

# Poverty Measurement : Rational and Relevance<sup>1</sup>

Padam Singh  
*Director, IRMS, New Delhi*

I feel honoured to deliver the presidential address at Rajkot the birth place of Mahatma Gandhi the Father of Nation, during the year when the country is celebrating 50 years of independence and is preparing for entering to the 21st century. This is time to take stock and examine how far the country has achieved the long term and short term goals set out during the five decades after independence. Removal of poverty and improvement in the standard of living have remained basic objectives in Indian Planning. To meet this objective different strategies and approaches have been adopted in successive five year plans. In the first few five year plans, it was thought that the development itself would take care of the problem of poverty. However, it was later observed that the benefits of development were not percolating down to the poors. Realising this, beneficiary oriented poverty alleviation programmes were initiated during Sixth Five Year Plan, and development strategies modified to benefit the poor. This approach with further refinements continued in the subsequent five year plans. Human Development became the main thrust in the Eighth Five Year Plan. This is appropriate time to assess how the poverty profile in the country has changed specially after the economic reforms and liberalisation. This is also the stage to examine the rational and relevance of the concept and the methodology used in the poverty measurement.

The methodology, concepts and measurement issues relating to poverty in Indian Context, were examined by a number of distinguished high level groups constituted by the Planning Commission for the purpose from time to time. Important among such distinguished groups, which deliberated on the subject of poverty measurement, are the following:

Working Group	-	1962
Task Force	-	1979
Study Group	-	1984
Expert Group	-	1993

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1 Technical Address delivered at the 51st Annual Conference of the Indian Society of Agricultural Statistics at Rajkot on 6th December, 1997.

There have been enormous contributions on the subject by noted Economists, Statisticians, Nutritionists and other researchers. The reports of the Task Force (1979) and Expert Group (1993) provide reasonably comprehensive review of the work done on the subject.

## 2. Methodology of Poverty Measurement

**2.1** The estimates of Poverty and targets for poverty reduction in planning frame work by Planning Commission were attempted for the first time during Sixth Five Year Plan. These estimates were based on the recommendations of the methodology as formulated by the Task Force on projections of minimum needs and effective consumption demand (1979). Following this methodology with modifications, the estimates were made for the years 1972-73, 1977-78, 1983-84 and 1987-88. The highlight of the methodology of these estimates is outlined as under.

**2.2 Calorie Norm:** The average calorie requirement norm has been worked out using the age sex-activity specific calorie allowances recommended by the Nutrition Expert Group of ICMR and the age-sex-occupational structure of the population. The calorie norms so worked out were 2400 calories per capita per day for rural areas and 2100 calories per capita per day for urban areas (Table 1).

**2.3 Monetary Equivalent:** The data of National Sample Survey Organisation (NSSO) on Consumer Expenditure Survey for 1973-74 (28th round) provided details on the consumption expenditure (in rupees) and the calorie intake which was used for working out the consumption expenditure (in terms of rupees) per capita per month corresponding the average calorie norm. It was estimated that, on an average, in 1973-74, consumer expenditure of Rs. 49.09 per capita per month corresponded to the calorie intake of 2400 per capita per day in rural areas and consumer expenditure of Rs. 56.64 per capita per month to the calorie intake of 2100 per day in urban areas. This is referred to as the base poverty line by the Planning Commission. The poverty line defined this way is partly normative (as calorie requirement is on normative consideration) and partly behavioural (as monetary equivalent is based on actual consumption behaviour). The poverty line on an average ensured the calorie requirement standard. Further, in the basket, corresponding to the poverty line, the proportion of expenditure on food was about 70 per cent and hence 30 per cent was available for non-food consumption (Table 2).

**2.4 Updating of Poverty Line:** The poverty line defined for the year 1973-74, requires updating over time. Initially the wholesale price index was used to update the poverty line. The Study Group (1983), considered several

options for updating the poverty line and recommended the use of a price index appropriately weighted by the consumption basket of the poor. As such an index was difficult to work out, it was recommended by the said Study Group to use to implicit private consumption deflator from National Accounts Statistics (NAS) which was found, at that time to be very close to such an index. The implicit price consumption deflator was used for updating the poverty line for the years 1977-78, 1983-84 and 1987-88 which are as under:

**Table A: Poverty line**

Year	Rural	Urban
1973-74	49.09	56.64
1977-78	60.60	69.90
1983-84	101.80	117.50
1987-88	131.80	152.10

