61 to about 54% in 68-69.

Vaidyanathan67 worked out the proportion of the rural population with per capita consumption below Rs. 20 per month at 60-61 prices. His estimates60 are:

<table>
<thead>
<tr>
<th>YEAR</th>
<th>NSS</th>
<th>OFFICIAL SERIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960-61</td>
<td>59.5</td>
<td>58.8</td>
</tr>
<tr>
<td>1964-65</td>
<td>60.4</td>
<td>56.9</td>
</tr>
<tr>
<td>1967-68</td>
<td>67.8</td>
<td>57.8</td>
</tr>
</tbody>
</table>

The estimates based on wholly NSS data showed a considerable rise during the sixties though the degree of inequality in distribution declined. The second column based on a combination of official estimates of per capita consumption and the pattern of inequalities revealed by the NSS showed a mild fall in the proportion of rural population below the poverty line cited earlier. The price indices were computed for each fractile group by using official wholesale price relatives for ten commodity groups and combining them by NSS based weights. We may note that for 67-68 the price index (base: 60-61) was about 190 for the first five or six decile groups.

Basing on NSS 13th round (September 57 - May 58) consumption data for rural India, Chatterjee et.al found about 53 per cent of the population to fall below the norm of 2400 calories per capita per day. The estimation was based on fairly detailed calculations.

Basing on the NCAER distribution data (study of the effectiveness of employment in rural India) for 1968-69 Bhatty found that about 70 per cent of the population in rural India were below the poverty income level of Rs. 30 per capita per month in that year. He adopted both Sen's poverty Index and the traditional head count in quantifying the incidence of poverty among the various rural occupational groups and found the incidence to be maximum among the agricultural labourers (83%) followed by non-agricultural workers (70%) and cultivators (62%).

Vyas found a decline in the incidence of rural poverty during 1950s and traced this to the combined impact of major
<table>
<thead>
<tr>
<th>Definition of poverty</th>
<th>Percentage of population below the poverty line</th>
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<tbody>
<tr>
<td></td>
<td>Period</td>
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<td>Ahluwalia</td>
<td></td>
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<tr>
<td>Rs. per annum</td>
<td></td>
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<tr>
<td>(1960-61: 100)</td>
<td>180</td>
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<tr>
<td></td>
<td>1956-57</td>
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<td></td>
<td>1960-61</td>
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<td>1965-66</td>
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<td>1967-68</td>
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<td></td>
<td>1970-71</td>
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<td></td>
<td>1973-74</td>
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<tr>
<td>Bardhan P.</td>
<td>180</td>
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<tr>
<td></td>
<td>1960-61</td>
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<td></td>
<td>1964-65</td>
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<td>1967-68</td>
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<td></td>
<td>1968-69</td>
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<tr>
<td>Dandekar V.M. and N.</td>
<td>180 (Rural)</td>
</tr>
<tr>
<td>and N.</td>
<td>270 (Urban)</td>
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<tr>
<td>Minhas B.</td>
<td>200</td>
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<tr>
<td></td>
<td>1960-61</td>
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<td></td>
<td>1964-65</td>
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<td>1967-68</td>
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<td>Djha P.D.</td>
<td>2250 Calories</td>
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<td>per day</td>
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<td>Bandive K.R.</td>
<td>240</td>
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<tr>
<td>Vaidyanathan A.</td>
<td>240</td>
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<tr>
<td>Vyas V.S.</td>
<td>180</td>
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<tr>
<td>Bhatty (NCAER)</td>
<td>300 (1968-69: 100)</td>
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<td></td>
<td>360 (1968-69: 100)</td>
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</tbody>
</table>

   
   
institutional changes and considerable agricultural growth during the period. The proportion of rural poor below the poverty line (Rs. 240 per capita and annum) fell from 45% in 1954-55 to 38% in 1960-61. The period after 60-61 witnessed neither agricultural growth nor institutional change but an increase in poverty.

In a recent study Ahluwalia examined trends in the incidence of rural poverty for fourteen different years spanning the period 1956-57 to 1973-74 for India as a whole (Table 1.4) as well as for the individual states. The time series showed fluctuations in the incidence of poverty in response to variations in real agricultural output per head though no significant time trend was discernible. He found a statistically significant inverse relationship between rural poverty and agricultural performance for India as a whole. This relationship was also observed in several states but there was also evidence of other factors at work which tended to increase the incidence of poverty independently of variations in agricultural output per head.

