Report of The Expert Group on Estimation of Proportion and Number of Poor

Perspective Planning Division
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Government of India
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REPORT OF THE EXPERT GROUP ON ESTIMATION OF PROPORTION AND NUMBER OF POOR

We, the undersigned, members of the Expert Group on Estimation of Proportion and Number of Poor, have adopted the Report and submit the same.

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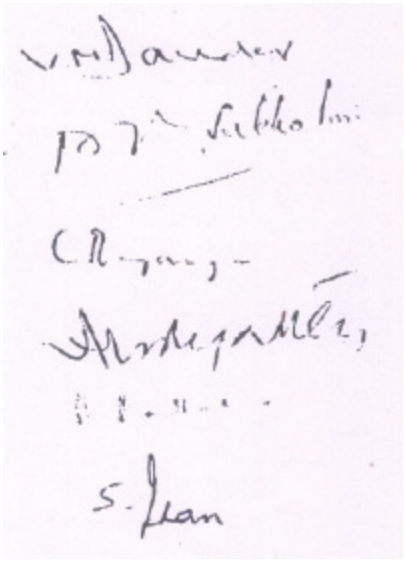

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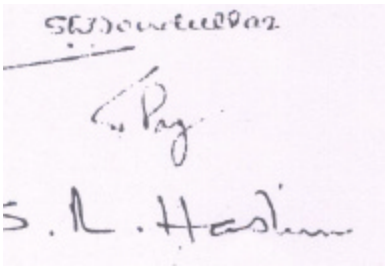

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Chapter 1

INTRODUCTION

1.1 A number of methodological issues have been raised in respect of the estimates of poverty released by the Planning Commission. In view of the importance of poverty eradication as a social objective, wide ranging references to the incidence of poverty in discussions relating to social problems as also their use in allocation of funds for poverty alleviation programmes, it was thought that all the issues relating to the estimation of poverty could be considered afresh by an expert group.

1.2 The Planning Commission constituted, in September 1989, an 'Expert Group' to consider methodological and computational aspects of estimation of proportion and number of poor in India. The terms of reference of the Expert Group are as follows:

> "to look into the methodology for estimation of poverty at national and state level and also to go into the question of re-defining poverty line, if necessary."

1.3 The initial composition of the Group and its subsequent re-constitution is shown at Annexure V.

1.4 The Group held a number of meetings and directed various empirical exercises to be carried out. Background papers circulated among the members of the Group included studies made by scholars, representations received from State Governments and a note from the Minister of State for Planning & Programme Implementation. After taking into account all the papers circulated and the empirical exercises carried out in the Perspective Planning Division, the Group finally recorded its recommendations which are presented in this Report. The Group gave due consideration to the available studies, the representations made and the issues raised and brought to its notice.

1.5 The layout of the report is as follows. Chapter 2 briefly outlines the concept of poverty, the definition of poverty line and its limitations. Chapter 3 discusses the present methodology of the official estimates of poverty and dwells upon various issues in the estimation of poverty that have generated a debate in recent years. Chapter 4 records the recommendations of the Expert Group. Chapter 5 deals with the related issues and the need for further work. There are two supplementary notes by two of the members, placed at Annexure I and II. A note on exploratory exercises is placed at Annexure IE. A technical note on State specific cost of living indices and poverty lines alongwith weighting diagram is added at Annexure IV.

1.6 The Late Professor D.T. Lakdawala, under whose Chairmanship this Expert Group was constituted, was deeply involved in the work of the Group right from the beginning. The outline of the report and the main thrust of the recommendations were almost finalised in the last meeting chaired by him about two weeks before his sad demise on 16th April, 1992. The Group gratefully acknowledges its deep sense of gratitude for the inspiration and guidance provided by its Late Chairman Professor D.T. Lakdawala.

1.7 Professor B.S. Minhas, Dr. Raja Chelliah and Dr. Y.K. Alagh, who were Members of the Group in its initial stages of working, greatly enriched the deliberations of the Group and helped in chalking out its course of work.

1.8 The Group is also grateful to the National Sample Survey Organisation and the Computer Centre of C.S.O. for retabulating some of the data on household consumer expenditure as per the requirements of the Expert Group.

1.9 The Expert Group wishes to place on record its gratitude to the officers and the staff of the Perspective Planning Division, Planning Commission who have worked hard to put together and analyse all the available material and have assisted the Group in completing its work. Shri J. Satyanarayana, Joint Adviser, Smt. Savita Sharma, Senior Research Officer and Shri Rajeev Malhotra, Senior Research Officer handled all the empirical work and assisted in putting together the final draft. Shri Shailendra Sharma, Joint Adviser, assisted the Member-Secretary in coordination of the work. Shri Deepak Rathore, Shri N.K. Arora and Shri Sanjay Gupta typed out the entire manuscript on the Word Processor and Shri Ashok Chanana, Senior Systems Analyst, NIC, assisted in the computer layout of the report.

Chapter 2
DEFINING POVERTY-APPROACH AND LIMITATIONS

2.1 In spite of the diversity of opinion among experts on the methodology of measuring poverty, the importance of quantifying it has been well recognised, especially since poverty alleviation has become an important Plan objective and successive plans have been specifying poverty alleviation targets. Poverty estimates have entered the consciousness and parlance of a wide public - politicians, bureaucrats, academicians, media, students, and activists, and have helped to promote awareness and public action. The poverty estimates have not only been used for evaluating development efforts, but over time, have found use in the allocation of funds for poverty alleviation programmes among the States. An acceptable and representative quantitative index of poverty is, therefore, necessary.

Definition of Poverty Line

2.2 Defining a poverty line is the first step in estimating poverty. A poverty line dividing the poor from the non-poor is used by putting a price on the minimum required consumption levels of food, clothing, shelter, fuel and health care, etc. The definition of poverty line in the Indian context was attempted for the first time in 1962 by a Working Group of eminent Economists and social thinkers after taking into account the recommendations of the Nutrition Advisory Committee of the Indian Council of Medical Research (ICMR, 1958) regarding balanced diet. The Working Group [1] , comprising Prof. D.R. Gadgil, Dr. B.N. Ganguli, Dr. P.S. Lokanathan, Shri M.R. Masani, Shri Ashok Mehta, Shri Pitambar Pant, Dr. V.K.R.V. Rao, Shri Shriman Narayan, Shri Anna Saheb Sahasrabuddhe, set up by the Seminar on Some Aspects of Planning, after considerable discussion on minimum standard of living, recommended (in 1962) that:

(i) The national minimum for each household of 5 persons (4 adult consumption units) should be not less than Rs. 100 per month in terms of 1960-61 prices or Rs.20 per capita. For urban areas, this figure will have to be raised to Rs.125 per month per household or Rs.25 per capita to cover the higher prices of the physical volume of commodities on which the national minimum is calculated.

(ii) This national minimum excludes 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.

[1] See for reference: "Perspectives of Development : 1961- 1976, Implications of Planning for a Minimum Level of Living "(Paper prepared in the Perspective Planning Division of the Planning Commission) - in Bardhan and Srinivasan (1974) : Poverty and Income Distribution in India". Statistical Publishing Society, Calcutta.

(iii) An element of subsidy in urban housing will have to be included after taking Rs. 10 per month, or 10 per cent as the rent element payable from the proposed national minimum of Rs. 100 per month.

2.3 Dandekar and Rath [2] in their seminal work on poverty used an average calorie norm of 2,250 calories per capita per day for both rural and urban areas, as a criterion to define the poverty line. On the basis of National Sample Survey data on consumer expenditure, the study revealed that, in rural area, the households with an annual per capita expenditure of Rs. 170.80 (or equivalently Rs. 14.20 per capita per month) at the 1960-61 prices consumed on an average food with calorie equivalent of 2250 per capita per day together with such non- food items as they chose. The corresponding figures in the urban area were Rs.271.70 and Rs.22.60 at 1960-61 prices. In comparison with the recommendations of the Working Group (1962), the authors observed that the rural minimum determined by them was considerably below, while the urban minimum determined by them was a little above the level recommended by the Group. In view of this, they decided to revise the rural minimum slightly upwards to Rs. 180 per annum or Rs. 15 per month. Similarly, they rounded off the urban minimum to Rs.270 per annum or Rs.22.50 per month, both at 1960-61 prices.

2.4 The poverty norm or national minimum of Rs.20 per capita per month in rural areas and Rs.25 per month in urban areas proposed by the 1962 Working Group represented a broad judgement of minimum needs and was not strictly related to nutritional requirements, although it took them into account. In the Perspective Planning Division (PPD) paper on "Perspectives of Development" (op.cit.), this norm was used to derive the target rate of growth required, under assumptions of invariant income distribution, to ensure the minimum level of living in the time horizon of 1961-1976.

2.5 Academic studies in early 1970s generated a rich and extensive literature on poverty based on, or related to, the poverty line. This was a result of greater data availability, increasing methodological sophistication, and emerging concerns and insights. The "Task Force on Projections of Minimum Needs and Effective Consumption Demand", Perspective Planning Division, (Jan. 1979), was able to bring together at one place the results of some of these studies and redefine the poverty line. The methodology as formulated by the Task Force' has, since then, been used in estimating the incidence of poverty in Planning Commission.

2.6 The "Task Force' (1979) defined the poverty line as the per-capita expenditure level at which the average per-capita, per day calorie intake was 2435 calories in rural areas and 2095 calories for urban areas. The Task Force used the age- sex-activity specific calorie allowances recommended by the Nutrition Expert Group (1968) to estimate the average daily per capita requirements for rural and urban areas using the age-sex-occupational structure of their respective population (as projected for 1982-83).

2 V.M. Dandekar, Nilkanth Rath, Poverty in India.Inclian School of Political Economy, Pune, 1971

Thus, to the extent the data permitted, the age, sex and occupational differentials in the daily calorie requirement of the population were captured in the average norms. For reasons of convenience the calorie norms were rounded off to 2400 calories per capita per day for rural areas and 2100 calories per capita per day for urban areas.

2.7 To work out the monetary equivalent of these norms (i.e., poverty lines), 28th Round (1973-74) NSS data relating to household consumption both in quantitative and value terms were used. Using appropriate conversion factors, the calorie content of consumption baskets corresponding to various per capita expenditure classes were worked out. Inverse linear interpolation method was applied to the data on average per capita monthly expenditure and the associated calorie content of food items in the class separately for rural and urban areas. Based on the observed consumer behaviour in 1973-74 it was estimated that, on an average, consumer expenditure of Rs.49.09 per capita per month was associated with a calorie intake of 2400 per capita per day in rural areas and Rs.56.64 per capita per month with a calorie intake of 2100 per day in urban areas. Thus, the concept of poverty line used here was partly normative and partly behavioural. This way of deriving the poverty line, while being anchored in a 'norm' of calorie requirement, does not seek to measure the nutritional status, and more specifically the incidence of malnourishment or under-nourishment in the population. It focuses rather on the purchasing power needed to meet the specific calorie intake standard with some margin for non-food consumption needs. Moreover the calorie norms relate to an average for the reference group and not the minimum required for biological existence, given that there is a considerable variation in calorie requirement of individuals depending on their workload, age, sex and activity status.

Estimating the Number of Poor

2.8 The poverty line serves as a cut-off line for separating the poor from the non-poor, given the size distribution of population by per capita consumer expenditure classes. Population with per capita consumer expenditure levels below the level defined by the poverty line is counted as poor. The data on the size distribution of population by expenditure classes is obtained from the household consumption survey conducted under various National Sample Surveys (NSS) rounds. The ratio of the population below the poverty line to the total population is the poverty ratio, also known as the head-count ratio.

2.9 The estimates relating to the number and proportion of the poor and variations and trends relating to them across States and over time, have served to retain "poverty reduction" prominantly on the development agenda and in the discourse relating to it, academic and public. More specifically this approach has been fruitfully used for:

(i) Estimating the extent of poverty (in absolute numbers and in proportion), all India and State-wise for rural and urban at different points of time. Thus enabling single- point rural-urban and inter-state assessments and over time comparisons;

(ii) Providing a quantitative framework for research on the magnitude, distribution, causation, consequences and other aspects of poverty;

(iii) Designing and budgeting for targetted anti-poverty programmes and identifying poor household for the purposes of such programmes; and

(iv) Evolving criteria for resource transfers from the Centre to the States (overall and programme specific).

Limitations of the Poverty Line Approach

2.10 The Poverty Line approach has been critiqued and its limitations have been pointed out from a number of angles. Broadly, they fall in two groups: the first related to the concept itself and the second arising from the data and methodologies used in India for estimating the poverty line.

2.11 Major criticisms which are inter-related in good measure include the following:

(i) The poverty line is anchored in a norm for calorie consumption which is taken as representing an absolute nutritional requirement based on the age, sex and activity status of the entire population. Although derived from a nutrition-related norm, the poverty line does not take into account intra and inter-personal variations or homeostatic adaptation. Accordingly, the poverty line is not a true indicator of malnourishment which it might be mistaken for.

(ii) The notion of absolute poverty[1] is inadequate because relative poverty[1] is also an equally important aspect of poverty and is, in fact, a determinant of absolute poverty at a given level of national income. More generally, the concepts of inequality and poverty, although distinct, need to be constantly viewed together as closely associated concepts.

(iii) The poverty line approach, as practised, usually freezes the notion of poverty, as it were, by not taking into account that even what is considered as absolute poverty' need not be immutable over time: what are wants today can become needs tomorrow because of changes in perceptions, legitimate aspirations, taste, technology, etc.

(iv) The poverty line, quantified as a number is reductionist. It does not capture important aspects of poverty — ill health, low educational attainments, geographical isolation, ineffective access to law, powerlessness in civil society, caste and/or gender based disadvantages, etc.

(v) The poverty line provides the conceptual rationalization for looking at the poor as a "category[1] to be taken care of through targeted ameliorative programmes, ignoring structural inequalities and other factors which generate, sustain, and reproduce poverty.

(vi) Poverty line derived from personal consumption patterns and levels do not take into account items of social consumption such as basic education and health, drinking water supply, sanitation, environmental standards, etc. in terms of normative requirements or effective access.

(vii) Normative and behavioural elements are compounded in the poverty line in as much as, while being based on the calorie norm, it is derived from the actual expenditure pattern. Related to this: (a) the proportion of non-food expenditures on essentials (rent, fuel, clothing, health care, etc) is not normative but empirical and likely to be seriously inadequate with reference to normative standards, (b) per contra-consumption of what might normatively be considered as inessentials' (e.g., alcohol and intoxicants) is accommodated. This conflates primary and "secondary" poverty.

(viii) Since the poverty line in India is based on consumption, not income, it obfuscates dependence on debt, use of common property resources, and informal social security.

(ix) The head-count ratio based on the poverty line does not capture the severity of poverty in terms of the poverty deficit (total shortfall from the poverty line) or additionally the distribution of consumption expenditure among the poor.

(x) The head count ratio is insensitive to mobility within the below poverty line group. It is also invariant to upward and downward mobility across the poverty line so long as such mobility takes place in equal measure.

(xi) There are also a number of issues and problems related to the primary data base (sampling and non-sampling errors in NSS) and to data and statistical procedures used in estimation (choice of deflators, data used in construction of deflators, interpolation procedures).

(xii) In a country of India's continental size and diversity, poverty line based on aggregation at all-India level ignores State-specific variations in consumption patterns and/or prices.

2.12 While being aware that the poverty line is only an approximate and stylized indicator of a complex, multi- faceted, and changing reality, it is also necessary to recognize the continued necessity and utility of poverty estimation. A practical approach will, accordingly, have to consist in:

(i) Improving the set of poverty estimates as may be feasible from time to time with reference to (a) concepts (b) data (c) methodology;

(ii) Supplementing the poverty line approach with indicators and information on various aspects of the conditions of the poor; and

(iii) Promoting research on the understanding and estimation of poverty on a sustained and cumulative basis.

Chapter 3

OFFICIAL METHODOLOGY AND ISSUES IN POVERTY ESTIMATION

3.1 Following the recommendations of the Task Force on Projections of Minimum Needs and Effective Consumption Demand' (1979), the Planning Commission has been estimating the proportion and number of poor separately for rural and urban India at national and State levels. These estimates have been released from the year 1972-73 onwards, using the full survey data on household consumption expenditure collected by the National Sample Survey Organisation (NSSO) at an interval of five years. The estimates are available for the years 1972-73, 1977-78, 1983-84 and 1987-88. The methodology behind these estimates, often termed as the 's official methodology' has been outlined in the following sections.

The Basis of Official Estimates

3.2 Calorie Norm : The official estimates are based on a calorie norm of 2400 calories per capita per day for rural areas and 2100 calories per capita per day for urban areas. The poverty line for the base year 1973-74 has been taken as the per capita expenditure level at which these calorie norms have been met, on an average, for the country as a whole, as per the NSS household consumption expenditure survey for the corresponding year.

3.3 Poverty Line in the Base Year : The Task Force (1979) defined the poverty line as the per capita expenditure level at which the calorie norms were met on the basis of the all- India consumption basket for 1973-74. This was equivalent to Rs.49.09 and Rs.56.64 per capita per month for rural and urban areas respectively at 1973-74 prices.

3.4 Deflators : The poverty line so defined needs updating over time to take care of changes in the price levels. Initially the wholesale price index was used to reflect the price changes. However, private consumption deflator derived from the National Accounts Statistics (NAS) was recommended for this purpose by a Study Group on "The Concept and Estimation of Poverty Line', (Perspective Planning Division, Planning Commission, November, 1984). The Study Group recommended the use of a price index appropriately weighted by the consumption basket of the poor as an index for reflecting price changes relevant to the poor. The implicit private consumption deflator from NAS was found, at that time to be very close to such an index and hence it was used for adjusting the poverty line for the years 1977-78, 1983-84 and 1987-88.

3.5 The Adjustment Procedure for Estimating Poverty Population: In order to arrive at the estimates of the number of poor., Planning Commission has been making adjustment in the National Sample Survey (NSS) data on distribution of households by consumption expenditure levels. Such an adjustment has been felt to be necessary because the aggregate private household consumption expenditure as estimated from the NSS data is different from the aggregate private consumption expenditure estimated in the National Accounts Statistics (NAS). It was considered desirable to have compatibility between the two sets of data in order to ensure consistency between the two important components of the plan model, i.e., the input-output table (based on NAS) and consumption sub-model (based on NSS data). The procedure followed has been to adjust the expenditure levels reported by the NSS uniformly across all expenditure classes by a

factor equal to the ratio of the total private consumption expenditure obtained from the NAS to that obtained from the NSS. The old NAS series was used for deriving the adjustment factor for the estimates up to year 1983 and the new NAS series has been used for the 1987-88 estimates.

3.6 The poverty population is, thus, estimated by applying the updated poverty line to the corresponding adjusted NSS distribution of households by levels of consumption expenditure. To estimate the incidence of poverty at the State level, all-India poverty lines and the adjustment factors have been used on the State specific NSS distribution of households by levels of consumption expenditure uniformly across the States. These official estimates are presented in tables 3.1, 3.2, 3.3 and 3.4 respectively.

Issues in Poverty Estimation

3.7 The methodology followed in official estimates of poverty at national and at State levels, as outlined above, has been regarded by some as inappropriate and even inadequate in giving a representative picture of incidence of poverty in India. Infact, the use of State level estimates of poverty in allocating plan resources for poverty alleviation programmes has brought this debate into sharper focus. The States have become very sensitive about their respective estimates of poverty. Representations have been received from some of the State Governments. Scholars and academicians have also raised conceptual and methodological issues in this regard. The adoption of uniform calorie norms and fixed consumption basket, base year price differentials and uniformity of deflators across the States as also the practice of adjusting the NSS distribution have been widely contested. These and other related issues are discussed in what follows.

The Base-Year Consumption Basket

3.8 The poverty line has been anchored in a given calorie norm and the corresponding all-India consumption basket for the year 1973-74. The poverty line needs to be updated overtime for changes in price levels relevant to the consumption of the people around the poverty line. Updating the poverty line over time can be done in two ways:

(a) The poverty line as estimated for the base year (i.e. 1973-74) can be updated for changes in prices overtime;

(b) A fresh poverty line can be calculated from the latest available consumer expenditure survey data using the procedure suggested by the Task Force.

