Chapter - 3

Studies on Inequality

Wide disparity in the living standards of the Indian population in both rural and urban areas has attracted the attention of a number of economists who have tried to measure the change in the degree of inequality in the income distribution and that in consumption expenditure. Moreover, attempts have been made to compare the degree of inequality existing in India with the same in other countries. A survey of the existing literature in this respect should be preceded by a discussion of the following points, as clarification of these points will facilitate the evaluation of the existing literature.

First, it is difficult to compare the per capita income of a developing country like India with that of a developed country because of the limited scope of national income accounts in the former. Moreover, objection has been raised in the use of exchange rates to convert all figures to a common standard and it is recognised that exchange rates may be a poor guide to purchasing power. As the study of David (1973) suggests the true gap regarding the 'real' per capita income between the United States and other countries is only four-ninths of that indicated by exchange rate conversion.

Secondly, while it is difficult to generalize about inter-country differences because of heterogeneities of different sorts — historical, physical and regional in addition to the
purely economic, we can still arrive at some conclusion regarding the effect of growth on size distribution of income by shifting to inter-temporal comparisons. This is as follows: Though inequality is generally low in the pre-industrialization stage, it tends to rise with the growth of towns and cities which emerge and flourish with capitalistic enterprise and growing commerce. Concentration of capital occurs with the growth of firms and urbanization increases regional disparity. But beyond this early phase it is difficult to generalise about the pattern of the change in the inequality-index as economic development proceeds. Kuznets maintains that the degree of inequality is lower in the developed economy compared to the less developed countries. Kuznets has been supported by others and these authors, after a careful scrutiny of the size-distribution of income of some countries, maintain that the distribution of income tends to be more equal, the longer and the more thoroughly the country has been exposed to the processes of social and economic transformation after the advent of industrialization.

We may now turn our attention to the studies on inequality in India. The RBI Study (1962) has two parts: in the first, the method of estimation and the average state of income distribution during the period 1953-54 to 1956-57 have been described; and in the second, changes in the income distribution from Period I (1953-54 to 1954-55) to Period II (1955-56 to 1956-57) has been analysed. This study was undertaken under the
guidance of Ojha and Dhatt (1964). Taking the household as the income-receiving unit, it attempts to present the pattern of income distribution in the households sector only, which comprises households, non-corporate business (including agriculture), and private collectives like temples, educational institutions and charitable foundations. The household sector is divided into three income groups: (i) low income group with annual income below or equal to Rs. 3000, (ii) households with an annual income between Rs. 3001 and Rs. 25,000, and (iii) top income group with annual income above Rs. 25,000.

The essence of the method of estimation used in the study is the integration of the income tax data with the consumer expenditure data from the National Sample Survey (NSS). The integration is indirect as the study does not use either the actual expenditure given in the NSS data or the actual income given in the tax data, except in the case of salary earners. Expenditure is assumed to be equal to income for those with annual expenditure equal to or below Rs. 3000. Again, the proportion of population and the size of the households in various expenditure brackets given in the NSS data on consumer expenditure are used for the following: First, to estimate independently from the population data (i) the distribution of rural and urban households between low income groups and high income groups, and (ii) the total number of households in the rural and urban areas separately. Secondly, to
estimate independently from the national income data the distribution of personal consumption expenditure between the rural and urban sectors and between low income and high income groups within each sector. The savings made and taxes paid are then added to derive personal disposable income and personal income respectively of the various income groups.

Moreover, personal incomes accruing to households in the top income group are obtained directly from the income tax data on the assumption that each salary earner assessed to tax represents one household. Income tax data are also used in the estimation of personal income accruing to households in the high income non-salary earners' group both in urban and rural areas in so far they are obtained as residual magnitudes. The distribution of incomes and households in this group is also done from income tax data. The independently estimated households and incomes are then put together to derive the pattern of income distribution.

The study reveals that for the period 1953-54 to 1956-57 the top decile accounts for 23 per cent of personal income, while the bottom decile obtains only 3 per cent. The Lorenz ratio for disposable income is only slightly lower (0.333) than that for personal income (0.340). Income distribution is more uneven in the urban sector than in the rural sector; the urban sector concentration ratio for personal income is 0.40, while this ratio for the rural sector is only 0.31.
Ghia and Bhatt (1964) then conclude as follows:

"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 economies."

This conclusion of the authors goes against the thesis of Kuznets and the empirical findings of Morgan (1953) and others. This view has been challenged by Ramadive (1965), Swamy (1965) and Mueller and Barna (1965). Though the debate is primarily concerned with the above conclusion of Ojha and Bhatt rather than with the index of inequality as revealed in their study, this has cast some doubt on the basis on which the study of Ojha and Bhatt depends.