Source: Planning Commission

**2.5 The Adjustment of NSSO Distribution for Estimating Poverty:** The poverty line serves as a cut-off line for estimating the poverty ratio. There are no data on the income distribution in India. However, the data on the distribution of population by expenditure were available from the household consumption surveys conducted under various NSS rounds. These data were used for the estimation of poverty. In order to arrive at the estimates of the poverty ratio, Planning Commission had made adjustment in the NSS data on distribution of households by consumption expenditure levels. Such an adjustment was considered necessary because the aggregate private household consumption expenditure as estimated from the NSS data was different from the aggregate private consumption expenditure estimated in the National Accounts Statistics (NAS). For the year 1973-74, the difference in the private consumption expenditure from NSS and NAS was not appreciable. Over years the magnitude of difference increased to about 33 percent. It was considered desirable to have compatibility between the two sets of data. The procedure followed had been to adjust the expenditure levels pro rata by a factor equal to the ratio of the total private consumption expenditure obtained from the NAS to that obtained from the NSS.

**Table B : Ratio of NAS and NSS estimates of total consumption expenditure**

Year	Adjustment Factor
1977-78	1.20
1983	1.33
1987-88	1.27

Source: Planning Commission

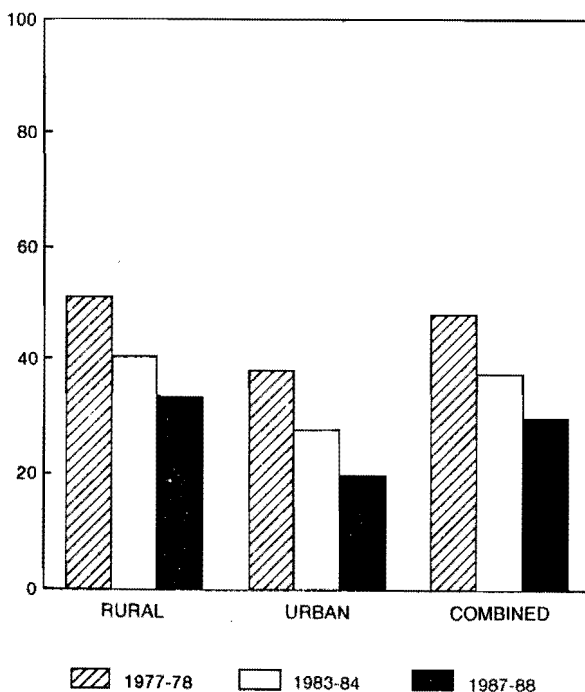
**2.6 Estimates of Poverty:** The poverty ratio was, estimated by applying the updated poverty line to the corresponding adjusted NSS distribution of households by consumption expenditure. Based on this methodology the estimates of percentage of persons below poverty line at All India level are as under.

**Table C: Poverty ratio**

	Rural	Urban	Combined
1977-78	51.20	38.20	48.30
1983-84	40.40	28.10	37.40
1987-88	33.40	20.10	29.90

Source: Planning Commission

**POVERTY RATIO**



The estimate of poverty at the State level, were also obtained using the same. All India poverty line and the All India adjustment factor (these are not available at State level) on the State specific NSS distributions of households by consumption expenditure. Based on these the results at State level for 1987-88 are given in Table 3.

### 3. Recommendation of the Expert Group

**3.1** The methodology as used by the Planning Commission was criticised/commented on issues specifically related to updating of the poverty line and the adjustment of NSS distribution. There was also the issue of using the same poverty line for all States. An Expert Group was set up by the Planning Commission to examine these issues and various other aspects relating to measurement of poverty. The recommendation of the Expert Group (1993) on specific issues viz., base poverty line, State level poverty lines, updating of poverty lines, adjustment of NSS distribution are as under:

**3.2 Base Poverty Line:** Expert Group recognised that the choice of base year is very crucial for defining the poverty line. Since much systematic work has already been done with the base 1973-74, the Expert Group recommended continuing it as the base year for estimating the poverty line and thus recommended that the base poverty line as used by Planning Commission (i.e. a monthly per capita total expenditure of Rs. 49.09 for rural and Rs. 56.64 for urban at 1973-74 prices) be adopted.

**3.3 State Level Base Poverty Lines:** Expert Group was of the view that the same All India poverty line should not be used for the States. The Expert Group recommended that for determining the base year poverty lines at State level, the standardised commodity basket corresponding to the All India poverty line should be valued at the prices prevailing in each State in the base year, i.e., 1973-74. The poverty line so derived for various States for 1973-74 are given in Table 4.