3.9 These two alternatives indicated above have somewhat different implications for the concept of poverty and its measurement overtime. Method (a) amounts to defining the poverty line in terms of a certain consumption expenditure with which the households, on an average, consumed food which met the calorie norm together with such non food items as they chose. In this method the poverty line is updated over time to allow only for changes in prices with reference to the consumption' basket associated with the poverty line in the base year.

3.10 On the other hand, method (b) allows for changes in the consumption basket provided the food items meet the calorie norm. Thus, while the calorie norm remains unchanged, the consumption basket associated with that calorie norm would change. Hence if there is a change

in the consumption behaviour due to shift in individual preferences, the two methods of updating the poverty line would give different results. In particular, method (b) would not give results comparable overtime.

3.11 As per the recommendations of the Task Force 1979, the Planning Commission has been using method (a). This*Group is in favour of using the same.

Choice of Price Deflators

3.12 It has been argued that the deflator for poverty line should be based on the cost of living of the poor. Construction of such an index requires a detailed information on the consumption basket of the poor and the relevant and appropriate prices. While it may not be impossible to construct such an index, there may be practical difficulties in obtaining reliable information in time and in sufficient details to construct such an index for the year for which poverty is to be estimated. It has been further argued that the assumption of identical price vector for the consumption baskets of people in rural and urban areas is highly questionable. It is observed that the relative price movements of the rural and urban sectors are distinct and are also different from CSO's consumption deflator.

3.13 In order to accommodate both the points discussed above a suggestion has been made that taking the commodity group indices available from Consumer Price Index of agricultural labourer for rural areas and the consumption pattern of the people around the rural poverty line at the national level for 1973-74 as weights, a special index may be constructed for updatating the rural poverty line. Similarly, for urban areas a special index of consumer prices may be constructed using the sub-group indices of industrial workers weighted by the consumption pattern of the population group around the urban poverty line. A simple average of this index and the CPI for urban non-manual employees for the urban areas can be used to update the urban poverty line. The Group favours the use of this option in this Report.

Estimation of Poverty at State Level

3.14 The Planning Commission's methodology to estimate State level poverty implicitly makes the following assumptions:

(i) Age-sex and occupation distribution of population in the States follows the all-India pattern. Hence, calorie requirements per capita are the same in different States.

(ii) The price structure of the consumption baskets and price trends across the States are identical.

3.15 It has been pointed out that there are important inter- State differences in terms of population structures, activity status, climatic and topographical considerations, and so on, which would need to be reflected in calorie requirements. Accordingly, normative calorie requirements would differ from State to State.

3.16 The consumption basket of the poor also differs significantly across the States. It is inherent in the poverty line concept that non - food expenditures such as clothing, housing and fuel are not

normatively estimated. The food habits will depend on local availabilities as well as on cultural and consumer preferences reflected in differing choices between vegetarian and non-vegetarian food items, between fine and coarse foodgrains and in the greater or smaller use of milk and milk products.

3.17 Ideally the inter-State differences in population structure, activity composition, climate and topographical price structures and their trends over time should be reflected in the State -specific poverty lines. On practical consideration, the Planning Commission had adopted the all- India calorie norms and used a common deflator for all the States for estimating the incidence of poverty. A number of States were of the view that given the current methodology, Planning Commission grossly underestimated their poverty status. There is therefore a need to streamline the methodology in this respect. In this context, it has been argued that there should be State-specific poverty lines reflecting the State -specific price differentials of the relevant consumption basket and that the national poverty line should be a weighted average of these 'State-specific[1] poverty lines to ensure consistency. It has been further argued, that in estimating the State-specific poverty lines, the State -specific consumption basket associated with the calorie norm should be used.

3.18 It may, however, be noted that any meaningful comparison, whether longitudinal or latitudinal, of incidence of poverty would require the use of same consumption basket associated with the given calorie norm, If the State-^specific consumption basket was used in the base year, it would no doubt provide a more meaningful comparison overtime of the poverty situation in that State. If the concern is to ensure comparability across states as well as over-time we need to adopt the same consumption basket for all the States. For this the obvious candidate is the all-India basket. In making such inter-State comparisons in any given year, we have to take into account the fact that prices of different commodities in different States are not the same in any given year nor are the changes in prices similar over the years. One of our members, Shri. S. Guhan, is of the view that in addition to the estimates furnished by us, it will be desirable for the Planning Commission to give a separate set of poverty estimates based on all-India calorie norms (for want of state-specific calorie norms), State level consumption baskets in the base year, and State level price indices and deflators relatable to the respective base year consumption baskets at the State level. His views have been reproduced in a supplementary note appended at Annexure II.

Differences in NSS and NAS Estimates of Consumption Expenditure

3.19 It has been observed that the aggregate private household consumption expenditure as estimated on the basis of National Sample Survey (NSS) is different from the aggregate private consumption expenditure estimated in National Accounts Statistics (NAS). Usually the latter has been higher than the former, and the difference has been increasing over time. The difference in the two estimates is the result of several factors including differences in coverage, sources and quality of data and methods of estimation. The practice in the Planning Commission has been to raise the expenditure levels reported by the NSS across all expenditure classes by a factor equal to the ratio of the total private consumption as obtained from NAS and the total as estimated from NSS. This factor is applied uniformly to all expenditure classes. Poverty is then estimated from this adjusted distribution of population by expenditure classes. Since the NAS estimates of

per capita private consumption are generally higher, this procedure gives a lower estimate of the incidence of poverty than the estimate derived without adjusting the NSS data. For instance, the overall proportion of poor is estimated to be 57.16 and 52.83 per cent for 1977-78 and 1983 respectively, using the unadjusted NSS distribution and the poverty lines as used in the official estimates (Table 3.5). This proportion falls to 48.30 and 37.4 per cent for 1977-78 and 1983 respectively, when the adjusted NSS distribution is used. The adjustment factors used in the poverty estimates cited above are based on the old series of National Accounts with base year 1970-71. However, with the new series with base year 1980-81, the differences in the NSS and NAS-based aggregates are wider. Consequently, the adjustment factors, for the same years go up further, thereby bringing down the poverty ratios to 43.00 and 30.13 per cent respectively for 1977-78 and 1983 (Table 3.6). Thus, with the existing procedure for adjusting NSS- based consumption expenditure, everytime the CSO revises the estimates of private consumption expenditure, the estimates of the incidence of poverty also change. The increase in overall adjustment factor using new and old series of National Accounts Statistics can be seen from Table 3.7.

3.20 Detailed cross validation exercises carried out by Minhas, et.al [3&4] have critically examined the different sources of discrepancies between NSS and NAS estimates of consumer expenditure at a detailed disaggregated level for 1972-73, 1977-78 and 1983.It becomes clear from their exercises that it is indeed hazardous to carry out pro-rata adjustment in the observed size distribution of consumer expenditure in a particular NSS round by multiplying it with a scalar derived from the ratio between the NAS estimate of the aggregate private consumption for the nearest financial year and the total NSS expenditure available from that particular NSS round. Studies of comparative trends in respective (NSS vs. NAS) aggregates should be made after adjusting for differences in coverage, time-periods, classification schemes, implicit prices, etc.

3.21 Such exercises are useful to identify and correct the sources of differences and should continue as part of the effort for improving the quality of estimates. However given that the direction and magnitude of differences between the two estimates vary greatly from commodity to commodity and that we do not yet have sufficient basis to judge the relative accuracy of the two, it is perhaps premature to make adjustments with confidence.

3.22. Even granting for the moment that adjustment is required, it may not be wholly justified to apply a uniform adjustment factor to raise the level of expenditure in all the expenditure classes, given that the discrepancy in the two sets of estimates is much larger in respect of certain items than, in respect of others. If we look at the correspondence between the two estimates at somewhat disaggregated level, say, by 11 major commodity groups, we find that the NAS based estimates are higher by a very large factor for commodity groups like sugar, edible oils, clothing and footwear, durable consumer goods and rent, fuel and power. These items typically occupy

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[3&4] 3 Minhas.B.S. (1988)," Validation of Large Scale Sample Survey Data - case of NSS Estimates of Household Consumption Expenditure," Sankhya A, Series B, Vol.50, Part 3, Supplement ppl-63.

4 Minhas, B.S. and S.M. Kansal (1989)," Comparison of the NSS and CSO Estimates of Private Consumption : Some Observations Based on 1983 Data. The Journal of Income and Wealth, Vol.11, No.l, January, 1989, pp 7-24.

larger weights in the consumption basket of higher income groups. The adjustment factor is lower for other items in the food group and for cereals the adjustment factor turns out to be other way round, i.e., the NSS based estimate of cereals are higher than NAS based estimate.

3.23 Thus the overall adjustment factor would be lower for lower expenditure groups and higher for higher expenditure groups. Hence, if adjustment is a must, a case may be made for commodity group specific and population group specific adjustment (rather than pro rata aggregate adjustment). An exercise was undertaken to apply commodity group wise adjustment to the consumption distribution. The results are summarised in table 3.8.

3.24 However, if commodity - specific adjustment is adopted, the problems in respect of differences in coverage, time -period, classification schemes and imlicit prices between the NSS and the NAS series will still remain.

3.25 If estimates of poverty-incidence are to be made with minimum recourse to adjustments based on arbitrary assumptions, the best course would be to base them entirely on the NSS. The use of NSS is preferable to NAS for several reasons. The NAS estimates relate to private consumption rather than household consumption which is the appropriate basis for assessing poverty -incidence. The NAS estimate of private consumption is derived as a residual by deducting from estimated production of the various goods and services (adjusted for foreign trade), the estimated use for capital formation and public consumption. Apart from the lack of reliable direct data on production for a sizeable segment of the economy, the adjustments for uses other than private consumption are based on scanty data, often of the distant past, and subjective judgments; they do not take into account differences in prices across States; nor do they provide State level estimates of private consumption.

3.26 The NSS gives a State-wise estimates of size distribution as well as commodity composition of private consumption for the rural and urban population separately. The estimate is based on information provided by households on quantities and price of large number of goods and services consumed by them. The surveys are carefully organised, use uniform concepts and procedures across the country and the sample households are selected by rigorous scientific procedures. NSS data are of course not free of errors, biases, comparability over time and other problems. The nature of these have been widely debated and there is a sustained effort to refine and improve the survey design and procedure. Even as these efforts continue - as of course they must - the NSS remains the best available source of assessing poverty incidence and the characteristics of the poor across space and time.

Special Problems of Hill Areas

3.27 It has been pointed out that hill States, with their rough terrain and harsh living conditions and especially for people living in the mid and higher hills, are at a disadvantage at least on two grounds. Owing to the extremes in climate and lack of well developed infrastructure, including transport and communications, hill people perforce have to lead a more strenuous life as compared to people in the plains. Consequently they have to have a higher daily calorific intake even for performing the normal activities related to their work and living. Besides, due to climatic conditions, the average resident has to incur heavier expenditure on clothing, food and energy for cooking and heating needs, compared to his counterparts in the plains.

3.28 The problem is genuine. However, there are practical difficulties in taking account of this problem. Terrains are not uniform in all the hilly States. There is a problem in defining a "Hilly State" itself. Then there are certain large States with hilly regions, and the question is how they should be treated for this purpose. Separate calorie norms are also not available for persons residing in hilly regions. Therefore, any attempt at accounting for the problems of hilly States in defining the poverty line will open up a interminable and indeterminate debate rather than solve the problem. If the concern is only allocation of resources, it needs to be noted that such regions/States are already given special treatment.

Other Issues in Poverty Estimation

3.29 The relationship between poverty, level of living and nutrition has been a subject of debate. Absolute poverty, as it is empirically measured, is a concept related to the "consumer expenditure" and the "purchasing power" of that expenditure. Measurement of poverty is based on NSS data where the main point of reference is expenditure, except for the food group of commodities where actual consumption is recorded. Health, education, housing, etc., are the components of level of living on which the NSS data records only the cash outlays incurred by the households. Consumption of free goods and services provided by the State or charitable institutions is not recorded. Social consumption of these publicly provided services is in the nature of transfer from the government to the people. In other words, the real levels of living of the poor, inclusive of social consumption are expected to be higher than what is reflected through the estimates of private consumption expenditure reported in NSS data. It has therefore been argued that there is a need to broaden the concept of poverty and delink food poverty from poverty in general.

3.30 The assumption that there is a monotonic relation between calorie intake and reported expenditure is also difficult to sustain. This is because households report only the food cooked at home. Part of this may be consumed by casual visitors and/or domestic helpers. Before we estimate the calories of food taken, it may be desirable to adjust for meals gifted, meals (including purchased meals) - eaten outside and for wastages before and after the meal is served.

3.31 As to the relationship between calorie intake nutrition and poverty, there has been considerable debate on nutritional adaptation and inter-individual variability which brings out the complexities involved in the measurement of under-nutrition. One of our members Prof. P.V. Sukhatme holds the view that a man's capacity for work is not determined by his intake but by efficiency with which he converts food energy into metabolisable energy over his homeostatic range of intake. His letter eloborating this view is appended at Annexure I. We prefer to distinguish and keep separate measurement of under-nutrition and measurement of poverty and to confine ourselves to the latter. The use of calorie norm in measuring poverty amounts only to a first order approximation to what may be considered to be an acceptable level of minimum need.

3.32 It is also worth noting that significant shifts in consumption pattern have been observed during the recent years. See tables 3.9, 3.10, 3.11 and 3.12. There is shift of expenditure from coarse to finer cereals, from cereals in general to non-cereal food like meat, milk, eggs, fruits, etc. and from food as a whole to non-food items of expenditure in almost all expenditure groups.

It has been observed from NSS rounds on household consumption distribution that even for the people below poverty line (both in rural and urban areas) the proportion of expenditure on cereals as also on total foodgrains is falling and at the same time proportion of expenditure on quality food (animal products, fruits and vegetables etc.) is rising. Infact where these shifts in consumption pattern are predominant, the cost of requisite calories is becoming higher. There is, thus, a decline in the average intake of calories across expenditure classes even though, the real per capita expenditure has been rising. See table 3.13.

3.33 Inequality and poverty are, of course, distinct concepts but there is a close causal relationship between the two. Given the level of development and the level of per capita income/consumption expenditure, a less unequal distribution would result in lower incidence of poverty. A practical way of looking at the inequality issue would be to look at the share of lower deciles in the aggregate income/consumption expenditure. Table 3.14 describes the decile-wise share in the consumption distribution over the years for which the poverty estimates have been worked out, separately for rural and urban areas. On the whole, it can be observed that the share of various deciles has not changed significantly over the years.

Table - 3.1

Number and Percentage of Population Below Poverty Line by States, 1972-73
(Officially Released Estimates)

S.No.	State	Rural		Urban	Combined		
		No. Lakhs	%age	No. Lakhs	%age	No. Lakhs	%age
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	Andhra Pradesh	207.1	57.7	38.5	43.8	245.6	54.9
2.	Assam	69.0	48.2	4.9	33.8	73.9	47.0
3.	Bihar	291.2	55.8	25.9	43.4	317.1	54.5
4.	Gujarat	86.9	43.9	26.6	34.0	113.5	41.1
5.	Haryana	18.4	21.5	5.6	29.9	24.0	23.1
6.	Himachal Pradesh	5.1	15.5	0.3	12.5	5.4	15.1
7.	Janmu & Kashmir	14.1	36.1	4.7	51.6	18.8	39.0
8.	Karnataka	119.0	52.3	34.3	45.8	153.3	50.5
9.	Kerala	106.4	57.8	19.2	52.7	125.6	56.9
10.	Nadhya Pradesh	222.3	61.4	32.5	44.8	254.8	58.6
11.	Naharashtra	191.5	53.9	56.7	34.3	248.2	47.7
12.	Manipur	2.4	24.7	0.4	24.2	2.8	24.7
13.	Meghalaya	1.8	20.6	0.2	10.8	2.0	19.0
14.	Orissa	147.3	71.0	8.5	43.3	155.8	68.6
15.	Punjab	22.6	21.5	7.3	21.8	29.9	21.5
16.	Rajasthan	105.0	47.5	18.8	39.3	123.8	46.0
17.	Tamil Nadu	183.5	63.0	67.8	52.2	251.3	59.7
18.	Tripura	6.2	42.6	0.3	18.7	6.5	39.9
19.	Uttar Pradesh	413.1	53.0	66.4	51.6	479.5	52.8
20.	West Bengal	220.9	64.0	41.6	35.9	262.5	56.8
21.	Nagaland and All Union Territories	8.4	37.6	12.8	26.7	21.2	30.2
	All India	2442.2	54.1	473.3	41.2	2915.5	51.5

Notes:

(1) The above estimates are derived by using the poverty lines of Rs.41 and Rs.47 per capita per month for rural and urban areas respectively at 1972-73 prices, corresponding to the poverty lines of Rs.49.1 and Rs.56.6 respectively at 1973-74 prices.

(2) The number of persons below poverty line relates to the population as on 1st oct., 1972.

Table 3.2
Number and Percentage of Population Below Poverty Line by States 1977-78
(Officially Released Estimates)

S.No.	State	Rural		Urban		Contained	
		No. Lakhs	%age	No. Lakhs	%age	No. Lakhs	%age
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	Andhra Pradesh	176.8	45.4	40.6	37.2	217.4	43.6
2.	Assam	78.0	48.5	6.4	36.5	84.4	47.3
3.	Bihar	330.5	57.8	33.7	44.8	364.2	56.3
4.	Cujarat	94.6	43.1	27.5	29.8	122.1	38.9
5.	Haryana	22.0	23.2	7.9	32.5	29.9	25.2
6.	Himachal Pradesh	10.2	27.8	0.5	17.2	10.7	27.0
7.	Jammu ft Kashmir	13.9	31.7	4.5	40.5	18.4	33.4
8.	Karnataka	131.9	53.2	41.6	44.6	173.5	50.8
9.	Kerala	94.1	47.4	23.0	53.2	117.1	48.4
10.	Madhya Pradesh	242.7	61.6	43.1	46.9	285.8	58.9
11.	Naharashtra	234.1	60.4	62.1	31.4	296.2	50.6
12:	Nanipur	2.9	29.2	0.8	26.8	3.7	28.7
13.	Neghalaya	5.2	51.2	0.6	28.6	5.8	47.4
U.	Orissa	151.6	67.9	11.1	41.8	162.7	65.1
IS.	Punjab	15.0	13.1	10.5	25.6	25.5	16.4
16.	Rajasthan	82.7	33.5	20.8	33.9	103.5	33.6
17.	Tamil Nadu	177.2	56.3	67.2	45.3	244.4	52.8
18.	Tripura	10.6	64.5	0.6	27.5	11.2	60.5
19.	Uttar Pradesh	422.8	49.8	83.2	49.2	506.0	49.7
20.	West Bengal	220.4	58.3	45.1	34.5	265.5	52.2
21.	Nagaland and All Union Territories	13.8	41.5	6.2	10.1	20.0	21.1
	All India	2531.0	51.2	537.0	38.2	3068.0	48.3

Notes:

(1) The above estimates are derived by using the poverty line of Rs.60.6 per capita per month for rural areas and the poverty line of Rs.69.9 per capita per month for urban areas at 1977-78 prices, corresponding to the poverty lines of Rs.49.1 and Rs.56.6 respectively for 1973-74.

(2) The number of persons below poverty line relates to the population as on 1st March, 1978.