According to Ramadive (1965), the RBI study is "marred by a lack of appreciation of the need for an appropriate concept of 'personal income', an incorrect use of IRS data for deriving size distribution of household income and by what seems to be a methodological error which has resulted in over-estimation of households in the high income groups." A close scrutiny of the RBI study shows that the number of households in the high income group is over-estimated, which is revealed by the fact that the number of households in non-salary earners' group is about six times higher than the number of the corresponding group in the tax data. Again, according to Ramadive, the concept of 'income' in the study excludes some elements and so the personal disposable
income in high income groups is likely to be underestimated. Thus the under-estimation of income and/or over-estimation of households in the higher income groups might account for the sharp difference of this study with the thesis of Kuznets (1963) supported by some empirical studies.

Mueller and Sarkar (1963) have pointed out that the assumption in the study of Ojha and Bhatt leads to a downward bias in income inequality and they have ignored an important body of data, which is a survey conducted by NCAER in 1969 with a stratified probability sample of 4400 families in 50 cities and towns all over India.62 Mueller and Sarkar have shown that NCAER income distribution is much more unequal than the Ojha and Bhatt distribution. Moreover, the saving estimates in RBI study do not correspond with the NCAER estimate. Criticising the thesis of Ojha and Bhatt, Guwah (1965) also contends that the pattern of income distribution in India supports the thesis of Kuznets.

Lydall (1960) assumes that Pareto 'Law' of distribution holds in India. He then makes use of income-tax statistics of individuals and Hindu undivided families, and converts the RBI 10th round data from household to a per-person basis, the income of each household being divided by the number of persons in that household. He further assumes that average number of persons covered by each tax assessment is about three. The result of his study is as follows. The top ten per cent of Indians account for
34 per cent of pre-tax income and 33 per cent of post-tax income in 1955-56. The corresponding figure for United Kingdom in 1954 are 30 per cent and 25 per cent respectively. But Lydall is cautious regarding any comparison of income distribution because coverage of income-tax is much smaller in India compared to U.K. and the estimate of direct income distribution in India is absent.

Since Lydall's study is based on income tax data, we do not get any reliable picture of the pattern of income distribution as a whole in the fifties.

Mukherjee and Chatterjee (1967) have utilised NSS data and the national income estimates to indicate broadly the behaviour pattern of income distribution. The premises of the study are as follows:

(1) First, statements are made about the nation as a whole and hence reliance has been placed on national income and allied information which relate to the country as a whole.

(II) Secondly, the reference period is 1950-51 to 1965-66. Moreover, an attempt has been made to construct size distribution of income at constant prices.

The study reveals that disparity of private consumption expenditure at current prices showed some reduction at the All-India level during the period 1953-54 to 1961-62. But disparity of private consumption expenditure in real terms showed a large
increase from the First to the Second Plan period and then maintained a high level. Again, the evidence is not conclusive on the movement of inequality in the distribution of personal income by size reckoned at current prices, but the overwhelming suggestion is that there has been some increase in inequality after 1953-54 and also towards the end of the period. Moreover, there has been a marked increase in disparity in distribution of personal income by size reckoned in real terms throughout the period.

Nalibero and Chatterjee implicitly assume that prices of cereals and non-cereals change in the same direction and also by the same proportion. While the first part of the assumption is generally true, the second part is not borne out by facts. Again, NSS data give changes in the prices of individual cereals as well as shift in the composition of cereals and this must be adjusted to get a proper index for deflating the consumption expenditure.

Swamy (1967) has adjusted the NSS data for reference period biases and differences in valuation. He establishes that inter-sectoral inequality is connected with the shift in the size distribution and the overall size distribution of income has little meaning unless it is examined along with the components of this distribution. According to Swamy about 85 per cent of the increase in inequality in the size distribution of consumer expenditure over the decade 1951-60 was due to structural shift in the
economy and only about 15 per cent was due to intra-sectoral changes in inequality. Thus Swamy emphasizes the importance of the study of structural parameters, as a study of intra-sectoral inequalities alone would not truly indicate the changes in the size distribution of income for the country as a whole.

The implication of Swamy's study is that the process of industrialization causes shifts in relative weights of different sectors, and without radical changes in the institutions, inequality in the income distribution must inevitably rise over time. Neglect of this aspect, according to Swamy, is the principal cause why some income distribution studies show a decline in the disparity in the income distribution. Further, Swamy has estimated that inequality remained more or less stable in rural areas, but increased in urban areas, which is reinforced by the fact that the proportion of population increased in urban areas over the period. This increased the disparity between rural and urban areas.

Modifications to the Ojha and Bhatt method have been suggested by Ranadive (1973) to allow for net dissaving by poorer income groups and for possible tax evasion in the top income groups. Ranadive adopts two extreme alternatives: (i) where households with annual income less than Rs. 2000 in the urban sector and with income less than Rs. 720 in the rural sector are assumed to have zero net savings and all evaded tax payments are assumed to be fully reflected in consumption and/or savings, and (ii) where households with annual income less than Rs. 3000 in the urban
sector and with income less than Rs. 1200 in the rural sector are assumed to have negative savings, which constitute 25 per cent of the total urban savings in the case of the former and 14 per cent of the total savings in the case of the latter. As for evaded tax payments, they are not reflected in consumption and/or savings, so that the estimated amount of tax evasion is added to the disposable income of the tax-paying classes. Now case (ii) should show higher inequality than case (i) due to the assumptions relating to savings and tax evasion.