**3.4 Updation of Poverty Line:** The Expert Group opined that the deflators for updating the poverty line should satisfy the following 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, after considering various possible choices for the deflator, the Expert Group recommended to use the disaggregated commodity indices from Consumer Price Index (CPI) for Agricultural Labourers to update the rural poverty line and a simple average of suitably weighted commodity indices of consumer price index for industrial workers and consumer price index of non-manual employees for updating the urban poverty line.

Planning commission for updating the poverty lines has adopted the use of CPI for the agricultural labourers for rural areas and only the CPI of industrial workers for urban areas.

**3.5 Recommended Poverty Lines:** Based on the recommendations of the Expert Group the poverty lines at All India level are as under:

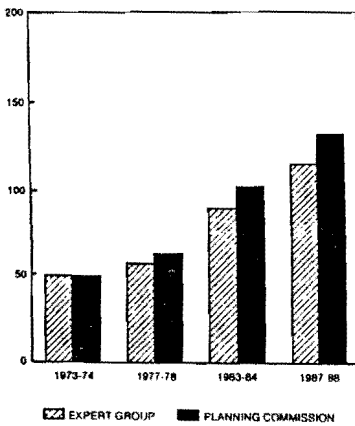
**Table D. Poverty line by expert group**

Year	Rural	Urban
1973-74	49.63 (49.10)	56.96 (56.60)
1977-78	56.84 (60.60)	72.50 (69.90)
1983-84	89.45 (101.80)	117.64 (117.50)
1987-88	115.43 (131.80)	165.68 (152.10)

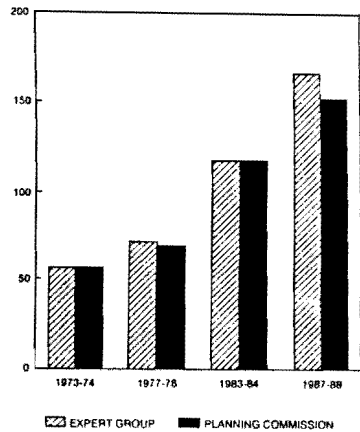
Figures in bracket are the corresponding poverty lines by the Planning Commission

**POVERTY LINE BY EXPERT GROUP**

**RURAL**



**URBAN**



The Expert Group recommended poverty lines at state level are given in Table 4.

**3.6 Adjustment of NSS Distribution and Estimation of Poverty Ratio:**

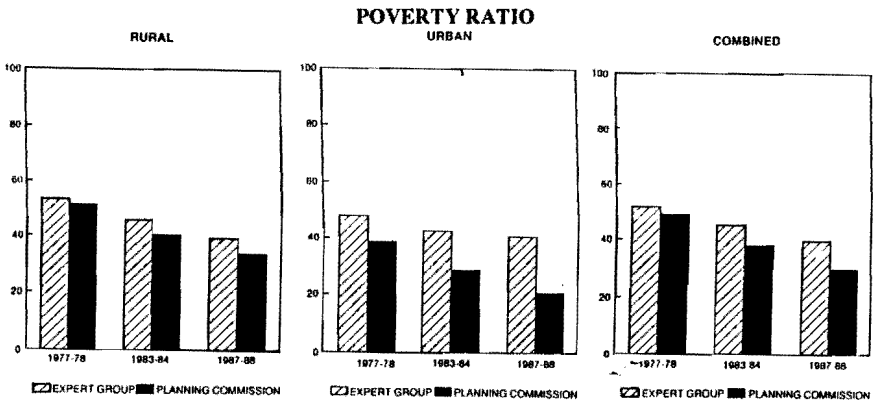
The Expert Group recommended the discontinuation of the adjustment of NSS distribution, for difference with National Accounts Statistics. The Group recommended that using the updated State-specific poverty lines and the corresponding size distribution of per capita consumption expenditure of NSS, the poverty ratio should be calculated separately for rural and urban areas for each State and the All India poverty ratio should be derived as a ratio of the aggregate number of State-wise poor persons to the total All India population. The All India poverty line is implicit corresponding to the Poverty Ratio at All India level.

**3.7 Estimates of Poverty:** The estimates of poverty based on the methodology recommended by the Expert Group at All India level are as under. The results at the State level for 1987-88 are given in Table 5.