Table - 3.3
Number and Percentage of Population Below Poverty Line by States 1983-84
(Officially Released Estimates)

S.No.	State	Rural		Urban	Combined		
		No. Lakhs	%age	No. Lakhs	%age	No. Lakhs	%age
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1 .	Andhra Pradesh	164.4	38.7	40.7	29.5	205.1	36.4
2.	Assam	44.9	23.8	4.9	2.1.6	49.8	23.5
3-	Bihar	329.4	51.4	36.1	37.0	365.5	49.5
4.	Gujarat	67.7	27.6	19.9	17.3	87.6	24.3
5.	Haryana	16.2	15.2	5.5	16.9	21.7	15.6
6.	Himachal Pradesh	5.8	14.0	0.3	8.0	6.1	13.5
7.	Jammu & Kashmir	8.1	16.4	2.2	15.8	10.3	16.3
8.	Karnataka	102.9	37.5	34.7	29.2	137.6	35.0
9.	Kerala	55.9	26.1	15.6	30.1	71.5	26.8
10-	Madhya Pradesh	218.0	50.3	36.9	31.1	254.9	46.2
-.-11.	Maharashtra	176.1	41.5	55.9	23.3	232.0	34.9
12.	Manipur	1.3	11.7	0.6	13.8	1.9	12.3
13.	Heghalaya	3.9	33.7	0.1	4.0	4.0	28.0
H.	Orissa	107.7	44.8	10.4	29.3	118.1	42.8
15.	Punjab	13.7	10.9	10.7	21.0	24.4	13.8
16.	Rajasthan	105.0	36.6	21.2	26.1	126.2	34.3
17.	Tami I Nadu	147.6	44.1	52.6	30.9	200.2	39.6
18.	Tripura	4.6	23.5	0.5	19.6	5.1	23.0
19.	Uttar Pradesh	440.0	46.5	90.6	40.3	530.6	45.3
20.	Uest Bengal	183.9	43.8	41.2	26.5	225.1	39.2
21.	Nagaland and All Union Territories	17.9	47.4	14.4	17.7	32.3	27.1
	All India	2215.0	40.4	495.0	28.1	2710.0	37.4

Notes:

(1) The above estimates are derived by using the poverty line of Rs.101.8 per capita per month for rural areas and the poverty line of Rs.117.5 per capita per month for urban areas at 1983-84 prices corresponding to the poverty lines of Rs.49.1 and Rs.56.6 respectively for 1973-74.

(2) The number of persons below poverty line relates to the population as on 1st March, 1984.

Table - 3.4
Number and Percentage of Population Below Poverty Line by States 1987-88
(Officially Released Estimates)

S.NO.	State	Rural		Urban		Combined	
		No. Lakhs	%age	No. Lakhs	%age	No. Lakhs	%age
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	Andhra Pradesh	153.1	33.8	42.6	26.1	195.7	31.7
2.	Assam	50.4	24.5	2.5	9.4	52.9	22.8
3.	Bihar	300.3	42.7	36.1	30.0	336.4	40.8
4.	Gujarat	56.2	21.2	17.1	12.9	73.3	18.4
5.	Haryana	13.5	11.7	4.7	11.7	18.2	11.6
6.	Himachal Pradesh	4.4	9.7	0.1	2.4	4.5	9.2
7.	Jammu & Kashmir	8.4	15.5	1.4	8.4	9.8	13.9
8.	Karnataka	102.8	35.9	33.7	24.2	136.5	32.1
9.	Kerala	37.4	16.4	11.6	19.3	49.0	17.0
10.	Madhya Pradesh	194.0	41.5	30.9	21.3	224.9	36.7
11.	Maharashtra	166.9	36.7	47.2	17.0	214.1	29.2
12.	Orissa	124.2	48.3	10.9	24.1	135.1	44.7
13.	Punjab	9.6	7.2	4.3	7.2	13.9	7.2
14.	Rajasthan	80.5	26.0	19.0	19.4	99.5	24.4
15.	Tamil Nadu	138.4	39.5	38.5	20.5	176.9	32.8
16.	Uttar Pradesh	373.1	37.2	75.2	27.2	448.3	35.1
17.	West Bengal	137.2	30.3	36.3	20.7	173.5	27.6
18.	Small States & UT's	9.3	11.8	4.9	4.7	14.2	7.7
	All India	1959.7	33.4	417.0	20.1	2376.7	29.9

Notes:

(1) The above estimates are derived by using the poverty line of Rs.131.8 per capita per month for rural areas and 152.1 per capita per month for urban areas at 1987-88 prices, corresponding to the poverty lines of Rs.49.1 and Rs.56.6 respectively for 1973-74.

(2) The number of persons below poverty line relates to the population as on 1st March, 1988.

Table - 3.5

Percentage of Poor Based on Unadjusted NSS Distribution (Poverty Line Updated by using Private consumption Deflator as Obtained from the New Series Of MAS)

	1977-78		1983-84		1987-88	
	Poverty Line	Proportion of Poor	Poverty Line	Proportion of Poor	Poverty Line	Proportion of Poor
Rural	62.10	60.19	101.70	56.33	131.60	50.87
Urban	71.65	46.55	117.34	41.94	151.83	33.25
Total		57.16		52.83		46.27

Table - 3.6

Percentage of Poor Based on Adjusted NSS Distribution

	1977- 78		1983- 84		1987- 88	
	Pov.Line (Rs.)	Proportion of Poor (Percent)	Pov.Line (Rs.)	Proportion of Poor (Percent)	Pov.Line (Rs.)	Proportion of Poor (Percent)
A. Using Overall Adjustment Factor and Mew Series of MAS						
Rural	62.10	45.74	101.70	32.62	131.60	30.02
Urban	71.65	33.42	117.34	21.75	151.83	17.88
Combined		43.00		30.13		26.85
Adjustment Factor		1.1961		1.3303		1.2666
B. Using Overall Adjustment * Factor and Old Series of MAS **						
Rural	60.60	51.20	101.80	40.40	131.80	33.40
Urban	69.90	38.20	117.50	28.10	152.10	20.10
Combined		48.30		37.40		29.90
Adjustment Factor		1.09		1.21		1.22

Motes: * Poverty line updated by using private consumption deflators as obtained from the new series of MAS.

** There was no "old sereies" for the year 1987-88. However, the poverty line for 1987-88 was obtained by updating the poverty line of 1983-84 which was based on deflators obtained from the "old series".

Table - 3.7
The Overall Adjustment Factor

Year	New Series of MAS	Old Series of MAS
1977-78	1.1961	1.09
1983	1.3303	1.21
1987-88	1.2666	

Table - 3.8
Percentage of Poor Based on Adjusted Distribution
(Using Commodity Specific Adjustment Factors Obtained
from New Series of MAS) [Poverty Line Updated by Using Private Consumption
Deflator as Obtained from New Series of NAS]

	1977-78		1983- 84		1981-88	
	Poverty Line	Porportion of Poor	Poverty Line	Porportion of Poor	Poverty Line	Porportion of Poor
Rural	62.1	46.7 (1.1832)	101.7	37.9 (1.2493)	131.6	35.6 (1.1888)
Urban	71.7	32.0 (1.2192)	117.3	22.8 (1.3087)	151.8	20.0 (1.2194)
Total		43.4		34.2		31.6

Table - 3.9
Distribution of Household Consumption Expenditure for Population Group Below Poverty (Rural)-INDIA

(Percentage)

S.No	Items	1977-78	1983	1986-87	1987-88
1.	Total Cereals	47.06	46.61	39.56	37.95
2.	Cram	0.39	0.28	0.38	0.19
3.	Cereal Substitutes	0.60	0.28	0.11	0.12
4.	Pulses	4.28	3.91	4.84	4.68
5.	Total Foodgrains	S2.33	51.08	44.89	42.94
6.	Milk & Milk Products	4.21	3.74	5.48	5.05
7.	Edible Oil	3.88	4.14	5.52	5.31
8.	Heat, Fish & Egg	2.69	2.51	3.13	2.77
9.	Vegetables	4.60	5.58	6.25	6.18
10.	Fruits & Nuts	0.80	0.79	1.01	0.99
11.	Sugar	2.35	2.40	2.88	2.64
12.	Salt & Spices	3.91	3.23	3.57	3.48
13.	Beverage & Refments	2.15	2.27	2.50	2.88
14.	Pan, Intoxicant etc.	3.33	3.20	3.84	3.53
15.	Total Other than Foodgrains	27.92	27.86	34.18	32.83
16.	Food Total	80.25	78.94	79.07	75.77
17.	Non-Food Total	19.75	21.06	20.93	24.23
18.	Total Expenditure	100.00	100.00	100.00	100.00

Note : "Poverty" in this table refers to officially released estimates of Poverty.

Table - 3.10

Distribution of Household Consumption Expenditure for
Population Group above Poverty (Rural)-INOIA

(Percentage)

S.No	Iterns	1977-78	1983	1986-87	1987-88
1.	Total Cereals	26.79	29.10	24.02	20.19
2.	Gram	0.43	0.25	0.39	0.26
3.	Cereal Substitutes	0.22	0.16	0.14	0.12
4.	Pulses	3.62	3.46	3.21	3.49
5.	Total Foodgrains	31.06	32.97	27.76	24.06
6.	Milk & Milk Products	9.08	8.37	10.41	10.39
7.	Edible Oil	3.43	4.00	4.75	4.67
8.	Meat, Fish & Egg	2.66	3.13	3.84	3.16
9.	Vegetables	3.42	4.53	5.10	4.55
10.	Fruits & Nuts	1.24	1.50	1.74	1.79
11.	Sugar	2.76	2.92	3.08	2.92
12.	Salt & Spices	2.66	2.34	2.60	2.49
13.	Beverage & Refments	2.63	3.50	3.72	4.12
14.	Pan, Intoxicant etc.	2.70	2.93	3.37	2.91
15.	Total other than Foodgrains	30.58	33.22	38.61	37.00
16.	Food Total	61.64	66.19	66.37	61.06
17.	Non-Food Total	38.36	33.81	33.63	38.94
18.	Total Expenditure	100.00	100.00	100.00	100.00

Note: "Poverty" in this table refers to officially released estimates of Poverty.

Table - 3.11
Distribution of Household Consumption Expenditure for Population Group Below Poverty (Urban)-INDIA

(Percentage)

S. No	Items	1977-78	1983	1986-87	1987-88
1.	Total Cereals	35.19	35.09	29.66	29.60
2.	Gram	0.24	0.17	0.21	0.13
3.	Cereal Substitutes	0.19	0.08	0.08	0.07
4.	Pulses	4.51	4.21	4.84	4.80
5.	Total Foodgrains	40.13	39.55	34.79	34.60
6.	Milk & Milk Products	6.34	5.81	7.61	6.77
7.	Edible Oil	5.03	5.19	6.42	6.20
8.	Meat, Fish & Egg	3.30	3.17	4.31	3.59
9.	Vegetables	5.07	5.76	6.29	6.46
10.	Fruits & Nuts	1.14	1.10	1.38	1.41
11.	Sugar	3.02	3.02	3.49	3.10
12.	Salt & Spices	3.77	3.17	3.36	3.54
13.	Beverage & Refments	4.65	4.74	5.00	4.82
U.	Pan, Intoxicant etc.	2.74	2.67	3.10	3.19
15.	Total other than Foodgrains	35.06	34.63	40.96	39.08
16.	Food Total	75.19	74.18	75.75	73.68
17.	Non-Food Total	24.81	25.82	24.25	26.32
18.	Total Expenditure	100.00	100.00	100.00	100.00

Note : "Poverty" in this table refers to officially released estimates of Poverty.

Table - 3.12
Distribution of Household Consumption Expenditure for
Population Group above Poverty (Urban)-INDIA

(Percentage)

S.No.	Items	1977-78	1983	1986-87	1987-88
1 .	Total Cereals	16.09	16.84	13.01	12.07
2.	Gram	0.23	0.18	0.22	0.17
3.	Cereal Substitutes	0.08	0.07	0.07	0.06
4.	Pulses	3.18	2.99	2.88	2.98
5.	Total Foodgrains	19.58	20.08	16.18	15.28
6.	Milk & Mi Ik Products	9.80	9.21	10.08	9.98
7.	Edible Oil	4.32	4.59	4.96	4.92
8.	Meat, Fish & Egg	3.33	3.48	3.89	3.22
9.	Vegetables	4.04	4.65	4.82	4.87
10.	Fruits & Nuts	2.05	2.12	2.39	2.63
11.	Sugar	2.43	2.30	2.40	2.16
12.	Salt & Spices	2.26	1 .96	2.06	2.01
13.	Beverage & Refments	6.43	6.75	6.47	6.71
U.	Pan, Intoxicant etc.	2.26	2.33	2.58	2.43
15.	Total other than Foodgrains	36.92	37.39	39.65	38.93
16.	Food Total	56.50	57.47	55.83	54.21
17.	Non-Food Total	43.50	42.53	44.17	45.79
18.	Total Expenditure	100.00	100.00	100.00	100.00

Note : "Poverty" in this table refers to officially released estimates of Poverty.

Table - 3.13
Monthly Per Capita Calorie Intake

Population Groups according to Expenditure levels	1977-78		1983	
	Rural	Urban	Rural	Urban
Lower 30 X	1664	1656	1599	1583
Middle 40 X	2277	2233	2136	2053
Higher 30 X	3239	3274	2940	2908
All India	2382	2372	2216	2168

Table - 3.14
Share of Deciles of Population in Consumption Expenditure

Deciles of Population	Decile Wise Percentage Share in Total Consumption Expenditure							
	Rural				Urban			
(as per levels of cons. expnd.	1973-74	1977-78	1983	1987-88	1973-74	1977-78	1983	1987-88
1st Decile	3.95	3.46	3.79	4.00	3.90	3.20	3.38	3.38
2nd Decile	5.41	4.90	5.22	5.33	5.27	4.54	4.63	4.58
3rd Decile	6.33	5.90	6.20	6.24	5.89	5.44	5.49	5.37
4th Decile	7.09	6.50	6.88	6.94	7.03	6.25	6.66	6.12
5th Decile	8.02	7.52	8.00	7.75	7.68	7.14	7.10	7.11
6th Decile	8.98	8.28	9.04	8.77	9.21	8.42	8.21	8.25
7th Decile	10.59	9.60	9.93	9.83	9.33	9.35	10.27	9.58
8th Decile	12.67	11.35	11.67	11.63	12.35	12.48	11.42	11.58
9th Decile	14.37	14.10	14.59 ,	14.23	14.20	14.17	14.98	15.11
10th Decile	22.59	28.39	24.68	25.28	25.14	29.01	27.86	26.92

Chapter 4

RECOMMENDATIONS OF THE EXPERT GROUP

4.1 The Expert Group has carefully examined the methodology currently used by the Planning Commission for determining the poverty line as well as for estimating the incidence of poverty at the national and States levels. It gave due consideration to the available studies and the issues raised and brought to its notice regarding the conceptual and procedural limitations of this methodology.

4.2 During the deliberations of the Group, certain alternative approaches to the measurement of poverty such as (a) the hunger criterion, (b) the food share criterion, (c) the calorie consumption criterion were considered. For various reasons the Group decided that these criteria were not suitable or advisable for measuring poverty. The considerations that weighed with the Group are discussed in Annexure III. In the circumstances, we feel that the poverty line approach anchored in a calorie norm and associated with a fixed consumption basket may be continued.

4.3 Relating poverty to a single set of calorie norms has also been questioned on the ground that it does not allow for inter-State variations and more fundamentally for intra- or interpersonal adaptations over time by the same person to varying calorie availabilities and needs. It has been argued that if "calorie requirements" are to be the basis for the specification of the poverty line, allowance must be made for difference in climate which makes a significant difference to the calorie needs for comparable age/sex/activity status categories and for inter-regional differences in preferences as also in prices at a given point of time as well as over time. For lack of data, it has not been possible to allow for inter-State variations in normative calorie requirements. However, we considered various alternatives, including: (a) the existing method, (b) using the commodity basket corresponding to the poverty line for the country as a whole and adjusting only for differences in prices across States, and (c) allowing for the differences in the commodity basket as well as prices across States. We also considered different methods of adjusting for changes in prices.

4.4 On the more basic issue of the relationship between poverty and malnutrition, the fact that the poverty line is anchored in a 'norm[1] of calorie requirement does not mean that those below the poverty line can be considered as malnourished or uniformly undernourished, everywhere or all the time. The poverty line defines on an average the level of per capita per day expenditure which meets a normative minimum standard of living, deemed reasonable. Calorie intake is but one of the ingredients, though an important one, of the minimum standard, but the poverty line makes an allowance for non-food consumption needs as well on the basis of observed consumer behaviour. The Group recognises the desirability of defining the normative standard for non-food consumption and its constituents without reference to actual behaviour, but until this is done, the existing basis seems to be the most practical and reasonable. It is this consumption basket that constitutes the minimum standard for defining the boundary between the poor and the non-poor.

4.5 The concept of the poverty line incorporating the norm of minimum living standard has to be kept distinct from the concept of malnourishment and undernourishment. The incidence of malnourishment and undernourishment is indeed an important indicator of well-being of population. But its measurement requires a different approach in which the differences in energy requirements due to climatic variations, the role of inter- andintra-individual differences in the

efficiency of utilisation of food intake and variations in food preferences have to be explicitly taken into account. We note that there is a sharp divergence of opinion among experts on (a) the validity of prescribing a unique calorie norm for a given age/sex/occupation category and (b) the margin within which individuals can adapt, without adverse impact on health or activity status, to variations in intake around the norm. We do not wish to get into these controversial issues as they are not germane to the measurement of poverty.

4.6 Having decided to accept the minimum living standard for defining poverty line normatively, we feel that it should be applied uniformly to all parts of the country for assessing poverty. The commodity basket corresponding to this norm should be standardised at the national level and applied to all States. This is being recommended in order to enable comparability across States and overtime. In this connection, attention is also drawn to the views of Shri.S. Guhan, one of our members, in his supplemental note.

4.7 Another factor which weighed with us is the need to ensure that the basic notions underlying poverty measurements should be based on data that is reliable, available on a comparable nation wide basis, i.e., over time and space, capable of being estimated with minimum recourse to other assumptions, and replicable and readily accessible to researchers. Keeping all these considerations in view, we recommend as follows:

(1) The Poverty Line recommended by the Task Force on projection of minimum needs and effective consumption demand, namely a monthly per capita total expenditure of Rs.49.09 (rural) and Rs.56.64(urban) rounded respectively to Rs.49 and Rs.57 at all India level at 1973-74 prices be adopted as the base line. This was anchored in the recommended per capita daily intake of 2400 calories in rural areas and 2100 calories in urban areas with reference to the consumption pattern as obtained in 1973-74. The Group recommends that these norms may be adopted uniformly for all States.

(2) Poverty estimates will vary according to the base year chosen for defining the poverty line. The choice of the base year will have to be guided by convenience and consistency recognizing that some degree of arbitrariness is inherent in the choice of any base year. Given that much systematic work has already been done with the base 1973-74, the Group is in favour of continuing it as the base year for estimating the poverty line.

(3) State-specific poverty line should be estimated as follows. The standardised commodity basket corresponding to the poverty line at the national level should be valued at the prices prevailing in each State in the base year, i.e., 1973-74. For updating poverty line to the current prices in a given year, we need a State-specific consumer price-index. For this purpose, the observed all-India consumption pattern of the 20 to 30 per cent of the population around the poverty line in 1973-74 should constitute the State-specific weighting diagram. This diagram should be used in the construction of State -specific price index over the years using the disaggregated commodity indices from the consumer price-index for the agricultural labourers (rural) and consumer price index for the industrial workers and non- manual employees (urban). The implicit reasoning underlying the procedure is that any consumer with income equal to the poverty line will be able to buy a normatively fixed bundle which is common to all consumers and invariant over time. The all India commodity basket corresponding to the 1973-74

official poverty line has been chosen for this purpose. Since prices vary between States and periods, the procedure calls for price adjustments for inter-State variations in the base year and State-specific price movements over time.

(4) It is necessary that the deflators chosen should satisfy three main requirements: (a) they should be State- specific, consistent with the adoption of State-specific poverty lines on the basis of State-specific base year prices, (b) they should reflect, as closely as possible, prices relevant to the consumption baskets of those around the poverty line and (c) the data base for the construction of the deflators should be periodically available, comparable across States, and consistent. In the background of these considerations, after considering various possible choices for the deflator, the Group came to the conclusion that it would be most suitable to rely on the disaggregated commodity indices from Consumer Price Index for Agricultural Labourers (CPIAL) to update the rural poverty line and a simple average of suitably weighted commodity indices of consumer price index for industrial workers (CPI1W) and consumer price index of non-manual employees (CPINM) for updating the urban poverty line.