Mukherjee prepared a map of India delineating clusters of regions relatively homogeneous in respect of level of living and the incidence of poverty. He looked at the serial distribution of poverty over 50 regions. Ranking persons by per capita expenditure he formed a group comprising the poorest 10 per cent of India's rural population and then examined how many of these poor fell in different regions. Judging both the rural and urban segments of the states as a whole on the criteria of density of the poor, density of the rich and per capita expenditure, he found Orissa, Kerala, Bihar, Mysore and Andhra Pradesh among the poorer
In a wide ranging study, the Centre for Development Studies focussed on 'economic evaluation of selected measures against poverty and unemployment and their implication for development policies' with reference to Kerala. It examined the incidence of poverty and food intake (from the food balance sheets covering a period 1960-61 to 1970-71) and found from a cross section analysis across states in India that the average per capita calorie intake for the urban population was directly related to the per capita income and per capita output of food grains in the state; on the other hand the per capita calorie intake of the rural population was not explained by the per capita income but was directly related to per capita food production in the state and inversely related to the level of inequality in ownership holdings. This was attributed to "the limited power of relatively poor and scattered rural communities to attract supplies of food grains from a distance after covering the marketing costs and distributive margins". Hence it found that raising the level of income in rural areas through public works programmes was by itself unlikely to bring about significant reduction in poverty in the absence of both growth of production and of reduction in inequalities in rural areas.

In a regional study of changes in rural poverty and inequality over the decade of sixties Indira Rajaraman found a deterioration in the absolute levels of living and a rise in the incidence of poverty. She measured poverty by the percentage of population below the poverty line worked out specifically for the region using
linear programming techniques. She concluded that "there was a significant deterioration over the ten year period not merely in terms of the relative distribution of consumption, but more seriously, in the absolute consumption levels of the poorest 25 per cent of the population. The finding assumes an added significance when it is seen to have occurred during a period of growth and a generally rising mean consumption level".

Deepaklal found a decline in the incidence of poverty among rural labour households in five states between 1956-57 and 1970-71. He adopted three alternative estimates of the state level poverty lines of Dandekar and Rath and Bardhan and utilised the rural labour enquiries of the NSS for 1956-57 and 1970-71. He noticed a significant negative correlation between the percentage change in the proportion of sample households below the poverty line and the percentage change in the average household income for the sample group as a whole, further the former was also correlated (though at a fairly low level of significance) with the percentage change in the cereal output of the period.

Parthasarady examined the economic conditions of rural labour and found 80 per cent of the labour households below the poverty line of Rs. 450 per capita annual income at 1972-73 prices. The proportion varied between landless and landed labour households; it was 86 per cent among the former while the corresponding percentage among the landed was 63.

In another study Sarveswara Rao highlighted the higher incidence of poverty and inequality in a more developed rural region.
a tribal area Desai et. al. found more than 80 per cent of the population in abject poverty. Finally, Radhakrishna et. al. in an elaborate case study of urban poverty and slums found the incidence to be rampant among the urban vulnerable social groups.


4. Leibenstein - Galenson Model is an example.


8. For instance a given rate of growth has drastically different implications depending on whether it is concentrated in say the 20% of the population with the highest or lowest income. See Simon Kuznets: *Population, Capital and Growth* (New York, W.W. Norton & Co., 1973) and Hollis Chenery et. al: *Redistribution with Growth*, 1974. Also the distorted weighing implicit in relying solely on the rate of increase of GNP is emphasised even more when attention is focussed on specific deprivation associated with poverty,
most notably the prevalence of malnutrition, infectious and parasitic diseases among low income families.


10. Among others, see Nirmal Kumar Bose: Selections from Gandhi, Navjivan Publishing House, Ahmedabad, 1957, pp. 46-48. In reply to Rabindranath Tagore's criticism of Swadeshi Movement Gandhi writes: "True to his poetical instinct, the post lives for the morrow and would have us do like wise. But I have had the pain of watching birds who for want of strength could not be coaxed even into a flutter of their wings. The human bird under the Indian Sky gets up weaker than when he pretended to retire. For millions it is an eternal vigil or an eternal trance... The hungry millions ask for one poem-invigorating food. They cannot be given it. They must earn it and they can earn only by the sweat of their brow".


pp. 1-80. See also his Modern Economic Growth, Yale University Press, 1966, particularly pp. 206-217.