Ranadive's estimate shows that in the year 1961-62, the bottom 20 per cent of population accounted for 7.6 to 7.8 per cent of total income, and top 20 per cent accounted for 45.5 to 46.7 per cent. The Lorenz ratio was between 0.351 and 0.367. The assumption of Ranadive that in the savings group total saving is distributed in proportion to consumption expenditure has been questioned by Bardhan (1974).

Ahmed and Bhattacharya (1972) have tried to integrate the size distribution of consumer expenditure obtained from NSS data with the size distribution of income before tax, obtained from income tax data, to estimate the size distribution of per capita personal income in India in three different periods, 1956-57, 1960-61 and 1963-64. They have followed the technique developed by Lydall (1961) and their study is a more systematic and rigorous extension of the earlier attempt of Ahmed (1971). This approach is based on two assumptions: (i) income (before tax)
equals consumer expenditure in the lower ranges of per capita consumer expenditure, and (ii) the distribution of per capita personal income before tax is asymptotically Paretoian for high values of per capita income and has the same slope as the distribution of assesses by size of incomes before tax.

The results of the study of Ahmed and Bhattacharya are as follows: For the first fit, where Pareto Curve is fitted to the size distribution of income before tax taking all income classes above Rs. 20,000, the Lorenz Ratio is 0.413 for 1956-57, 0.379 for 1960-61 and 0.372 for 1963-64. Again, for the second fit, that is where Pareto Curve is fitted taking the last interval of income before tax as Rs. 100,000 and above, the Lorenz ratio is 0.403 for 1956-57, 0.382 for 1960-61 and 0.361 for 1963-64.

Thus the distribution of per capita personal income at current prices shows a decline in disparities between 1956-57 and 1963-64. However, this result has been qualified by the authors with two points: First, considering the fact that price increases have been more sharp for the lower income groups than for the higher income groups, this decrease in the inequality in nominal income distribution may be more 'illusory than real'. Secondly, this decline, the authors suspect, may be traced to the 'inherent weaknesses' of the two sets of data.

Baruha (1974) points out that the first assumption of Ahmed and Bhattacharya rules out dissaving in the lower income brackets and so it leads to some understatement of inequality.
Moreover, considering the fact that the number of income tax assesses is not even 1 per cent of Indian population and rural rich are mostly beyond the net of income tax authority, the technique of fitting Pareto distribution in the Indian context may very well distort the picture.

On the basis of IRS data Vaidyanathan (1974) analyses inter-state variations in the levels of inequality. Vaidyanathan shows that data from the 13th and the 22nd rounds suggest a negative association between the Lorenz ratios of consumption and per capita consumption expenditure, though the coefficients are not statistically significant. The study further reveals that, in rural India, greater inequality in the distribution of land is associated with more uneven distribution of consumption. Moreover, the pattern of land ownership is much more important than the pattern of land operation in determining the degree of consumption inequality. This result is quite consistent with a priori judgement; as land is the most important source of income in rural areas and as production structure is largely disorganised the holding of land gives important leverage to the owners who reap the advantages of a hierarchical society.

Vaidyanathan calculates the changes in Lorenz ratios during the decade 1957-58 to 1967-68; for rural India the inequality index (LH) has decreased from 0.334 in 1957 to 0.293 in 1967-68. But the variations over the states are not uniform; while for Andhra Pradesh, Assam and Madhya Pradesh the decline is sharp
The regional variation of inequality in rural India has been analysed by Shetty (1974) also. He has divided the rural population (workers) into three categories — cultivators, agricultural labourers and non-agricultural workers. Then he presents the Gini Coefficient of inequality in income distribution for India for 1968-69. Inequality is found to be highest in Sujrat followed by Uttar Pradesh, Mysore and Tamil Nadu, and it is lowest in Orissa followed by Assam, Bihar, Kerala and Rajasthan.

Income distribution is most unequal among the cultivators, as Shetty has shown, the $G$ is 0.490. Again, the degree of inequality is lowest among the agricultural labourers with $G = 0.37$; the position of the non-agricultural workers lies in between the two with $G = 0.377$. But in Punjab-Haryana, the Gini Coefficient for agricultural labourers is higher than for non-agricultural workers and in Orissa, the index for agricultural labourers is above that for the cultivators. The study further reveals that the per capita income of agricultural labourers has a strong positive association with the per capita income of the rural population, with coefficient of rank correlation $+0.82$, at 1 per cent level of significance; though inequality in their per capita income seems to be on the rise. Thus while the first result indicates that agricultural labourers can share in any
general improvement in the health of the rural economy, this paves the way for rise in inequality in their incomes.

As the study of Shetty relates only to the year 1968-69, it fails to give any indication of the change of inequality in rural India. Again, the categorization of rural income classes as cultivators, agricultural workers and non-agricultural workers misses the point that the position of small cultivators is sharply different from that of the large land-owners. The high index of inequality among the cultivators may be explained by this difference.