(5) The detailed procedure for deriving the poverty lines is as as follows:

(A) Rural Poverty Line : The all-India rural poverty line of Rs.49 at 1973-74 prices is taken as the base. This is adjusted to reflect the observed differences in the rural cost of living across States. Statewise consumer price indices for agricultural labourers for food and general indices with 1960-61 as the base year are available in published form. Based on weights of food and general indices of each State the implicit indices of non-food items for the States have been worked out. Having obtained food and non- food indices for each State, the combined consumer price index is obtained using the consumption pattern of the people around the poverty line at the national level for 1973-74. The latter group of population contained the poverty norm in 1973-74 and closely corresponds to the 40 to 60 per cent tractile group. The all-India consumption pattern of food and non-food items of this group has been obtained from the NSS report relating to 1973-74 and used as the weighting diagram. The State-specific consumer price indices thus derived are adjusted for base year price differentials using the Fisher's rural cost of living index reflecting price differentials across States for 1960-61, as adopted by Minhas [5] from Chatterjee and Bhattacharya.[6] Given these adjusted State-specific consumer price indices for 1973-74 the State-specific poverty lines for 1973-74 corresponding to the all-India poverty line are derived. For the years 1977- 78, 1983 and 1987-88 the consumer price indices for agricultural labourers are available for four groups of commodities namely 'food', 'fuel and light' 'clothing and footwear' and 'miscellaneous' with base 1960-61 = 100. Accordingly, the State-specific price indices for rural areas in respect of each State are worked out using price indices of the above four groups. The all-India consumption

5 Minhas B.S. and L.R. Jain (1989) "Incidence of Rural Poverty in Different States and All-India 1970-71 to 1983", Technical Report No.8915 ISI, Delhi.

6 Chatlerjee G.S. and N. Bhattacharya (1974) "Between State Variations in Consumer * ices and Per Capita Household Consumption in Rural India", in Snnivasan T.N. and P.K. Bardhan (edited) Poverty and Income Distribution in India Statistical Publishing Society, Calcutta.

pattern of people around the poverty line for the above four broad commodity groups in 1973-74 has been used as the weighting diagram for constructing State-specific price indices for the rural population for the three NSS survey years, i.e., 1977-78, 1983 and 1987-88. The State specific poverty lines for 1973-74 are then updated for the years, i.e., 1977-78, 1983 and 1987-88 by moving them with the State specific CPI obtained for these three years as discussed above.

(B) Urban Poverty Line: For urban areas, the all India poverty line of Rs.56.6 for 1973-74 has been adopted as the base. This is adjusted to reflect the observed differences in the urban cost of living across States. The CPI for industrial workers and CPI for urban non-manual employees has been considered as the relevant price index. The CPI for industrial workers is available from 1973-74 onwards for 50 centres covering all major States for five commodity groups namely 'food', 'fuel and light', 'housing', 'clothing, bedding and footwear', and 'miscellaneous' with 1960 as the base. The CPI for non-manual employees is, however, not available at a disaggregated commodity group level for all the years under consideration. Only a general index is available for 45 centres and is being published in the Monthly Abstract of Statistics of the Central Statistical Organisation (CSO). Commodity groupwise CPI for industrial workers for each State are combined using weights based on the urban consumption pattern of the people around the poverty line at the national level for 1973-74. A simple average of this derived index, and CPI for urban non-manual employees is then taken as the State specific price indices. The State-specific urban price indices thus estimated have to be adjusted for base year (1960-61) price differentials across States. This has been done, using Fisher's urban cost of living index reflecting price differentials across States for 1960-61 as estimated by Minhas [7] et al. The adjusted State specific urban price indices have been estimated for 1973-74, 1977-78, 1983 and 1987-88. The all-India poverty line of Rs.56.6 for the year 1973-74 is then adjusted using the adjusted State -specific price indices to derive the State -specific poverty lines for 1973-74. These State -specific poverty lines are then moved with the State-specific price indices derived as discussed above for other years namely 1977-78, 1983 and 1987-88.

(6) Given the updated State-specific poverty lines and the corresponding size distribution of per capita consumption expenditure (PCTE) of NSS, the number of poor as a percentage of total population or the poverty ratio should be calculated separately for rural and urban areas for each State. The absolute number of poor in each State in rural and urban areas should be calculated by applying the poverty ratio to the estimated population as given by the Registrar General of Census. The all-India (rural or urban) poverty ratio should be derived as a ratio of the aggregate number of State-wise poor persons to the total all-India (rural and urban) population. The implicit all-India poverty line may be worked out, given the all-India poverty ratio and the all- India distribution of population by expenditure classes obtained from the same NSS survey.

(7) For the 18 States/Union Territory namely - Andhra Pradesh, Assam, Bihar, Gujarat, Haryana, Himachal Pradesh, Jammu & Kashmir, Karnataka, Kerala, Madhya Pradesh,

7 Minhas B.S., L.R. Jain, S.M. Kansal and M.R. Saluja (1988) "Measurement of General Cost of Living for Urban India - All India and Different States", Sarvekshana Vol.XII, No.l, July 1988.

Maharashtra, Orissa, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh, West Bengal and Delhi, the rural poverty line has been directly estimated using the State-specific consumer price index based on the disaggregated commodity indices of CPIAL. For these States/Union Territory the urban poverty line has also been estimated directly, using the disaggregated indices available from CPI for industrial workers and the CPI for urban non-manual employees. Using these State-specific poverty lines and the corresponding State-level NSS population distribution by expenditure classes, the total number of poor in rural, urban and combined in each one of them has been estimated. For the States/Union Territories namely, Arunachal Pradesh, Goa, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura, Andaman & Nicobar Islands, Lakshadweep, Dadra and Nagar Haveli, Daman and Diu, Pondicherry and Chandigarh, there are certain constraints imposed by the non-availability of adequate data. In certain areas the relevant price data is not available and in some, the sample size of the household consumption expenditure survey is not adequate or it is not available in a series for all the years under consideration. In assigning the poverty line and poverty ratios to these States/Territories, the two considerations that have guided are physical contiguity of areas and similarity of economic profile as indicated by other economic parameters. Accordingly, the estimates are derived as follows:

i) The poverty-ratio of Assam has been adopted for Sikkim and the North-eastern States namely, Arunachal Pradesh, Meghalaya, Mizoram, Manipur, Nagaland, and Tripura. In case of Manipur, the population distribution by expenditure classes and the price indices, both are available. But the use of such information for estimating the incidence of poverty in Manipur gave poverty ratios which were completely out of line with the poverty ratios in the other North-Eastern States and also the numbers and the ratios were not very consistent over the years. This happens probably because of the sample size. Hence, we preferred to adopt the poverty-ratio of Assam for Manipur also.

ii) For Goa, Daman and Din we have taken the poverty line of Maharashtra and used the population distribution by expenditure classes for Goa.

iii) Among the Union Territories, for Andaman and Nicobar Islands we have used the poverty -ratio of Tamil Nadu, for Lakshdweep the poverty ratio of Kerala, for Dadra and Nagar Haveli the poverty-ratio of Goa, and for Pondicherry the poverty ratio of Tamil Nadu. For rural and urban Chandigarh we have used the urban poverty-ratio of Punjab.

(8) The NSS consumption surveys - which are carried out every 5 years yielding State level estimates of mean per capita total consumption expenditure and the size distribution of population around the mean, should be the basic source of information for estimating, on a quinquennial basis, the proportion of the population below the poverty line and changes therein. Calculations of poverty line and poverty-ratios following the recommended method should be worked out for the years 1977-78, 1983 and 1987-88 and onwards, as and when the State wise results of quinquennial NSS rounds of comprehensive household consumption surveys are available.

(9) The Planning Commission has in the past "adjusted" the frequency distribution derived from the NSS for the discrepancy between the NSS and the national accounts based estimates put out by CSO of the aggregate consumption expenditure (pee). This adjustment is made on the assumption that the difference between the two estimates of mean pee at the national level is distributed uniformly across States, and across all sections of the population. We do not find this procedure acceptable because it involves arbitrary pro- rata adjustment in the distribution. Under the circumstances it is better to rely exclusively on the NSS for estimating the poverty ratio by State and in rural and urban areas.

(10) The estimates of the proportion and number of poor based on the methodology recommended by this group are given in tables 4.1 to 4.5. The Group endorses these results for adoption as poverty estimates for the years 1973-74, 1977-78, 1983 and 1987-88. These estimates will replace the earlier officially released series of poverty estimates for the said years.

Table -4.1
State Specific Poverty Lines with Base 1975-74

(Rs. per capita per month)

S. No	States/UT's	Rural				Urban			
		1973-74	1977-78	1983	1987-88	1973-74	1977-78	1983	1987-88
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	States								
1.	Andhra Pradesh	41.71	50.88	72.66	91.94	55.11	71.56	111.84	159.50
2.	Arunachal Pradesh *	49.82	60.?9	98.32	127.44	50.40	64.94	103.97	140.45
3.	Assam	49.82	60.29	98.32	127.44	50.40	64.94	103.97	140.45
4.	Bihar	57.68	58.93	97.48	120.36	60.29	70.24	116.47	161.19
5.	Goa *	50.47	58.07	88.24	115.61	58.64	74.64	127.23	184.45
6.	Gujarat	47.10	54.70	S3.29	115.00	60.08	74.86	125.05	175.57
7.	Haryana	49.95	59.37	88.57	122.90	52.07	66.74	102.59	142.15
8.	Himachal Pradesh	49.95	59.37	88.57	122.90	51.98	66.40	101.92	142.63
9.	Jammu & Kashmir	46.59	61.53	91.75	124.33	41.19	59.35,	98.75	145.22
10.	Karnataka	47.24	51.95	83.31	104.46	57.87	71.25	121.23	171.23
11.	Kerela	51.63	58.38	99.35	130.61	62.06	71.82	127.84	175.11
12.	Madhya Pradesh	50.20	56.26	83.59	107.00	63.65	77.73	124.71	178.44
13.	Maharashtra	50.47	58.07	83.24	115.61	58.64	74.64	127.23	184.45
14.	Manipur *	49.82	60.29	96.32	127.44	50.40	64.94	103.97	140.45
15.	Meghalaya *	49.82	60.29	96.32	127.44	50.40	64.94	103.97	140.45
16.	Mizoram *	49.82	60.29	96.32	127.44	50.40	64.94	103.97	140.45
17.	Nagaland *	49.82	60.29	96.32	127.44	50.40	64.94	103.97	140.45
18.	Orissa	46.87	58.8?	106.28	121.42	60.18	75.00	127.16	170.63
19.	Punjab	49.95	59.37	88.57	122.90	51.80	66.06	101.25	143.11
20.	Rajasthan	50.96	57.54	80.24	117.52	60.77	74.84	117.24	166.72
21.	Sikkim *	49.82	60.29	96.32	127.44	50.40	64.94	103.97	140.45
22.	Tamil Nadu	45.09	56.62	96.15	118.23	54.34	71.18	123.73	174.82
23.	Tripura, *	49.82	60.29	98.32	127.44	50.40	64.94	103.97	140.45
24.	Uttar Pradesh	48.92	54.21	83.85	114.57	56.81	70.50	110.92	154.78
25.	West Bengal	54.49	63.34	105.55	129.21	54.69	68.02	105.83	148.95
	U.T's								
26.	Delhi	49.95	59.37	88.57	122.90	65.45	80.00	124.02	178.48
27.	A & N Island *	45.09	56.62	96.15	118.23	54.34	71.18	123.73	174.82
23.	Chandigarh *	51.80	66.06	101.35	143.11	51.80	66.06	101.25	143.11
29.	D & N Haveli *	50.47	58.07	88.24	115.61	58.64	80.00	127.23	184.45
30.	Lakshadweep *	51.68	58.88	99.35	130.61	62.08	71.82	127.84	175.11
31.	Pondicherry *	45.09	56.62	96.15	118.23	54.34	71.18	123.73	174.82
	All India	49.00				56.60			
	All India 8	49.63	56.84	89.45	115.43	56.96	72.50	117.64	165.58

* Estimates as discussed in para 4.7 (7)(i)(ii)(iii)

@ Implicit poverty line as discussed in para 4.7 (6)

Table - 4.2

Number and Percentage of Poor based on Poverty lines as Given in Table-4.1 - 1973-74

S.No	State/U.T's	Rural		Urban		Combined	
		No. of Persons (Lakhs)	% of Persons	No. of Persons (Lakhs)	% of Persons	No. of Persons (Lakhs)	X of Persons
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	States						
1.	Andhra Pradesh	178.21	48.41	49.31	52.56	227.52	49.25
2.	Arunachal Pradesh <	' 2.57	52.67	0.09	37.16	2.66	51.96
3.	Assam	76.37	52.67	5.50	37.16	81.87	51.23
4.	Bihar	336.52	62.99	33.27	51.75	369.79	61.78
5.	Goa *	3.16	46.85	0.98	36.88	4.14	44.04
6.	Gujarat	94.61	46.35	41.09	49.31	135.70	47.21
7.	Haryana	30.08	34.23	8.12	39.58	38.20	35.24
8.	Himachal Pradesh	9.38	27.42	0.35	13.20	9.73	26.40
9.	Jainmu & Kashmir	18.41	45.51	2.95	30.40	21.36	42.59
10.	Karnataka	128.40	55.14	41.85	52.01	170.25	54.34
11.	Kerala	111.36	59.19	23.97	62.24	135.33	59.71
12.	Madhya Pradesh	231.21	62.66	45.63	58.34	276.84	61.90
13.	Maharashtra	210.84	57.71	74.99	42.96	285.83	52.94
14.	Man i pur *	5.11	52.67	0.75	37.16	5.86	50.01
15.	Meghalaya *	4.88	52.67	0.64	37.16	5.52	50.25
16.	Mizoram *	1.62	52.67	0.20	37.16	1.83	50.33
17.	Nagaland *	2.65	52.67	0.25	37.16	2.90	50.87
18.	Orissa	142.24	67.28	12.38	56.29	154.62	66.24
19.	Punjab	30.47	28.21	9.92	27.68	40.40	28.08
20.	Rajasthan	101.41	44.76	27.63	53.15	129.04	46.33
21.	Sikkim *	1.09	52.67	0.10	37.16	1.18	50.91
22.	Tamil Nadu	172.60	57.43	73.79	54.47	246.39	56.51
23.	Tripura *	7.88	52.67	0.66	37.16	8.54	51.03
24.	Uttar Pradesh	449.99	56.53	84.87	59.48	534.86	56.98
25.	West Bengal	257.96	73.16	41.14	34.50	299.10	63.19
	U.T's						
26.	Delhi	1.06	24.44	20.50	49.17	21.56	46.85
27.	A & N Island *	0.59	57.43	0.17	54.47	0.76	56.72
28.	Chandigarh *	0.07	27.68	0.76	27.68	0.83	27.68
29.	n & N Haveli *	0.37	46.85	0.01	36.88	0.38	46.65
30.	Lakshadueep *	0.18	59.19	0.03	62.24	0.21	59.61
31.	Pondicherry *	1.61	57.43	1.25	54.47	2.86	56.09
	All India	2612.91	56.44	603.12	49.23	3216.03	54.93

* Estimates as discussed in para 4.7 (7)(i)(ii)(iii)

Table 4.3

Number and Percentage of Poor based on Poverty Lines as Given in Table-4.1 - 1977-78

S. No.	States/UT's	Rural		Urban		Combined	
		No. of Persons (Lakhs)	% of Persons	No. of Persons (Lakhs)	% of Persons	No. of Persons (Lakhs)	% of Persons
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	States						
1.	Andhra Pradesh	149.13	38.11	51.64	46.46	200.77	39.96
2.	Arunachal Pradesh	*3.26	59.82	0.12	37.58	3.39	58.55
3.	Assam	97.55	59.82	6.70	37.58	104.25	57.63
4.	Bihar	364.48	63.25	39.95	52.17	404.43	61.95
5.	Goa *	2.72	37.64	1.17	36.66	3.88	37.34
6.	Gujarat	92.53	41.76	41.33	43.13	133.86	42.17
7.	Haryana	26.43	27.73	8.97	36.24	35.40	29.48
8.	Himachal Pradesh	12.46	33.49	0.58	19.47	13.04	32.45
9.	Jammu & Kashmir	19.04	42.86	3.61	31.89	22.65	40.63
10.	Karnataka	120.39	48.18	50.17	52.88	170.57	49.47
11.	Kerala	102.85	51.48	26.09	59.54	128.94	52.93
12.	Madhya Pradesh	247.98	62.52	58.07	62.05	306.05	62.43
13.	Maharashtra	249.75	63.97	81.20	40.61	330.96	56.06
14.	Manipur *	6.09	59.82	1.11	37.58	7.20	,54.83
15.	Meghalaya *	6.10	59.82	0.79	37.58	6.89	56.04
16.	Mizoram *	2.03	59.82	0.32	37.58	2.35	55.38
17.	Nagaland *	3.44	59.82	0.35	37.58	3.79	56.74
18.	Orissa	162.50	72.38	14.53	53.55	177.03	70.35
19.	Punjab	18.87	16.37	11.49	27.64	30.36	19.36
20.	Rajasthan	89.66	35.89	28.99	46.36	118.64	37.99
21.	Sikkim *	1.41	59.82	0.15	37.58	1.55	56.69
22.	Tamil Nadu	182.50	57.68	79.77	53.23	262.26	56.25
23.	Tripura *	9.95	59.82	0.76	37.58	10.71	57.41
24.	Uttar Pradesh	407.41	47.60	98.42	57.07	505.83	49.19
25.	West Bengal	259.69	68.34	51.55	38.71	311.24	60.65
	UT's						
26.	Delhi	1.35	30.19	16.72	33.33	18.07	33.07
27.	A & N Island *	0.71	57.68	0.22	53.23	0.93	56.56
28.	Chandigarh *	0.08	27.64	0.96	27.64	1.03	27.64
29.	D & N Haveli *	0.33	37.64	0.16	36.66	0.49	37.32
30.	Lakshadweep *	0.13	51.48	0.07	59.54	0.21	54.09
31.	Pondicherry *	1.65	57.68	1.48	53.23	3.13	55.49
	All India	2642.46	53.07	677.40	47.40	3319.86	51.81

* Estimates as discussed in para 4.7 (7)(i)(ii)(iii)

Table - 4.4
Number and Percentage of Poor based on Poverty Lines as Given in Table-4.1 - 1983

S. NO.	States/U.T's	Rural		Urban		Combined	
		No. of Persons (Lakhs)	X of Persons	No. of Persons (Lakhs)	X of Persons	No. of Persons (Lakhs)	X of Persons
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	States						
1.	Andhra Pradesh	113.46	26.53	56.07	40.13	169.53	29.88
2.	Arunachal Pradesh	* 2.72	42.60	0.13	26.38	2.85	41.40
3.	Assam	81.28	42.60	6.06	26.38	87.35	40.86
4.	Bihar	415.90	64.37	50.05	50.42	465.95	62.51
5.	Goa *	1.14	14.81	1.09	27.20	2.22	19.05
6.	Gujarat	73.49	29.80	47.26	40.63	120.76	33.27
7.	Haryana	22.14	20.56	7.71	23.48	29.85	21.24
8.	Himachal Pradesh	7.11	17.00	0.33	9.25	7.44	16.39
9.	Jammu & Kashmir	13.02	26.04	2.40	17.14	15.42	24.10
10.	Karnataka	100.32	36.33	52.31	43.37	152.63	38.47
11.	Kerala	84.32	39.03	25.61	48.65	109.93	40.91
12.	Madhya Pradesh	213.53	48.90	65.85	54.59	279.38	50.13
13.	Maharashtra	193.17	45.23	98.62	40.57	291.79	43.54
14.	Manipur *	4.71	42.60	1.13	26.38	5.84	38.08
15.	Heghalaya *	5.00	42.60	0.74	26.38	5.74	39.46
16.	Mizoram *	1.72	42.60	0.41	26.38	2.13	38.14
17.	Nagaland *	3.08	42.60	0.41	26.38	3.49	39.75
18.	Orissa	163.42	67.53	18.37	50.61	181.79	65.32
19.	Punjab	16.74	13.20	12.37	23.86	29.11	16.29
20.	Rajasthan	96.96	33.50	33.31	40.37	130.28	35.02
21.	Sikkim *	1.23	42.60	0.17	26.38	1.41	39.62
22.	Tamil Nadu	181.77	53.99	84.63	49.22	266.41	52.38
23.	Tripura *	8.40	42.60	0.65	26.38	9.06	40.79
24.	Uttar Pradesh	442.76	46.45	114.78	50.27	557.54	47.19
25.	West Bengal	266.65	63.05	50.45	32.21	317.10	54.72
	U.T's						
26.	Delhi	0.35	7.66	18.64	28.32	18.99	26.97
27.	A & N Island *	0.85	53.99	0.30	49.22	1.15	52.68
28.	Chandigarh *	0.07	23.86	1.20	23.86	1.27	23.86
29.	D&N Haveli *	0.16	14.81	0.02	27.20	0.18	15.64
30.	Lakshadweep *	0.09	39.03	0.09	48.65	0.18	43.48
31.	Pondicherry *	1.57	53.99	1.76	49.22	3.33	51.36
	All India	2517.15	45.61	752.93	42.15	3270.08	44.76