24. These measures were quintile shares, the Gini concentration ratio, coefficient of variation and the standard deviation of the logs of income.


32. H.W. Arndt: "Development and Equity: The Indonesian Case", *World Development*, Nos. 2 and 3, February-March 1975. Also see Dwight Y. King and Peter D. Weldon: "Income Distribution and Levels of Living in Java: 1963-70", *Economic Development and Cultural Change*, July 1977, pp.699-711. Relying on a number of measures such as 5P of Logs, Coefficient of Variation, Gini Index, quintiles and supplementing income data with rice consumption as an indicator of level of living (They adopted poverty lines in terms of 'Rice equivalent' of 240 kg and 360 per capita per year for rural and urban areas respectively in 1969-70) they found a general picture of worsening distribution and deterioration in the real level of living for (approximately) the bottom 40% of the population.


35. M.S. Ahluwalia: "Income Inequality: Some Dimensions of the Problem" in Chenery et.al.


39. The threefold division is: (i) Households with income up to Rs.3000/- (ii) Households with yearly income between Rs.3001 and Rs.25,000/- and (iii) Households with yearly income above Rs.25,000/-.


42. K.R. Ranadive: "Pattern of Income Distribution in India: 1953-54 to 1959-60", Bulletin, Oxford University Institute of Economics and Statistics, August 1968, pp.231-261. The main sources of her data base are (i) NSS data on consumer expenditure, (ii) Savings estimates of the RBI and the NCAER and (iii) All India Income Tax Statistics Published by the Central Board of Revenue.

43. K.R. Ranadive: "Distribution of Income: Trends Since Planning", 1971 (mimeo). The measures of inequality adopted are (1) the concentration ratio, (2) the standard deviation of logarithms, (3) Coefficient of variation, (4) Share of the lowest decile and (5) the share of the highest decile.


Subrahmanya Swamy, op.cit., p.162.


54. The aptness of the choice cannot be overemphasised in a country like India where the level of material living is so low that in a majority of cases disposable income is synonymous with household consumer expenditure.

56. The norm did not make any distinction between rural and urban areas.


58. The unsatisfactory nature of this procedure is realised by him in view of the persisting differences between NSS and official estimates of total consumption.


60. B.S. Minhas, ibid, p.257, 256.


62. He employed NSS 16th round data (July 60 - August 61) and corrected the NSS estimates of food grain consumption for overreporting in the light of official estimates of availability.


65. M. Mukherjee, N. Bhattacharya and G.S. Chatterjee, op.cit.

66. This diet bundle included 15 oz. of cereals, 3 oz. of pulses, 4 oz. of milk, 1.5 oz. of sugar and gur and 1.25 oz. of edible oils per day. There are groundnuts (1 oz) and vegetables (6 oz) in the bundle ignored by Bardhan in the computation of the cost because of the non-availability of retail prices.


68. A. Vaidyanathan; Ibid, p.240


The other poverty lines adopted by him are Rs. 15, 20, 25 and 35 income per capita per month.


Montek S. Ahluwalia: "Rural Poverty and Agricultural Performance in India", *The Journal of Development Studies*, April 1978, pp. 289-232. The poverty line adopted was the per capita consumer expenditure of Rs. 15/- for 30 days at 60-61 rural prices; equivalent poverty lines for different years were derived by using consumer price indices for agricultural labourers (as Bardhan did). Both Sen's poverty index and the traditional head count were adopted.


Centre for Development Studies, *op. cit.*, p. 148


82. Of the six states Maharashtra, Orissa, Rajasthan, Punjab, Uttar Pradesh and Mysore, he found decline in poverty in the former five states.


84. B. Sarveswara Rao: "A Study of Rural poverty and inequalities in a Developed district (East Godavari, Andhra Pradesh)", Andhra University, Waltair, 1977.


86. R. Radhakrishna, Bhanumati K. Parikh, Niresh C. Shah: An Exploratory Study on Slums, Employment, Poverty and Liquor Consumption (A Case Study of Ahmedabad Slums)".