Table - 4.5

Number and Percentage of Poor based on Poverty Lines as Given in Table-4.1 - 1987-88

S. No	State/ U.T's	Rural		Urban		Combined	
		No. of Persons (Lakhs)	X of Persons	No. of Persons (Lakhs)	X of Persons	No. of Persons (Lakhs)	X of Persons
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	States						
1.	Andhra Pradesh	94.89	20.92	72.88	44.63	167.77	27.20
2.	Arunachal Pradesh	* 2.73	39.35	0.11	17.34	2.84	37.47
3.	Assam	80.86	39.35	4.58	17.34	85.44	36.84
4.	Bihar	370.36	52.63	69.48	57.71	439.84	53.37
5.	Goa *	1.32	17.64	1.42	33.71	2.74	23.42
6.	Gujarat	75.95	28.67	52.63	39.63	128.58	32.33
7.	Haryana	18.75	16.22	7.15	17.79	25.90	16.63
8.	Himachal Pradesh	7.37	16.28	0.25	6.18	7.62	15.46
9.	Jammu & Kashmir	13.96	25.70	2.40	14.82	16.36	23.20
10.	Karnataka	93.96	32.82	68.39	49.06	162.35	38.14
11.	Kerala	66.20	29.10	26.02	43.36	92.22	32.08
12.	Madhya Pradesh	195.85	41.92	70.04	48.17	265.89	43.40
13.	Maharashtra	185.59	40.78	108.59	38.99	294.18	40.10
14.	Manipur *	4.68	39.35	0.85	17.34	5.53	32.93
15.	Meghalaya *	4.89	39.35	0.59	17.34	5.48	34.60
16.	Mizoram *	1.68	39.35	0.33	17.34	2.01	32.52
17.	Nagaland *	3.05	39.35	0.35	17.34	3.40	34.85
18.	Orissa	148.02	57.64	19.94	44 11	167.96	55.61
19.	Punjab	16.78	12.60	7.77	12.91	24.56	12.70
20.	Rajasthan	103.02	33.21	38.17	38.99	141.19	34.60
21.	Sikkim *	1.25	39.35	0.15	17.34	1.40	34.67
22.	Tamil Nadu	160.67	45.80	82.54	43.88	243.20	45.13
23.	Tripura *	8.49	39.35	0.48	17.34	8.97	36.84
24.	Uttar Pradesh	412.03	41.10	125.02	45.22	537.05	41.99
25.	West Bengal	219.09	48.30	57.63	32.84	276.72	43.99
	U.T's						
26.	Delhi	0.06	1.29	12.74	16.91	12.80	16.04
27.	A&N Island *	0.80	45.80	0.32	43.88	1.12	45.24
28.	Chandigarh *	0.04	12.91	0.76	12.91	0.80	12.91
29.	DIN Haveli *	0.21	17.64	0.03	33.71	0.24	18.71
30.	Lakshadweep *	0.06	29.10	0.12	43.36	0.18	37.26
31.	Pondicherry *	1.35	45.80	1.80	43.88	3.15	44.68
	All India	2293.96	39.06	833.52	40.12	3127.48	39.34

* Estimates as discussed in para 4.7 (7)(i)(ii)(iii)

Chapter 5

RELATED ISSUES AND FURTHER WORK

5.1 In this final chapter, we deal with certain issues related and ancillary to poverty estimation. We also suggest certain priority areas for research and data improvement from the point of view of improving the poverty estimates in the future.

5.2 Non -availability of appropriate State-specific cost of living indices is an important gap in data availability for making State-specific estimates of poverty. In this respect an appropriately weighted index based on CPI for Agricultural labourers has been recommended for use for rural areas and a simple average of appropriately weighted indices based on CPI of industrial workers and CPI for non manual employees is recommended for use for urban areas for calculating relevant price indices. These cannot be adequate substitutes for cost of living indices for poor. This Group recommends taking immediate steps to construct the price indices representing changes in consumer prices of the poor at relevant disaggregated levels.

5.3 The estimates of the poverty-ratio derived from the NSS provide a composite picture of the number of people whose per capita consumption expenditure is below the level corresponding to the basket of commodities constituting the desired minimum. It does not, however, provide a complete picture of the State of well-being of the population: for instance it does not tell us anything about the living environment(hous-ing, sanitation and amenities). Many of these services contributing to the living standard are provided by the public authorities at subsidised prices and do not get fully reflected in the survey-based estimate of private consumption expenditure. We, therefore, need to supplement the estimates of the proportion and number of poor with the assessment of the following aspects in order to capture a fuller picture of the living conditions and well being of the poor:

(i) The composition of the poor population in terms of dominant characteristics, i.e., their distribution by region, social group, family characteristics (e.g., size, education, age, sex of household head, dependency ratio) and the way this is changing over time. Much of this can be done by appropriate tabulation of NSS employment and consumption survey data.

(ii) Nutritional status of the population: levels of intake of principal nutrients, incidence of malnourishment, anthropometric measurements and activity patterns by age, sex and socio-economic categories. This can be done by the National Institute of Nutrition.

(iii) Health status: mortality (overall, infant and child, maternal); morbidity; access to and use of health services (public and private) and costs. The quinquennial surveys of public consumption as well as the mortality indicators based on the Sample Registration System and the morbidity surveys of NSS need to be put on a systematic and continuing basis.

(iv) Educational status: school enrolment by region, sex and age group and by economic-social class; reach and quality of public education services and costs. Here again information from the NSS social consumption enquiries and the all-India Education Survey suitably restructured would provide the basic data.

(v) Living Environment: distribution by density of settlement; living space per head; type of houses; access to safe drinking water and sanitation; access to amenities (post office, telephones, railway, pucca road, markets, etc).

5.4 These data should be collected and analysed by the Planning Commission to produce every 5 years a comprehensive report on the levels of living of the popoulation. Data are already being collected on several of these aspects by the NSSO as well as the executive ministries at the Centre and in the States. Systematic collection and interpretation of these gives us a good starting point. But the scope, coverage and periodicity of the surveys now being done by various agencies need to be reviewed with a view to standardising concepts and methodology, generating tabulations/analysis relevant to publishing "The State of poverty" report. This report should highlight, as far as possible, the conditions of the bottom 30 per cent of the population in the country and the nature and magnitude of changes in their conditions over time and across States. However, it is recognised that the available body of information may not be adequate in many cases to get sufficiently detailed picture of the conditions of the poorest 30 per cent. It would be necessary, therefore, to conduct special supplementary sample surveys which focus specifically on this segment of the population. The design and organisation of such supplementary surveys should be an integral part of the programme of work of the Planning Commission in this area and the necessary modalities, including financial modalities, should be planned from now onwards.

5.5 In some aspects like nutrition where basic issues concerning the concept of under-nourishment and minimum requirements for healthy active individuals are under controversy, further research is necessary to improve our understanding. Besides encouraging improvements in the range and quality of survey data, the Planning Commission should also support research on some of these basic issues.

5.6 The poverty line is also used for the operational identification of poor households in order to determine their eligibility for benefits under targetted anti-poverty schemes notably the IRDP. We believe that, in principle, the improved estimates we have recommended will make them more usable for this purpose. In practice, however, it is difficult to estimate or verify incomes or consumption expenditure at the level of individual households. In these circumstances, the "first information' indicator provided by the poverty-ratio under this methodology needs to be supplemented and corrected with other indicators - which may also be more readily verifiable than income or consumption expenditure . This is important in order to refine targeting so that the ineligible are excluded from, and the eligible are fully covered in, the intended benefits from targetted anti-poverty programmes.

5.7 Attention must be drawn to the fact that in deriving State-specific poverty lines and in updating them, the Group has allowed for only price differences across States and over time. The calorie norms and consumption baskets have been standardised at the all India level since such standardisation has been felt to be necessary in order to permit comparability across States and for inter-State ranking of poverty- ratios in any particular year of estimation. Such inter-State comparisons have been used for the allocation of funds to States in the case of specific Central and Centrally-sponsored programmes. The procedures suggested by us would improve the validity of broad inter- State comparisons with reference to what was possible under earlier

official estimates since the latter,unlike our estimates, made no allowance for inter-State price differentials. Even so, considering that there could still be differences in views about definition and measurement of poverty, we are not in favour of using these estimates to derive any [v] poverty criterion' in such an important matter as the inter-se allocation of financial transfers to the States.

5.8 At present, the agencies concerned with the implementation of poverty-alleviation programmes resort to special surveys to identify the eligible households. Such surveys, besides being expensive, cannot really give a correct picture because they may suffer from the reporting bias which arises when it is known to form the basis for identifying beneficiaries of government assistance. Analysis of data relating to sample households obtained form the NSS can give us an idea of certain easily identifiable characteristics of poor households.

5.9 Such analyses have already been attempted on a limited scale and they show that the ranks of the poor tend to have a relatively high concentration of households with large household size, high-dependency-ratio and female heads, rural households which do not cultivate any land, and households belonging to scheduled castes and scheduled tribes. It should be possible from the NSS data to estimate,by State and region, separately for rural and urban areas, the probability of a household being poor for various values of each of these characteristics taken individually and in combination. Once this is done, it should be possible to give guidelines for identifying the poor households in a given locality of the region in terms of the value of specified characteristics information on which is already available in the population census or can be collected without much expense. We would urge the Planning Commission to take the initiative in exploring these possiblities.

5.10 In order to progressively improve the coverage and quality of the 'State of Poverty' reports it is necessary for the Planning Commission to stimulate and support research on certain basic issues related to the estimation of poverty such as:

(1) The relationship between poverty and under-nourishment

(2) The nature and magnitude of poverty among disadvantaged classes such as the Scheduled Castes and Tribes and in disadvantaged and backward regions such as hill and desert areas.

(3) Decomposition of the poverty population into broad occupational groups (such as agricultural labourers, marginal farmers, artisans, urban manual workers) and according to demographic and life-cycle characteristics (viz. -, household size, dependency ratios, widowhood, old age)

(4) Changes in the patterns of the consumption expenditure of the poor

(5) The relationship between transient and persistent poverty.

Annexure I

SUPLEMENTARY NOTE
from
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Prof. S.R. Hashim,
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January 15, 1993

Dear Dr. Hashim,

I have gone through the summary and recommendations given in Chapter 5 of our report. I am, however, not too happy with many of the points made therein. The point which bothers me most arises from discussion in para 5.4 (now para 4.4). Bluntly stated it implies that when poverty line is defined as a level equal to the norm we unwittingly harm the interests of the backward castes in profiting from the programmes for the poor. The best test of whether this is true will be to increase children's intake to the level of the norm as we do in ICDS project and watch the results. It is found that our children, especially those from backward castes, do not gain weight to match the Harvard standard. The basic assumption that the norm provides a minimum standard of living has, therefore, no basis to support it.

The level of calorie intake becomes meaningful if along with the norm we also dwell on the meaning of intra- individual variation. In particular it is imperative that even though we use norm, to anchor poverty line we need to have evidence of non-random structured pattern of- .variation so essential for understanding how the mind controls the brain. Only then we can be sure that intake even when it is lower than the norm can have the capacity to use the food energy more efficiently than a norm. The brain. Only then we can be sure that intake even when it is lower than the norm can have the capacity to use the food energy more efficiently than a norm. The nearer we are to the norm in constructing the poverty line the more we will be discriminating against low castes in preventing them to reap the benefits of the grants that Planning Commission makes to alleviate poverty. Making allowance for non -food consumption

does not solve the problem. Let me take up my points one by one. We have expressed the view that estimates of poverty cannot provide a complete picture of the state of well being of the population. The reason is that these estimates depend on surrounding environment such as sanitation, potable water, etc. These services are normally under the authority of Public Health Administration. This is the reason that we have advanced as to why they do not get reflected in poverty estimates based on private consumption expenditure. I accept all this reasoning but the fact remains that these services do not in any way help to cut down the expenditure on health and illness incurred by the rural poor. To take one example we know that the number of days annually lost by school and pre-school children due to episodes of diarrhoea, dysentry, upper respiratory diseases, etc. is some 20% ? The result is that no sooner a child recovers from one episode he suffers from another. This frequency of episodes of disease is particularly large among low caste children. One has only to look at the results of food intervention under the ICDS project to verify this. So heavy is the prevalence of disease that children fail to show any benefits in respect of their health from these interventions. Surely this is not something one would expect if inadequate food were the sole reason for the low stature of our children. I have carried out a very detailed assessment of ICDS. Broadly, my finding is that around l/3rd of the village centres under ICDS remain totally closed. A second l/3rd are open for about 2-3 hours a day and no more. A final 3rd of the centres run with enthusiasm. They do what they are intended to do. But having said this the fact remains that we have little or no evidence of the improvement in nutritional status of the children. The broad picture that emerges is that over one-half the children are small in stature i.e. below the 90th percentile of the Harvard median. Our nutritionists hold that inadequate intake is the major cause of this situation. On the other hand, a detailed follow up of children in the field shows that food intervention with intake equal to that of counterpart children in USA have not materially improved the situation. They have failed. The question as to why our children remain small in spite of food intervention thus remains unanswered.

The answer is to be found in the interaction between the child and his surrounding. We seem to forget that health has a social aspect with gain in body-weight varying with caste and hence with personal hygiene and surrounding environment. This has not been taken care of in ICDS nor in IRDP. This is the major flaw of our projects. We have several other studies carried out in our villages. They all confirm that diarrhoea and respiratory diseases are the most common and dangerous diseases among children. Actual examination of stools confirm that one out of every two episodes is bacterial in origin thereby pointing to the annual prevalence of diarrhoea of the order of 40 to 50% . The high mortality that we find in children is in fact the result of this high prevalence of morbidity. I am not, therefore, surprised that our children are not able to use food to gain weight and height. But I do find it difficult to understand why our nutrition experts demand food intervention under these conditions. Almost every school in India has a programme of food intervention. The total programme is so massive that it costs the government some 100, crores rupees a year. It is not cost effective either. We do not need food but along with food we also need potable water, adequate disposal of excreta, good sanitation and personal hygiene to reduce prevalence of morbidity before initiating feeding programmes. I have even wondered as to why the interest of our people in environment is so passive and in food so active? Even rats are active in exploring surroundings to contribute to their survival. We seem to behave more like Pavlov's dog when what we need is conscious mind-brain interaction to initiate negative feedback to restore order whenever there is disruption. Available data show that diet and disease

move in concert to show synergistic interactions. If someone is suffering from diarrhoea not only that person will have low intake but he or she will be unable to effectively assimilate what little is eaten because of the rapid food transit time and disturbance in the absorption mechanism. The majority of illness tend to synergise mal-nutrition both by demanding higher energy intake to meet the rise in BMR which accompany fever and by requiring higher intake of protein and other nutrients to form antibodies to fight the illness. It is this negative correlation which Japan used to formulate her policy in post war years to provide water for drinking, pit latrines to dispose of excreta, sanitation to control breeding of flies and mosquitoes and education in pre-primary and primary schools to improve personal hygiene. I am not therefore surprised that Japan added some 12 years to increase life expectation of her people during the immediate post war decade.

A child with infection will not grow. It is not therefore so much the intake that determines work capacity, it is the control of disease that matters. I fear that continuing food intervention under these conditions will be to waste our resources. Clearly our programmes needs to be restructured and that too very soon.

Behind this failure lies the lack of understanding of that is known in literature as SEM Hypothesis. This is a fundamental hypothesis in recent development of Biology. If food interventions do not show gains in weight comparable to that recorded in US children then our children will have no alternative except to adapt themselves to low levels of sizes and low levels of productivity. It is believed that such adaptation will lead to increasingly low productivity, low level of income and low intake and hence still greater poverty. However when this hypothesis of vicious cycle is examined we find that it is untrue. In all such studies of economic activities it is assumed by default that much of the potential working time of a villager is dissipated in enforced idleness. In reality we find that the poor work for longer hours and are fully employed in work of low productivity. Broadly the poor men work for 60 hours and women 70 hours per week. Space doesn't permit more elaborate discussion. A key factor in this data is that the time spent in recreation is not included in productive work time. The broad conclusion we reach is that there is hardly any relation between the productivity per unit of time and food energy intake. Such a phenomenon is impossible to explain unless food energy is metabolised into work output with decreasing efficiency with the increase in intake as indeed we find the case to be in all our experiments in India. The following Table No.I based on observation on 54 adult subjects for six days at a time at intervals of eight weeks over one full year speaks for itself. It will be seen that the calorie cost of the work output for the high intake group is about the same as that for the low intake groups.

Table-1
Results of the Pilot Study on 10 Individuals

	Mean energy intake in kcal	BMR/ Minute	Ht. cm.	Wt.Kg.	Basal need for 24 hours (Kcal)
High Intake Group	2754	1.32	162.0	52.1	1900
Low Intake Group	1773	0.68	161.6	52.8	980

The analysis of variance of the same data is presented below in Table2.

Table-2
Anova for Energy intake (Kcals x 10)

Source	d.f.	M.S.	F.	Estimate of true variance	
Between subjects	53	149.9	3.12	16.5 =	σ_b^2
Within subjects	270	46.6		46.6 =	σ_w^2

It will be seen that the mean square between individuals is significantly larger than the mean square within individuals. There is thus a clear evidence here of the non-independent hierarchical structure of variation. This means that the differences between individuals cannot be attributed to chance only. Part of these difference are real differences representing genetic potential for coping with variation in energy intake and the remainder has its origin in environmental effects permanently associated with individual's development within the intra-uterine and external environment experienced by him.

Inter-individual variation when broken down by weeks and days within weeks shows the same non-independent hierarchical structure. It implies that the genetic physiological process of energy metabolism does not remain the same each day and has its origin in the interaction between the genetic entities possessed by the individual and the micro-environment provided by the food intake in different days.

It is a pity that not withstanding such extensive work of great importance for the country we are-denied the privilege of continuing the project on human caloriemeter at Pune. The reason given by SERC of DST is that Pune does not have the congenial atmosphere for such work. On the other hand, I refuse to move from Pune which is only natural for a man of my age over 80. The economic significance of lack of correlation between human energy intake and productivity is vast. Normally it will be impossible for India to compete with more developed countries if productivity mainly depended upon energy intake. Fortunately, we have feedback mechanism in our bodies which can compete with modern technology. Our evidence is conclusive that higher the intake, higher is the energy expenditure on maintenance. Thus, a person who eats 10% less than his habitual intake will find that his BMR is also reduced by about the same % reduction in BMR. Man's capacity for work is therefore not determined by his intake but by efficiency with which he converts food energy into metabolisable energy over his homeostatic range of intake. I will resist the temptation of going into further details of how the mind controls the brain in keeping with the moral and social philosophy of Adhyatma that guides us in our work. It is adhyatma which is the core of our teaching and helps us to regulate mental process and its implications for the interactions between man and surroundings.

Thanking you,

Yours sincerely,
sd/-
(P.V. SUKHATME)'

Annexure II

SUIVLEMENTARY NOTE
from
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18th May, 1993

Dear Prof. Hashim,

The methodology recommended by the Expert Group for making poverty estimates represents a distinct improvement over the one adopted in the official estimates currently available. Three important improvements are : (a) the abandonment of the NSS-NAS adjustment procedure (b) initial estimation of poverty State-wise and its aggregation for deriving all-India estimates (c) adoption of price indices and deflators that are related to consumption around the poverty line. The Group has recommended that the all-India calorie norms and the relevant consumption baskets at the all-India level may both be uniformly adopted for all States. Standardisation of calorie norms and the consumption basket have been found to be necessary to enable aggregation of State-wise estimates and comparisons across States at each point of estimation.

2. While I recognise that the devices adopted by the Group are necessary for the stated purposes, I feel that the estimates recommended do not give a full and true picture of poverty at State levels because the standardisation procedure necessarily ignores States-wise differences in normative calorie requirements and in consumption baskets. In a country as large and diverse as India, these parameters vary considerably across States because of differences in climate and terrain, levels of urbanisation, average incomes, income distribution, local availabilities of cereals and other food items, consumer preferences, cultural patterns and so on. These variations have been discussed in the report itself while dealing with the calorie intake criterion and with variations in the consumption pattern across States and over time.

3. In view of these State-wise differences, I feel that the Group could have recommended a separate set of State- level estimates in addition to the series recommended by it in order to approximate more closely to poverty at the State level. This will involve taking account of State-level normative calorie requirements and State-level mended by it in order to approximate more closely to poverty at the State level. This will involve taking account of State-level normative calorie requirements and State-level differences in consumption baskets. The former can not be done at present for want of technically-determined normative calorie requirements at the State

level. State-level consumption baskets are however available and it is possible to adopt them for deriving State-level poverty estimates. On this basis, the separate set of State-level estimates could be based on all-India calorie norms (for want of anything better), State-level consumption baskets in the base year, and State-level price indices and deflators relatable to the respective base year consumption baskets at the State level. There is no reason not to provide such estimates.

4. I realise that such State-level estimates can not be aggregated for all-India. For that, we have to depend per force on the methodology recommended by the Group. But aggregation and stylised comparisons are not all. Differences too are important given the diversity of India which is only a 'Union of State', a fact recognised by the Group itself while basing its all-India poverty estimates on primary estimates at State levels.[1] The separate set of State-level estimates I recommend will give us better insight into two important dimensions of poverty in India. First, they will enable State governments and their citizens to follow the levels and trends of poverty in their State as closely as the available data will permit. This is, or ought to be, a matter of concern and interest since in India's dual polity, politically and administratively, each State has a separate identity. Second, it is also a matter of interest to consider how State X stands in relation to State Y in terms of ^heir respective poverty profiles defined on the basis of standards appropriate to each.[2]

1 For loading oranges and apples as cargo, only their weight and volume are relevant. For invoicing them, only prices are relevant. That one has to engage in these activities need not rule out paying heed to the distinctiveness and varieties of oranges and apples in terms of other characteristics such as size, colour, flavour, taste etc. More philosphically: measurements are based on conventions; conventions are use-related; different uses require appropriately different conventions and hence measures; if different measures are viewed as being conflictual and discarded in favour of a uniform standard measure, something may be gained but much is also needlessly lost in the process. The optimal course, therefore, will be to provide a plurality of measures.

2 In this connection, the following from Prof. Amartya Sen should be persuasive (Poverty and Famines, Oxford University Press, 1981, p.21)

There is, indeed, nothing contradictory in asserting both of the following pair of statements:

(1) There Is less deprivation in community A than in community B in terms of some common standard, e.g. the notions of minimum needs prevailing in community A.

(2) There is more deprivation in community A than in community B in terms of their respective standards of minimum needs, which are a good deal higher in A than in B.

It is rather pointless to dispute which of these two senses is the correct' one, since it is quite clear that both types of questions are of interest. The important thing to note is that, the two questions are quite distinct from each other.

5. For reasons that I have not been able to fully understand or appreciate, the Group could not be persuaded to accept my suggestion for providing a set of State-level estimates on the basis indicated by me in addition to the series which we have all recommended. Perhaps, the rest of the Group too did not fully understand or appreciate the value and validity of my arguments. I have reiterated my suggestion in this supplemental note in the hope that it will at least find favour with the Planning Commission and the State governments. In that case, the federal dimension of poverty will also get duly recognised and those interested in this topic need not rest content with abstractions such as an [v]all-India[1] consumption pattern. With best regards,

Yours sincerely,

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Annexure III

EXPLORATORY EXERCISES

1. Given the issues that have been raised on the limitations of the existing methodology, the Group directed a number of exercises with a view to find a more acceptable method of estimating the incidence of poverty. The various alternatives that were considered, fall in two groups. The first set of exercises involve investigating alternative approaches to measure poverty. The latter set of exercises were aimed at modifying and refining the existing methodology with a view to overcome the limitations of this approach, as discussed in Chapter 3 of this report. The details of these exercises are outlined in what follows.

The Hunger Criterion

2. Poverty is a multi-dimensional phenomenon and hunger is one, undoubtedly the most crucial of its components . It has been suggested that the incidence of hunger as perceived by people could be considered as an alternative approach to assess the poverty in the country. In an effort to directly estimate the extent of hunger in the country, the 38th round household consumption expenditure survey of NSSO (1983), for the first time included a question addressed to the head of the household, seeking to know whether all members of the household got two square meals a day throughout the year or not. The responses were tabulated in three categories.

(i) Number of persons who were getting two square meals a day, all the year round;

(ii) Number of persons who were not getting two square meals a day for some months of the year; and

(iii) Number of persons who were not getting two square meals a day even for some months of the year.

3. Seasonally hungry, i.e. category (ii) above , and chronically hungry, i.e., category (iii) above were added together to get a distribution of persons who go without food atleast on some occasions in the course of the year. The ratio of such persons to total population is termed as "the hunger ratio". Tables A III.l and Table A III.2 give the dimension of hunger in the country in terms of "the hunger ratio". It can be seen that the incidence of hunger is less than the incidence of poverty, both in rural and in urban areas of the country. In other words not all the poor are hungry. Secondly, the problem of hunger is more serious in the rural areas than in the urban areas. On an average, about 81 per cent of rural population and about 93 per cent of urban population gets two square meals a day. Finally, hunger is even more concentrated in certain regions than poverty. For example, the proportion of chronic hunger varied from 39.6 per cent in West Bengal rural, 37.2% in Bihar rural, and 36.8% in Orissa rural on the high side to 0.85% in Haryana rural and 1.6% in Punjab rural on the low side in 1983.

4. It has to be kept in mind that the information regarding the adequacy or inadequacy of food for consumption, elicited through a single probing question, may not always be free from subjectivity and at the same time may not be adequately precise and objective. For instance the size of 'square meal[1] would differ not only from person to person but also from place to place.

Very often, particularly in rural India, the head of the family, usually a man who is the main respondent in the survey, would not be sufficiently aware of the quantity and content of meal left for his wife and other female members of the house. Therefore, this data would probably give only a broad idea about the perceptions of the people on adequacy of food. Undoubtedly hunger or food poverty constitutes the most crucial component of poverty, but the extent of hunger is but one of the facets of the overall level of living of the people. While quantifying poverty it is desirable that we not only consider the calorie needs of an individual but also give due weightage to the basic needs of shelter and health and other needs like education and transport, which would help him/her in living a 'normal' and 'effective' existence. To this extent the hunger criterion discussed here, fails to comprehensively quantify the poor. However, its utility lies essentially in drawing attention to the most unfortunate of all problems facing us - namely the problem of hunger - as perceived by the sampled households.

The Food Share Criterion

5. Ernst Engel had argued that with given tastes or preferences, the proportion of income spent on food diminishes as income increases. Poor living is characterised by a large proportion of the total consumer expenditure taken up by items such as food which are absolutely essential for sheer physical survival. The proportion of expenditure on food can, therefore, be used as a general measure of welfare. Using a certain fixed proportion of expenditure on food as a dividing line, the individuals/households could be grouped as poor or non-poor. If a household spends the given or a larger than this proportion of expenditure on food, that household would be classified as poor. The criterion is sufficiently vivid and easily quantifiable. This criterion would also overcome certain constraints and problems associated with the estimation of poverty, such as, the assumption of uniform calorie norms for the entire country, the price adjustment of the poverty line, capturing the inter-State price differentials and the problem of adjustment of NSS-based consumption expenditure with the estimate of private consumption expenditure in National Accounts Statistics, etc.

6. It was suggested that the share of expenditure on food [1] from the NSS 28th Round (1973-74) on household consumption expenditure corresponding to the poverty lines of average monthly per capita total consumption expenditure of Rs.49.09 (rural) and Rs.56.64 (urban) at 1973-74 prices could be taken as a cut off point for estimating the poor. This proportion works out to 82.5 per cent for rural areas and 78.0 per cent for urban areas. NSS Data on household consumption for 38th Round (1983) were retabulated from household schedules to get a distribution of households having a share of food expenditure at and above the percentages just indicated. The resultant distribution is presented in table A III.3.

7. It can be seen from the table that the extent of rural poverty is only marginally higher than the urban poverty, on this criterion. The proportion of rural poor is 18.13 per cent and that of urban poor is 16.20 per cent. Out of 28 States/Union Territories for which data is available, in 16 States/Union Territories the proportion of poor is higher in urban areas, while in six other

[1] Food includes cereals, gram, cereal substitutes, pulses, milk products, edible oil, meat, egg and fish, vegetables, fruits and nuts, sugar, salt, sprices, and beverages and refreshments.

States/Union Territories it is only marginally less than the rural proportion. It is notable that the proportion of 'poor' according to this is remarkably close to the 'hunger ratio[1] criterion and its Statewise distribution is also very similar.

8. The "food share* criterion discussed here is not altogether free from shortcomings. To begin with, it is difficult to arrive at a concensus as to what should be the desirable proportion of expenditure devoted to food so as to determine the poverty cut-off points. Here we have implicitly used the calorie intake ceriterion of 2400 and 2100 calories for rural and urban areas respectively with reference to the consumption basket in 1973-74 at 1973-74 prices, uniformly for the entire country. Though the expenditure criterion takes care of the problems associated with the updating of poverty line (i.e., the problem of appropriate deflators) it is unable to incorporate the inter- State price differentials. Moreover the expenditure criterion fails in separating the influence of socio-cultural factors on eating habits of the people which is an important factor in determining the proportion of expenditure devoted to food. The criterion being very sensitive to the choice of the proportion of expenditure on food, a change in the food, habits, and hence, in the food share would affect the estimate of people below poverty level to a much larger extent.

9. Neither the reported perception of hunger, nor the food share criterion provide a really meaning full basis for measuring even the nutrition status, leave alone poverty. It is difficult to measure the actual food intake of individuals. Even if this could be done the nutritional status of individuals cannot be inferred from the level of calorie intake. In any case poverty is a concept of much broader scope than nutritional status and seeks to focus on the exent to which people have or can afford a specified minimum desirable standard of living. While food required for sustaining a healthy and active life must be an important ingredient of the minimum standard, due weightage must also be given to other basic needs like clothing, shelter and such other non food items.

Consumption of Calories as Criterion

10. One of the exercises undertaken was to estimate a separate poverty line for every State, keeping the norm of 2400 and 2100 calories in rural and urban areas respectively and marking off the expenditure levels corresponding to these calorie norms on the 'calorie intake distribution tables' produced by NSSO for different States for the relevant years. This exercise was done for the years 1977-78 and 1983 using the 32nd and 38th round household consumer expenditure surveys. The results are presented in tables A III.4 and A III.5. It is observed that in 1977-78 for rural areas the poverty line is highest for Kerala at Rs.81 per capita per month and lowest for Rajasthan at Rs.51 per capita per month. For urban areas it is highest for Maharashtra, i.e., Rs.99, and lowest for Jammu & Kashmir, i.e., Rs.52. All India poverty line works out to Rs.60.53 and Rs.65.96 for rural and urban areas respectively. Similarly in 1983 for rural areas, poverty line is as high as Rs.197 for Kerala and lowest for Uttar Pradesh at Rs.95 per capita per month. For urban areas the range is between Rs. 178 for Maharashtra to Rs. 109 for Orissa. Poverty profile is estimated on the basis of these poverty lines using distribution of percentage of persons by monthly per capita expenditure classes. It is found that in the year 1983, the poverty ratio is 79% in Kerala, 78% in Tamil Nadu and 75% in Maharashtra, whereas it is only 31% in Himachal Pradesh and 36% in Jammu & Kashmir, against the all India ratio of 67%. In Unofficial releases of poverty estimates, Bihar turns out to be the poorest State, and this image of Bihar is consistent with other indicators like per capita SDP and a variety of demographic and

social indicators. But table A III. 5 puts 10 States poorer than Bihar out of the 17 States for which data are presented here. This is not consistent with other known indicators about the relative position of the States. Also it may be noticed that in this method the poverty in 1983 turns out to be higher than that in 1977-78. It increases from 54.39% in 1977-78 to 66.58% in 1983.

11. While using a common calorie norm and relying exclusively on the NSS household consumption survey data, this method in effect allows the poverty line to fully reflect inter-State differences in (a) consumer preferences in respect of food as well as of the level and pattern of non food consumption, and (b) level in structure of prices at each point in time. It also allows fully differential changes in the level and composition of consumption due to changes in income and prices as well as the differential price trends across States.

12. The difficulty with this measure is that it is difficult to make a meaningful comparison of poverty incidence across States at any given point of time because of inter-State variation in the composition and quality of the consumption basket associated with the given calorie norm. The composition of the basket differs not only due the differences in tastes and preferences, but also, it appears, due to the differences in income levels. As the incomes change, the basket changes overtime as well.

Cross Tabulation of Persons by Expenditure Classes and by Calorie Intake Levels

13. We also attempted a cross tabulation of persons below poverty line based on their distribution by expenditure classes and those below calorie norm based on distribution by calorie intake levels. A tabulation of household level data for this purpose was done to produce tables A III.6 and A III.7 and A.III.8 for the years 1977-78, 1983 and 1987-88 respectively.

14. It can be seen from table A III. 6 for 1977-78 that the percentages of persons below calorie norm but above poverty line were more or less the same as the percentages of persons below poverty line but above calorie norm. These percentages were between 12 and 13 for both, rural and urban areas. Due to this reason poverty ratios in 1977-78 would be more or less the same whether one adopted the calorie norm or the poverty line criterion. However, in 1983 there was a wide divergence between the percentage of those below calorie norm but above poverty line (28.29 per cent in rural areas) and the percentage of those below poverty line but above calorie norm (3.63 per cent in rural areas as seen from table A III.7. Divergences were similar in rural and urban areas. In 1987-88, the divergence increased further (36.37 per cent and 2.97 per cent Table A III. 8. Hence, the poverty estimates based on the two criteria are widely different.

Table - AIII.1

Proportion of Hunger (Rural)- 1983

Percentage Distribution of Households by the Type of Response to the Question - Whether all Members of the Household got Two Square Heals a Day

S. No	State/Union Territory	Responses Type				
		'Yes'		'No'	Total (3 + 4)	Not Reported
		Throughout the Year	Only during some months of the Year			
(0)	(1)	(2)	(3)	(4)	(5)	(6)
1.	Andhra Pradesh	34.32	14.69	0.82	15.51	0.17
2.	Arunachal Pradesh	-	-	-	-	-
3.	Assam	83.87	12.49	3.58	16.07	0.06
4.	Bihar	62.51	31.81	5.42	37.23	0.26
5.	Gujarat	96.92	2.78	0.07	2.85	0.23
6.	Haryana	98.61	0.73	0.12	0.85	0.54
7.	Himachal Pradesh	96.45	3.08	0.24	3.32	0.23
8.	Jammu & Kashmir	97.81	1.51	0.10	1.61	0.58
9.	Karnataka	80.91	17.81	0.93	18.74	0.35
10.	Kerala	80.80	15.29	3.68	18.97	0.23
11.	Madhya Pradesh	84.34	13.35	1.72	15.07	0.59
12.	Maharashtra	85.80	13.42	0.68	14.10	0.10
13.	Manipur	83.12	9.31	2.73	12.04	4.84
U.	Meghalaya	-	-	-	-	-
15.	Mizoram	87.99	10.18	1.24	11.42	0.59
16.	Nagaland	-	-	-	-	-
17.	Orissa	62.79	31.80	5.02	36.82	0.39
18.	Punjab	98.26	1.35	0.24	1.59	0.17
19.	Rajasthan	95.95	3.11	0.69	3.80	0.25
20.	Sikkim	-	-	-	-	-
21.	Tamil Nadu	82.10	16.06	1.36	17.42	0.48
22.	Tripura	-	-	-	-	-
23.	Uttar Pradesh	88.24	10.39	0.62	11.01	0.75
24.	West Bengal	60.31	31.01	8.60	39.61	0.08
25.	Andaman & Nicobar Islands	97.74	2.03	0.17	2.20	0.06
26.	Chandigarh	100.00	-	-	-	•
27.	Dadra & Nagar Haveli	93.70	6.30	0.00	6.30	
28.	Delhi	99.16	-	-	-	0.84
29.	Goa, Daman & Diu	87.92	12.08	0.00	12.08	-
30.	Lakshadweep	-	-	-	-	-
31.	Pondicherry	68.14	27.54	4.32	31.86	-
32.	All India	81.09	16.19	2.35	18.54	0.37

Table - AIII.2

Proportion of Hunger (Urban)- 1983

Percentage Distribution of Households by the Type of Response to the Question - Whether

all Members of the Household got Two Square Meals a Day

SI. No.	State/Union Territory	Response Type				
		'Yes'		'No'	Total (3 + 4)	Not Reported
		Throughout the year	Only during one Months of the year			
(0)	(1)	(2)	(3)	(4)	(5)	(6)
1.	Andhra Pradesh	92.94	6.93	0.04	6.97	0.09
2.	Arunachal Pradesh	-	-	-	-	-
3.	Assam	90.77	7.23	1.79	9.02	0.21
4.	Bihar	87.60	9.14	2.89	12.03	0.37
5.	Gujarat	98.18	1.05	0.09	1.14	0.68
6.	Haryana	99.47	0.53	0.00	0.53	-
7.	Himachal Pradesh	99.26	0.74	0.00	0.74	-
8.	Jammu & Kashmir	98.43	0.88	0.12	1.00	0.57
9.	Karnataka	88.65	10.37	0.58	10.95	0.40
10.	Kerala	86.05	11.67	1.85	13.52	0.43
11.	Madhya Pradesh	94.21	4.86	0.37	5.23	0.56
12.	Maharashtra	94.50	5.00	0.42	5.42	0.08
13.	Manipur	65.65	23.59	5.44	29.03	5.32
14.	Meghalaya	-	-	-	•	-
15.	Mizoram	89.20	9.56	0.40	9.96	0.84
16.	Nagaland	95.01	1.85	0.00	1.85	3.14
17.	Orissa	87.41	11.33	0.84	12.17	0.42
18.	Punjab	96.80	1.80	0.82	2.62	0.58
19.	Rajasthan	96.98	1.18	0.27	1.45	1.57
20.	Sikkim	98.37	0.60	0.00	0.60	1.03
21.	Tamil Nadu	91.28	7.15	1.05	8.20	0.52
22.	Tripura	-	-	•	-	-
23.	Utter Pradesh	95.17	3.86	0.71	4.57	0.26
24.	West Bengal	91.88	6.14	1.55	7.69	0.43
25.	Andaman & Nicobar Islands	97.28	2.72	0.00	2.72	-
26.	Chandigarh	99.37	-	-	-	0.63
27.	Dadra & Nagar Haveli	-	-	-	*	-
28.	Delhi	98.60	0.84	0.00	0.84	0.56
29.	Goa, Daman & Diu	94.34	5.66	0.00	5.66	-
30.	Lakshadweep					
31.	Pondicherry	92.19	7.81	0.00	7.81	-
32.	All India	93.25	5.56	0.77	6.33	0.42

Table - AIII.3

Percentage of Poor (1983) using Food Share Criterion
(Percentage of Hosuehold having 82.5X or more of expenditure on food in rural and 78X or more of expenditure on food in urban areas)

S.No	States	Rural	Urban
1.	Andhra Pradesh	10.43	13.15
2.	Assam	27.71	28.32
3.	Bihar	34.90	37.92
4.	Gujarat	12.38	16.32
5.	Haryana	8.35	9.48
6.	Himachal Pradesh	7.69	7.09
7.	Jammu & Kashmir	19.58	16.51
8.	Karnataka	8.25	12.68
9.	Kerala	8.79	21.55
10.	Madhya Pradesh	21.07	13.23
11.	Maharashtra	5.28	9.07
12.	Manipur	28.00	40.62
13.	Meghalaya	23.53	5.49
14.	Nagaland	-	23.53
15.	Orissa	36.48	34.34
16.	Punjab	5.17	9.19
17.	Rajasthan	17.59	16.96
18.	Sikkim	23.41	4.75
19.	Tamil Nadu	14.60	18.95
20.	Tripura	23.50	22.69
21.	Uttar Pradesh	12.63	14.33
22.	West Bengal	34.22	20.26
23.	Andaman & Nicobar Islands	16.57	11.01
24.	Arunachal Pradesh	-	33.44
25.	Chandigarh	0.34	7.28
26.	Delhi	4.20	7.02
27.	Goa, Daman & Diu	3.43	9.73
28.	Mizoram	5.28	3.51
29.	Pondicherry	7.42	21.06
30.	Dadra & Nagar Haveli	4.29	-
31.	Lakshadweep		26.34
	All India	18.13	16.20

Table - AIII 4

State Wise Poverty Line Corresponding to Fixed Calorie Norm and Calorie Distribution of the same Year and Poverty Ratios - 1977-78

S.No./States	Rural		Urban		Combined
	Poverty Line (Rs. Per Capita per month)	Poverty Ratio (Percentage)	Poverty Line (Rs. Per Capita per month)	Poverty Ratio (Percentage)	Poverty Ratio (Percentage)
(0) (1)	(2)	(3)	(4)	(5)	(6)
1 Andhra Pradesh	65.42	59.18	63.16	35.96	54.10
2 Assam	63.91	66.20	62.51	34.22	63.06
3 Bihar	55.98	58.44	54.44	31.81	55.35
4 Gujarat	72.86	65.19	80.77	50.47	60.76
5 Haryana	65.88	35.65	76.49	45.43	37.64
6 Himachal Pradesh	64.86	42.21	78.88	31.27	41.40
7 Jammu & Kashmir	51.12	23.27	52.25	18.30	22.26
8 Karnataka	57.43	55.65	61.22	41.15	51.70
9 Kerala	81.29	71.59	65.44	54.25	68.49
10 Madhya Pradesh	55.74	61.82	61.40	43.58	58.37
11 Maharashtra	67.84	74.75	99.49	59.51	69.61
12 Orissa	55.90	68.30	57.00	33.76	64.64
13 Punjab	71.36	28.45	81.54	42.20	32.07
14 Rajasthan	50.77	27.49	68.85	39.97	29.97
15 Tamil Nadu	71.97	74.94	73.24	55.26	68.64
16 Uttar Pradesh	52.05	44.19	70.72	57.28	46.36
17 West Bengal	59.01	63.47	56.65	26.26	53.90
All India	60.53	58.39	65.96	40.32	54.39

Notes:1) The calorie norm is per capita per day intake of 2400 calories in rural areas and 2100 calories in urban areas.

2) The all- India poverty line and poverty ratios are obtained directly from all-India distribution.

Table - AIII.5

State Wise Poverty Line corresponding to Fixed Calorie Norm and Calorie Distribution of the same year and Poverty Ratio - 1983

S. No.	States	Rural		Urban		Combined
		Poverty Line (Rs. per capita per month	Poverty Ratio (Percent-age)	Poverty Line (Rs. per capita per month	Poverty Ratio (Percent-age)	Poverty Ratio (Percent-age)
(0)	(1)	(2)	(3)	(4)	(5)	(6)
1.	Andhra Pradesh	130.27	72.37	146.92	61.81	69.78
2.	Assam	140.32	&1.30	141.07	51.75	78.14
3.	Bihar	103.22	68.86	120.58	53.20	66.80
4.	Gujarat	143.37	77.05	151.23	58.70	71 .20
5.	Haryana	134.39	54.65	131.61	42.54	51.85
6.	Himachal Pradesh	106.51	31.30	137.72	22.32	30.60
7.	Jammu & Kashmir	102.75	38.15	110.81	28.12	35.97
8.	Karnataka	118.83	63.63	131.31	48.82	59.16
9.	Kerala	196.79	83.15	156.01	63.03	79.23
10.	Madhya Pradesh	101.38	64.63	118.27	49.14	61 .30
11.	Maharashtra	153.38	83.48	178.38	60.80	75.29
12.	Orissa	113.74	72.32	109.03	37.96	67.88
13.	Punjab	126.21	38.12	152.94	52.23	42.20
14.	Rajasthan	96.40	46.55	112.67	37.30	44.51
15.	Tamil Nadu	152.00	81.95	174.36	69.62	77.79
16.	Uttar Pradesh	94.81	56.64	120.79	57.63	56.83
17.	West Bengal	131.90	77.90	133.66	49.17	70.14
18	All India	122.61	70.53	138.53	54.29	66.58

Notes: (1) The Calorie norm is per capita per day intake of 2400 calories in rural areas and 2100 calories in urban areas.

(2) The all-India poverty line and poverty ratios are obtained directly from all-India distribution.

Table - AIII 6
Cross Tabulation of Percentage of Persons Below Poverty Line
and Below Calorie Norm (1977-78)

	Rural			Urban		
	Below Poverty Line	Above Poverty Line	Total	Below Poverty Line	Above Poverty Line	Total
Below Calorie Norn	45.32	12.47	57.79	37.33	11.95	49.28
Above Calorie Mom	12.31	29.21	42.21	12.66	38.06	50.72
	57.63	42.37	100.00	49.94	40.01	100.00

Note: (1) The poverty line used in this table is Rs.59.15 for rural areas and Rs.73.51 for urban areas as considered in the report of "Study Group on Concepts and Estimation of Poverty Line" (1984).
(2) Calculations are based on special detailed tabulation provided by NSSO.

Table AIII 7
Cross Tabulation of Percentage of Persons Below Poverty Line end Below Calorie Norm (1983)

	Rural			Urban		
	Below Poverty Line	Above Poverty Line	Total	Below Poverty Line	Above Poverty Line	Total
Below Calorie Nor*	37.75	28.29	66.64	26.31	34.37	60.68
Above Calorie Norm	3.63	29.73	33.36	2.47	36.85	39.32
	41.38	58.62	100.00	28.78	71.22	100.00

Table - AIII 8
Cross Tabulation of Percentage of Persons Below Poverty Line
and Below Calorie Norm (1987-88)

	Rural			Urban		
	Below Poverty Line	Above Poverty Line	Total	Below Poverty Line	Above Poverty Line	Total
Below Calorie Norm	29.39	36.37	65.76	18.08	38.67	56.75
Above Calorie Norm	2.97	31.27	34.24	2.78	40.47	43.25
	32.36	67.64	100.00	20.86	79.14	100.00

Note: (1) Poverty line in tables AIII.7 and AIII.8 refers to official estimates.
(2) Calculations are based on special detailed tabulation provided by MSSO.

Annexure IV

TECHNICAL NOTE ON STATE -SPECIFIC COST OF LIVING INDICES AND POVERTY-LINES

State -Specific Cost of Living Indices for Middle Rural Population

The State- specific cost of living indices for people around poverty line are not available from published sources, such indices have been specially constructed using the most appropriate indices from amongst the available ones. The indices for rural areas have been constructed using the published series of CPI for agricultural labourers and the consumption pattern of the population in the expenditure classes Rs. 34-43 and Rs.43-55 i.e., the middle rural population which constituted about 40 per cent of the total rural population in 1973-74.

2. The disaggregation of CPI for agricultural labourers is available at present by four commodity groups, i.e., "food", "fuel and lighting', "clothing and footwear' and "miscellaneous[1], for 15 major States with 1960-61 as the base. Due to further reorganisation of States after the CPI for agricultural labourers series began, the index for Assam has been applied to Manipur and that for Punjab has been assumed applicable to Haryana, Himachal Pradesh and Delhi. However, for 1973-74 the published information relates to CPI for agricultural labourers for 'food' and 'general index' alongwith their respective weights for each State. Using the weights of general index and food, the weight of non-food items is derived. With the help of the weights of food and non-food items, the implicit consumer price indices of non food items for each State is derived. Having obtained food and non-food consumer price indices of agricultural labourers for each State, a combined price index is then obtained using the consumption pattern of the people around the poverty line in rural areas at the national level for 1973-74. Table A IV. 1 gives the basic information on food and non-food group consumer price indices for agricultural labourers, the respective weights and the Consumer Price Index for Middle Rural Population (CPIMR) for 1973-74 for each State.

3. For the years 1977-78, 1983 and 1987-88, the disaggregation of CPI for agricultural labourers is available by four groups of commodities and services. Using the pattern of consumption of middle rural population in 1973-74 by these groups along with the groupwise CPI for agricultural labourers, the combined CPI for Middle Rural Population are derived. The indices by four groups as well as the CPIMRs alongwith the pattern of consumption for the years 1977-78, 1983 and 1987-88 are given in tables A IV.2 to A IV.4.

State -Specific Cost of Living Indices for Middle Urban Population

4. For urban areas the use of a simple average of CPI of urban non-manual employees and CPI of industrial workers as the relevant price for the urban population around the poverty line has been recommended.

5. The CPI for industrial workers is available for five commodity groups namely food', "fuel & light', "housing", "clothing[1] and "miscellaneous[1]. These price indices are being released for 50 centres covering all the major States.' Using the centre-wise weights in the All India for

industrial workers, State specific CPI for industrial workers by commodity groups have been worked out. These commodity group wise indices for each State are combined using the consumption pattern of the middle urban population in 1973-74 to get the general index. The middle urban population is taken as the population falling in expenditure classes Rs.43- 65 and Rs.55-75, which constitutes about 42% of the total urban population.

6. The series of CPI for urban non-manual employees with 1960 as base are taken for the relevant years 1973-74, 1977- 78, 1983 and 1987-88 as available for 45 centres at aggregate level. The indices at the disaggregated level are not available for all the years under consideration. The centre-wise indices are pooled using their weights in the all India index to get State-wise indices.

7. A simple average of State-specific CPI for industrial workers and CPI for urban non-manual employees is taken to yield a composite index (CPIMU) for use in the case of urban areas. The State-specific CPI for industrial workers and CPI for urban non-manual employees and the CPIMU for the years 1973-74, 1977-78, 1983 and 1987-88 (alongwith the weighting diagram) are presented in Tables A IV.5 to A IV.8.

Inter-State Price Differentials and State-specific Poverty Line

8. In order to get the State-specific poverty lines the all-India poverty line needs to be adjusted for (a) inter- State price differentials in the base year and (b) differential movements of prices in the States from the base year onwards. The procedure described below has been adopted for this purpose.

9. Chatterjee and Bhattacharya [1] constructed State-specific relative (Fisher's) indices for various quintile groups of rural population for 1963-64. For the purpose of this study the State-specific relative indices relating to purchases of consumers who were around the poverty line were considered. These were assumed to be same in 1960-61 and were carried forward to 1973-74 by using the State-specific price indices for the middle group of population, with 1960 = 100. Table A IV.9 gives the State specific price indices (relative to all India) for middle rural population as worked out by Chatterjee and Bhattacharya along with the adjusted indices for 1973-74, and the State-specific poverty lines.

1 Chatterjee G.S. and Bhattacharya N. (1974); "Between States Variation in Consumer Prices and Per Capita Household Consumption in Rural India", Srinivasan T.N. and P.K.Bardhan (ed) Poverty and Income Distribution in India.

10. For urban areas, Minnas et al [2] have estimated State specific price differentials (relative to All India) for the year 1961-62 using NSS implicit prices (derived from quantity and value of consumption) and the pattern of consumption observed in different States in 1961-62. Assuming the inter-State price differentials in 1961-62 to be the same in 1960-61, these are then carried forward to 1973-74 with the help of CPIMU for 1973-74 with base 1960= 100.

11. Table A IV. 10 presents the relative price differentials for urban areas as worked out by Prof. Minhas et al for 1960-61 and those adjusted for 1973-74 and the State-specific urban poverty lines. The steps involved in calculations are described in the notes below the tables.

2 Minhas, B.S., Kansal, S.M. and Jain L.R.: Incidence of Urban Poverty in different States, Technical Report No.8902 Jan. 1989, ISI Delhi.

Table - AIV.1

State Specific Consumer Price Index Number for the Middle Rural Population (CPIMR) in 1973-74 with 1960-61-100

S. No.	States	Consumer Price Index Number for Agricul-ture Labourers		Food Weight	Weight for Commodities	Non Food Index	CPIMR 1973-74
		Food	General				
1	2	3	4	5	6	7	8
1	Andhra Pradesh	260.00	242	9.62	12.30	177.39	244.54
2	Assam	287.00	260	3.09	4.07	174.87	266.01
3	Bihar	373.00	337	13.08	15.86	167.62	334.55
4	Gujarat	268.00	246	2.27	2.88	164.13	248.56
5	Haryana	302.00	273	2.80	3.86	196.40	282.23
6	Himachal Pradesh	302.00	273	2.80	3.86	196.40	282.23
7	Jammu & Kashmir	287.00	263	0.04	0.05	167.00	264.54
8	Karnataka	309.00	275	4.67	6.22	172.56	283.46
9	Kerala	312.00	276	2.35	3.21	177.63	286.85
10	Madhya Pradesh	352.00	309	5.50	7.12	163.01	316.62
11	Maharashtra	308.00	276	6.63	8.72	174.49	283.01
12	Manipur	287.00	260	3.09	4.07	174.87	266.01
13	Orissa	313.00	282	4.00	4.97	154.16	283.27
14	Punjab	302.00	273	2.80	3.86	196.40	282.23
15	Rajasthan	319.00	284	0.88	1.16	174.00	291.86
16	Tamil Nadu	262.00	242	6.93	9.15	179.57	246.57
17	Tripura	287.00	260	3.09	4.07	174.87	266.01
18	Uttar Pradesh	336.00	303	9.59	12.07	175.39	305.93
19	West Bengal	302.00	276	6.67	8.36	173.38	277.92
20	Delhi	302.00	273	2.80	3.86	196.40	282.23
	All India	313	286	78.12	100.00	189.60	289.90
	Weighting Diagram	0.8128				0.1872	

Table - AIV.2

State-pacific Consumer Price Index Number for the Middle feral Population (CPIMR) in 1977-78 with 1960-61=100

S. No.	States	Consumer Price Index Number for Agricultural Laborers				CPIMR 1977-78
		Food	Fuel & Lighting	Clothing & Footwear	Misc.	
1	Andhra Pradesh	312.92	138.75	324.92	264.17	298.34
2	Assam	345.67	131.75	269.25	258.33	321.94
5	Bihar	368.50	139.75	276.33	264.50	341.80
4	Gujarat	303.50	136.17	266.33	259.83	288.71
5	Haryana	359.50	130.00	334.17	258.17	335.48
6	Himachal Pradesh	359.50	130.00	334.17	258.17	335.48
7	Jammu & Kashmir	371.42	121 .DO*	320.33	317.42	349.34
8	Kanataka	328.17	139.17	325.75	274.58	311.71
9	Kerala	348.50	150.25	307.00	258.42	326.79
10	Madhya Pradesh	385.25	121.00	296.75	262.75	354.87
11	Maharashtra	349.75	139.25	298.25	245.42	325.65
12	Manipur	345.67	131.75	269.25	258.33	321.94
13	Orissa	387.50	126.58	268.42	261.58	355.88
14	Punjab	359.50	130.00	334.17	258.17	335.48
15	Rajasthan	351.75	122.25	291.42	286.00	329.57
16	Tanil Naou	326.50	147.92	322.83	261.08	309.59
17	Tripura	345.67	131.75	269.25	258.33	321.94
18	Uttar Pradesh	361.83	141.50	297.67	284.42	339.04
19	West Bengal	343.25	164.00	312.42	252.33	323.03
20	Delhi	359.50	130.00	334.17	258.17	335.48
	All India	349.33	139.83	303.67	262.92	327.10
	Minting Diagram	0.8128	0.0615	0.0372	0.0885	

Table - AIV.3
State-Specific Consumer Price Index Number for the Middle Rural Population (CPIMR) in 1983 with 1960-61=100

S. No.	States	Consumer Price Index Number for Agricultural Labourers				CPIMR 1987-88
		Food	Fuel & Lighting	Clothing & Footwear	Misc.	
1	Andhra Pradesh	449.67	170.92	421.00	388.83	426.07
2	Assam	574.75	161.67	396.67	374.50	525.00
3	Bihar	620.00	177.33	391.00	407.17	565.42
4	Gujarat	468.50	167.67	418.67	371.58	429.57
5	Haryana	538.92	152.67	490.50	393.75	500.51
6	Himachal Pradesh	538.92	152.67	490.50	393.75	500.51
7	Jammu & Kashmir	555.00	138.08	453.83	502.75	520.97
8	Karnataka	529.50	173.08	460.67	471.33	499.87
9	Kerala	591.25	183.17	483.58	469.75	551.39
10	Madhya Pradesh	578.17	138.83	415.25	376.42	527.23
11	Maharashtra	532.42	172.92	432.75	399.58	494.84
12	Manipur	574.75	161,67	396.67	374.50	525.00
13	Orissa	716.08	150.33	411.58	403.00	642.25
14	Punjab	538.92	152.67	490.50	393.75	500.51
15	Rajasthan	490.08	139.42	413.67	421.17	459.58
16	Tamil Nadu	565.58	173.50	439.25	440.92	525.74
17	Tripura	574.75	161.67	396.67	374.50	525.00
18	Uttar Pradesh	564.08	178.92	418.25	444.58	524.39
19	West Bengal	583.50	213.67	435.75	392.50	538.36
20	Delhi	538.92	152.67	490.50	393.75	500.51
	All India	561.17	172.25	427.83	414.06	519.27
	Weighting Diagram	0.8128	0.0615	0.0372	0.0885	

Table - AIV.4

State-pecific Consumer Price Index Number for the Middle Rural Population (CPU*) in 1987-88 with 1960-61=100

S.No.	States	Consumer Price Index Number for Agricultural Labourerss				CPIMR 1987-88
		Food	Fuel & Lighting	Clothing & Footwear	Misc.	
1	Andhra Pradesh	560.08	190.42	568.67	576.50	539.12
2	Assam	740.42	179.58	571.25	524.17	680.49
3	Bihar	754.50	186.67	531.33	605.75	698.11
4	Gujarat	647.08	186.58	580.75	541.50	606.95
5	Haryana	750.00	163.83	622.00	580.17	694.47
6	Himachal Pradesh	750.00	168.83	622.00	580.17	694.47
7	Jammu & Kashmir	754.67	152.25	565.33	702.25	705.94
8	Kanataka	647.42	195.92	580.83	756.25	626.80
9	Kerala	775.58	206.42	570.83	684.08	724.87
10	Madhya Pradesh	737.83	150.08	549.33	514.58	674.92
11	Maharashtra	693.00	193.58	545.92	597.00	648.32
12	Manipur	740.42	179.58	571.25	524.17	630.49
13	Orissa	794.58	163.25	544.50	65T.33	733.78
14	Punjab	750.00	168.83	622.00	580.17	694.47
15	Rajasthan	727.33	152.00	559.83	584.17	673.05
16	Tamil Nadu	680.33	192.83	579.92	679.00	646.50
17	Tripura	740.42	179.58	571.25	524.17	680.49
18	Uttar Pradesh	769.25	196.00	561.33	658.17	716.55
19	West Bengal	692.58	316.00	557.08	631.67	658.99
20	Delhi	750.00	168.83	622.00	580.17	694.47
	All India	711.36	196.36	565.00	625.27	666.62
	Weighting Diagram	0.8128	0.0615	0.0372	0.0885	

Table - AIV.5
State-Specific Consumer Price Index Number for the Middle Urban Population (CPIHJ)
in 1973-74 with 1960-61=100

S. No.	States	Consumer Price Index Mutter for Industrial Workers					Weighted CPI	CPI Urban Non Manual Worker	CPIMU
		Food	Fuel & Lifting	Housing	Clothing & Beding	Misc.			
1	Andhra Pradesh	282.45	217.65	167.22	297.86	220.28			
2	Assam	249.88	149.42	100.00	229.09	286.49	243.63	204.58	224.10
3	Bihar	336.70	202.95	113.14	248.47	209.60	302.69	243.77	273.23
4	Gujarat	297.41	233.91	121.45	258.49	221.30	277.49	214.52	246.01
5	Haryana	291.00	239.00	187.50	264.08	263.00	280.41	230.67	255.54
6	Himachal Pradesh	292.08	267.75	157.50	269.92	226.92	277.77	230.67	254.22
7	Jammu & Kashmir	203.67	301.00	144.00	263.42	275.58	219.96	227.24	223.60
8	Karnataka	308.00	327.83	185.50	244.33	216.92	292.33	240.73	266.53
9	Kerala	332.18	248.41	148.50	227.26	197.44	301.04	245.13	273.08
10	Madhya Pradesh	322.21	237.16	129.12	265.43	234.79	296.40	254.56	276.48
11	Maharashtra	287.11	239.76	126.71	247.22	189.14	266.74	214.94	240.34
12	Manipur	249.88	149.42	100.00	229.09	286.49	243.63	204.58	224.10
13	Orissa	281.25	186.67	100.03	253.67	242.42	264.39	227.54	245.97
14	Punjab	292.08	267.75	157.50	269.92	226.92	277.77	230.67	254.22
15	Rajasthan	313.36	247.93	170.72	287.44	196.26	289.08	248.20	268.64
16	Tamil Nadu	257.45	236.40	192.29	258.19	209.95	248.11	231.82	239.96
17	Tripura	249.88	149.42	100.00	229.09	286.49	243.63	204.58	224.10
18	Uttar Pradesh	320.50	278.35	148.32	265.77	217.66	298.11	243.49	270.80
19	West Bengal	282.36	247.01	129.90	265.42	203.18	265.15	220.28	242.71
20	Delhi All India	313.50 297.92	260.17 243.83	175.50 146.00	265.17 259.50	259.50 209.67	297.89 277.64	228.50 231.75	263.20 254.70
	Weighting Diagram	0.7463	0.0671	0.0252	0.0286	0.1328			

Table - AIV.6
State Specific Consuner Price index Nutter for the Middle Urtan Population (CP1MJ)
in 1977-78 with 1960-61=100

S. No.	States	Consumer Price Index Mutter for Industrial Workers					Weighted CPI	CPI Urban Non Manual Worker	CPIMU
		Food	Fuel & Lifting	Housing	Clothing & Beding	Misc.			
1	Andhra Pradesh	356.48	341.04	244.00	386.43	270.97	342.11	308.41	325.26
2	Assam	304.07	177.79	100.00	336.97	350.22	297.52	280.00	288.76
3	Bihar	353.27	278.52	128.56	342.77	278.26	332.33	304.32	318.33
4	Gujarat	332.12	309.76	153.19	361.75	303.04	323.10	289.99	306.54
5	Haryana	362.17	346.25	217.50	362.17	367.00	358.09	296.93	327.51
6	Himachal Pradesh	364.58	346.38	206.00	350.42	333.04	354.77	296.93	325.85
7	Jammu & Kashmir	326.58	339.00	183.50	403.58	340.58	327.87	316.46	322.17
8	Kanataka	348.08	443.33	276.50	322.92	301.00	345.70	310.67	328.18
9	Kerala	329.72	362.09	162.53	370.22	274.51	321.50	310.33	315.92
10	Madhya Pradesh	368.66	334.02	165.50	366.38	301.60	352.25	322.97	337.61
11	Maharashtra	346.89	364.36	156.41	343.20	251.83	330.53	281.29	305.91
12	Manipur	304.07	177.79	100.00	336.97	350.22	297.52	280.00	288.76
13	Orissa	323.17	375.17	100.00	382.67	322.25	322.61	290.48	306.55
14	Punjab	367.00	346.50	194.50	338.67	299.08	351.45	296.93	324.19
15	Rajasthan	363.78	366.43	220.44	391.96	266.91	346.94	314.70	330.82
16	Tamil Nadu	330.98	341.16	254.44	355.55	271.95	322.60	306.10	314.35
17	Tripura	304.07	177.79	100.00	336.97	350.22	297.52	280.00	288.76
18	Uttar Pradesh	378.12	396.12	182.75	374.43	285.33	361.98	310.20	336.09
19	West Bengal	343.72	328.79	147.31	355.15	256.69	326.53	277.21	301.87
20	Delhi All India	367.00 345.83	346.50 343.33	194.50 184.50	338.67 360.67	299.06 275.50	351.45 332.63	292.00 298.00	321.72 315.34
	Weighting Diagram	0.7463	0.0671	0.0252	0.0286	0.1328			

Table - AIV.7
State Specific Consumer Price Index Number for the Middle Urban Population (CPIHJ)
in 1983 with 1960-61=100

S. No.	States	Consumer Price Index Mutter for Industrial Workers					Weighted CPI	CPI Urban Non Manual Worker	CPIMU
		Food	Fuel & Lifting	Housing	Clothing & Beding	Misc.			
1	Andhra Pradesh	531.22	652.53	405.72	604.75	448.62			
2	Assam	483.91	263.01	100.00	463.63	585.20	472.62	452.00	462.31
3	Bihar	594.58	484.59	144.22	501.05	437.09	552.26	503.33	527.80
4	Gujarat	570.56	552.27	214.77	600.65	486.04	550.00	474.09	512.05
5	Haryana	544.20	685.00	384.20	572.50	567.60	553.53	453.30	503.42
6	Himachal Pradesh	555.90	629.90	321.00	561.50	494.85	547.00	453.30	500.15
7	Jammu & Kashmir	572.60	766.40	254.00	588.30	658.70	589.46	482.64	536.05
8	Karnataka	595.90	977.20	401.00	513.50	515.00	603.47	513.30	558.39
9	Kerala	605.31	811.91	226.64	542.61	456.56	588.08	536.59	562.34
10	Madhya Pradesh	592.21	792.78	239.73	574.15	481.14	581.52	501.91	541.71
11	Maharashtra	588.44	718.45	189.32	560.76	427.96	565.00	477.87	521.44
12	Manipur	483.91	268.01	100.00	463.63	585.20	472.62	452.00	462.31
13	Orissa	561.50	703.20	100.00	528.60	543.50	556.05	483.41	519.73
14	Punjab	567.60	574.80	257.80	550.50	422.10	540.46	453.30	496.88
15	Rajasthan	562.38	686.77	319.18	614.81	419.88	547.17	489.34	518.26
16	Tamil Nadu	598.33	716.37	435.84	542.73	436.68	579.10	513.68	546.39
17	Tripura	483.91	268.01	100.00	463.63	585.20	472.62	452.00	462.31
18	Uttar Pradesh	574.11	933.73	262.58	588.62	438.48	572.79	484.72	528.76
19	West Bengal	524.91	666.30	211.56	552.83	412.46	512.37	426.99	469.68
20	Delhi All India	567.60 572.80	574.80 682.90	257.80 264.00	550.50 554.60	422.10 447.10	540.46 555.19	457.00 480.00	498.73 517.60
	Weighting Diagram	0.7463	0.0671	0.0252	0.0286	0.1328			

Table - AIV.8
State-Specific Consumer Price Index Number for the Middle Urban Population (CPIMU)
in 1967-88 with 1960-61-100

S. No.	States	Consumer Price Index Mutter for Industrial Workers					Weighted CPI	CPI Urban Non Manual Worker	CPIMU
		Food	Fuel & Lifting	Housing	Clothing & Beding	Misc.			
1	Andhra Pradeah	759.23	906.43	669.82	793.32	644.22	752.56	697.47	725.01
2	Assam	607.12	283.27	100.00	711.47	893.77	613.66	635.39	624.53
3	Bihar	784.24	714.03	220.52	633.05	642.92	742.23	718.76	730.49
4	Gujarat	790.44	760.26	314.24	722.23	779.13	772.96	664.83	718.8?
5	Haryana	728.30	994.00	1117.60	704.60	810.20	766.14	629.03	697.58
6	Himachal Pradesh	753.95	991.50	790.50	727.15	759.90	770.83	629.03	699.93
7	Jammu & Kashmir	828.20	1075.30	310.60	791.30	1184.40	877.98	698.60	788.29
8	Karnataka	862.30	1301.30	583.20	709.40	704.90	859.45	717.89	788.67
9	Kerala	811.52	920.78	331.69	670.68	662.91	783.00	757.57	770.20
10	Madhya Pradash	849.85	1251.97	320.71	717.92	734.92	844.47	705.72	775.09
11	Maharashtra	886.03	1081.02	270.12	636.76	639.26	845.12	666.76	755.94
12	Manipur	607.12	283.27	100.00	711.47	893.77	613.66	635.39	624.53
13	Orissa	639.10	1284.10	100.00	618.90	875.40	736.91	657.87	697.39
14	Punjab	779.60	989.00	463.40	749.70	709.60	775.53	629.03	702.28
15	Rajasthan	827.72	812.71	620.77	782.95	652.03	796.89	677.03	736.98
16	Tamil Nadu	808.97	1006.41	733.02	695.71	669.20	798.22	745.80	772.01
17	Tripura	607.12	283.27	100.00	711.47	893.77	613.66	635.39	624.53
18	Uttar Pradash	802.35	1325.59	387.34	737.96	620.69	801.03	674.64	737.84
19	West Bengal	724.47	1104.64	313.27	725.31	617.41	725.43	596.61	661.02
20	Delhi All India	779.60	939.00	463.40	749.70	709.60	775.53	669.99	717.76
		798.20	988.40	427.40	704.90	669.10	781.81	675.03	728.42
	Weighting Diagram	0.7463	0.0671	0.0252	0.0286	0.1328			

Table - AIV.9
Inter-State Price Differentials and Poverty Lines in Rural Areas

S. No.	States	Fisher's Index 1960-61	CPIMU* 1973-74 (1960-61=100)	Fisher's Index 1973-74	CPIMR*				Poverty Line			
					1973-74	1977-78	1983	1987-88	1973-74	1977-78	1983	1987-88
0	1	2	3	4	5	6	7	8	9	10	11	12
1.	Andhra Pradesh	100.90	244.54	85.11	244.54	298.34	426.07	539.12	41.71	50.88	72.66	91.94
2.	Assam	110.80	266.01	101.67	266.01	321.94	525.00	680.49	49.82	60.29	98.32	127.44
3.	Bihar	102.00	334.55	117.71	334.55	341.80	565.42	698.11	57.68	58.93	97.48	120.36
4.	Qujarat	112.10	248.56	96.11	248.56	283.71	439.57	606.95	47.10	54.70	83.29	115.00
5.	Harvana	104.70	282.23	101.93	282.23	335.48	500.51	694.47	49.95	59.37	88.57	122.90
6.	Himchal Pradeeh	104.70	282.2	101.93	282.23	335.48	500.51	694.47	49.95	59.37	88.57	122.90
7.	Jammu & Kashmir	104.20	264.54	95.C6	264.54	349.34	520.97	705.94	46.59	61.53	91.75	124.33
8.	Karnataka	98.60	283.46	96.41	283.46	311.71	499.87	626.80	47.24	51.95	83.31	104.46
9,	Persia	106.60	286.86	105.48	286.85	326.79	551.39	724.87	51.68	58.88	99.35	130.61
10.	Madhya Pradesh	93.80	316.62	102.45	316.62	354.87	527.23	674.92	50.20	56.26	83.59	107.00
11.	Maharashtra	105.50	283.01	102.99	283.01	325.65	494.84	648.32	50.47	58.07	88.24	115.61
12.	Manipur	110.80	266.01	101.67	266.01	321.94	525.00	680.49	49.82	60.29	98.32	127.44
13.	Orissa	97.90	283.27	95.66	283.27	355.88	642.25	733.78	46.87	58.89	106.28	121.42
14.	Punjab	104.70	282.23	101.93	262.23	335.48	500.51	694.47	49.95	59.37	88.57	122.90
15.	Rajasthan	103.30	291.86	104.00	291.86	329.57	459.58	673.05	50.96	57.54	80.24	117.52
16.	Tamil Nadu	108.20	246.57	92.03	246.57	309.59	525.74	646.50	45.09	56.62	96.15	118.23
17.	Tripura	110.80	266.01	101.67	266.01	321.94	525.00	680.49	49.82	60.29	98.32	127.44
18.	Uttar Pradesh	94.60	305.93	99.83	305.93	339.04	524.39	716.55	48.92	54.21	83.85	114.57
19.	West Bangal	116.00	277.92	111.21	277.92	323.03	538.36	658.99	54.49	63.34	105.55	129.21
20.	Delhi	104.70	282.23	101.93	282.23	335.48	500.51	694.47	49.95	59.37	88.57	122.90
	All India	100.00	289.90	100.00	289.90	327.10	519.27	666.62	49.00	55.29	87.77	112.67

* CPIMR* is consumer price index for middle rural population.

Notes:

(1) State specific price indices (relative to all-India) for middle population given in colum(2), are the fisher's indices constructed by Chatterjee & Bhattacharya.

(2) Colum(4) is obtained on multiplying colum(2) with colum(3) and dividing it with 289.90.

(3) colums (5,6,7 & 8) are CPIW for 1973-74,1977-78.1983 and 1987-88 respectively.

(4) Colum (9) is obtained on multiplying colum (4) with 49.00 (All-India poverty line for rural areas at 1973-74 prices)

(5) colums (10,11 & 12) are obtained on dividing colums (6,7 & 8) by colum (5) and multiplying then with colum (9).

Table - AIV.10
Inter-State Price Differentials and Poverty Lines in Urban Area*

S. No.	States	Fisher's Index 1960-61	CPIMU* 1973-74 (1960-61=100)	Fisher's Index 1973-74	CPIMU*				Poverty Line			
					1973-74	1977-78	1983	1987-88	1973-74	1977-78	1983	1987-88
0	1	2	3	4	5	6	7	8	9	10	11	12
1.	Andhra Pradesh	99.00	250.50	97.3675	250.50	325.26	508.37	725.01	55.11	71.56	111.84	159.50
2.	Assam	101.20	224.10	89.0417	224.10	288.76	462.31	624.53	50.40	64.94	103.97	140.45
3.	Bihar	99.30	273.23	106.5243	273.23	318.33	527.80	730.49	60.29	70.24	116.47	161.19
4.	Gujarat	109.90	246.01	106.1504	246.01	306.54	512.05	718.89	60.08	74.86	125.05	175.57
5.	Haryana	91.70	255.54	92.0024	255.54	327.51	503.42	697.58	52.07	66.74	102.59	142.15
6.	Himachal Pradesh	91.70	255.09	91.8404	255.09	325.85	500.15	699.93	51.98	66.40	101.92	142.63
7.	Jammu & Kashmir	82.90	223.60	72.7775	223.60	322.17	536.05	788.29	41.19	59.35	98.75	145.22
8.	Karnataka	97.70	266.53	102.2379	266.53	328.18	558.39	788.67	57.87	71.25	121.23	171.23
9.	Kerala	102.30	273.08	109.6823	273.08	315.92	562.34	770.28	62.03	71.82	127.84	175.11
10.	Madhya Pradesh	103.60	276.48	112.4591	276.48	337.61	541.71	775.09	63.65	77.73	124.71	178.44
11.	Maharashtra	109.80	240.34	103.6095	240.34	305.91	521.44	755.94	58.64	74.64	127.23	184.45
12.	Manipur	101.20	224.10	89.0417	224.10	288.76	462.31	624.53	50.40	64.94	103.97	140.45
13.	Orissa	110.10	245.97	106.3263	245.97	306.55	519.73	697.39	60.18	75.00	127.16	170.63
14-	Punjab	91.70	254.22	91.5272	254.22	324.19	496.88	702.28	51.80	66.06	101.25	143.11
15.	Rajasthan	101.80	263.64	107.3716	268.64	330.82	518.26	736.98	60.77	74.84	117.24	166.72
16.	Tamil Nadu	101.90	239.96	96.0028	239.96	314.35	546.39	772.01	54.34	71.18	123.73	174.82
17.	Tripura	101.20	224.10	89.0417	224.10	288.76	462.31	624.53	50.40	64.94	103.97	140.45
18.	Uttar Pradesh	94.40	270.80	100.3672	270.80	336.09	528.76	737.84	56.81	70.50	110.92	154.78
19.	West Bengal	101.40	242.71	96.6266	242.71	301.87	469.68	661.02	54.69	68.02	105.83	148.95
20.	Delhi	111.90	263.20	115.6344	263.20	321.72	498.73	717.76	65.45	80.00	124.02	178.48
	All India	100.00	254.70	100.0000	254.70	315.34	517.60	728.42	56.60	70.08	115.02	161.87

* CPIMU is consumer price index for middle urban population.

Notes:

(1) State specific price indices (relative to all-India) for middle population given in column(2), are the fisher's indices constructed by Minhas, Kansal & Jain.
(2) Colum(4) is obtained on multiplying colum(2) with colum(3) and dividing it with 254.70.
(3) Colums (5,6,7 & 8) are CPIMU for 1973-74,1977-78,1983 and 1987-88 respectively.
(4) Colum (9) is obtained on multiplying colum (4) with 56.6 (All-India poverty line for urban areas at 1973-74 prices)
(5) colums (10,11 & 12) are obtained on dividing colums (6,7 & 8) by colum (5) and multiplying then with colum (9).

Annexure V

THE EXPERT GROUP
ON ESTIMATION OF PROPORTION AND NUMBER OF POOR

The Planning Commission, vide its memorandum No. M-11019/1/89-PP, dated 28th September 1989, constituted an Expert Group on Estimation of Proportion and Number of Poor with the composition as follows:

1.	Prof. D.T. Lakdawala Hony. Prof.Sardar Patel Institute of Economic and Social Research, Ahmedabad.	Chairman
2.	Prof. V.M. Dandekar Indian School of Political Economy Pune.	Member
3.	Prof. B.S. Minhas Distinguished Professor Indian Statistical Institute New Delhi.	Member
4.	Prof. P.V. Sukhatme Prof. & Head Department of Biometry Maharastra Association for Cultivation of Sciences, Pune.	Member
5.	Dr. R. Radhakrishna Director Centre for Economic and Social Studies, Hyderabad.	Member
6.	Dr. Raja J. Chelliah Member Planning Commission, New Delhi	Member
7.	Dr. Yoginder K. Alagh Member Planning Commission, New Delhi.	Member
8.	Prof. Suresh D. Tendulkar Delhi School of Economics University of Delhi, Delhi.	Member
9.	Director General, CSO and Ex-officio Addl. Secretary, Department of Statistics, Sardar Patel Bhavan New Delhi.	Member

10.	Chief Executive Officer, NSSO & Joint Secretary Department of Statistics, New Delhi.	Member
11.	Prof. S.R. Hashim Adviser Perspective Planning Division, Planning Commission, New Delhi.	Member-Secretary

The Expert Group was reconstituted in March 1990 with the following composition:

1.	Prof. D.T. Lakdawala	Chairman
2.	Prof. V.M. Dandekar	Member
3.	Prof. B.S. Minhas	Member
4.	Prof. P.V. Sukhatme	Member
5.	Dr. R. Radhakrishna	Member
6.	Dr. A. Vaidyanathan Member Planning Commission, New Delhi.	Member
7.	Shri S. Guhan Adviser to Chief Minister Government of Tamil Nadu Madras	Member
8.	Prof. Suresh D. Tendulkar	Member
9.	DG, CSO	Member
10.	Chief Executive Officer, NSSO	Member
11.	Prof. S.R. Hashim	Member-Secretary

Prof. B.S. Minhas subsequently conveyed his inability to continue further participation in the deliberations of the Group. In partial modification of Planning Commis sion order dated Jan. 1992, the term of the Expert Group was further extended till 31st March 1992 and the composition of the Group was further modified to include Dr. C. Rangarajan, Member, Planning Commission, as a Member of the Group. After the sad demise of its Chairman, Prof. D.T. Lakdawala on 16th April, 1992, the Group was not reconstituted, but its term was extended upto January 31, 1993.