Table E: Poverty ratio — expert group

Year	Rural	Urban	Combined
1977-78	53.07 (51.20)	47.40 (38.20)	51.81 (48.30)
1983-84	45.61 (40.40)	42.15 (28.10)	44.76 (37.40)
1987-88	39.06 (33.40)	40.12 (20.10)	39.34 (29.90)

(Figures in bracket are those by Planning Commission)



**4. Implications of Expert Group Recommendations**

**4.1** The broad implications of the recommendations of the Expert Group are that the level of poverty is higher as compared to the earlier official estimates. Further, the poverty in urban areas is much higher as compared to

the earlier official estimates. However, the poverty ratio shows declining trend in both cases.

The Expert Group has made recommendations on base year of poverty line, updating of poverty line, State level poverty lines and adjustment of NSSO distribution. The implication of these recommendations on the magnitude of poverty are discussed in the following sections:

**4.2 Base Year:** The Expert Group recommended use of 1973-74 as base year for updating the poverty line. One could have considered any other year also as the base. For consumption basket relevant for poor following comments are made.

- (i) Over years, those around poverty line would shift to lower deciles because of decline in poverty ratio and those in lower deciles have relatively higher share of cereals in the consumption basket.
- (ii) With time there would be change in the consumption pattern and the general development results in reducing the share of cereals in the basket.

Because of these two opposing factors together, the change of base year would not have affected the results that widely. Even the use of consumption basket of the poor for 1993-94 (an extreme case) as weights instead of 1973-74, would have resulted in underestimating the poverty line by only about 5 per cent with the implication on poverty ratio in 1993-94 of about the similar magnitude.

**4.3 Updating:** The year 1973-74 is the base year for poverty line and as expected the consumption basket corresponding to the poverty line in 1973-74 satisfied the calorie requirement norm. Poverty line for subsequent years are essentially the consumption basket of 1973-74 evaluated at respective years prices.

A comparison revealed that for urban areas, the Expert Group recommended poverty lines and those used by the Planning Commission were almost same upto 1983-84 but for 1987-88, the Expert Group poverty line is much higher as compared to Planning Commission Poverty Line. On the other hand the Expert Group recommended poverty line for rural areas were much lower as compared to the corresponding poverty lines by the Planning Commission for all the years.

**4.4 Adjustment of NSS Distribution:** The difference between the estimates of total private consumption expenditure was around 5 per cent when the Task Force recommended such an adjustment. The adjustment factor, rose sharply to 29 per cent in 1987-88 and later to 39 per cent in 1993-94. The



adjustment of such a high discrepancy by the same proportion for rural and urban and between poor and non-poor received lot of criticism. Although there was a case for item specific adjustments taking into account the discrepancies between poor and non-poor as well as rural and urban, the Expert Group recommended that NSS distribution should be used as obtained without any adjustment.

4.5 The implication of the recommendations of the Expert Group on the magnitude of poverty are summarised as under.

**Table F: Implications and source of increase in poverty ratio 1987-88**

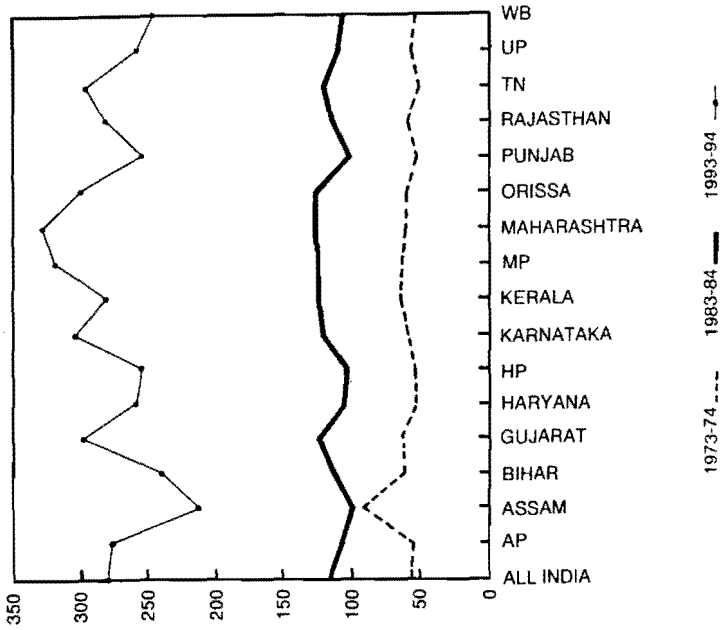
	Source	Rural	Urban
(i)	Change in the poverty line due to updating	9.1	3.5
(ii)	Doing away with adjustment of NSS Distribution	14.6	15.9
	Both	5.5	19.4

Following observations are made in this regard:

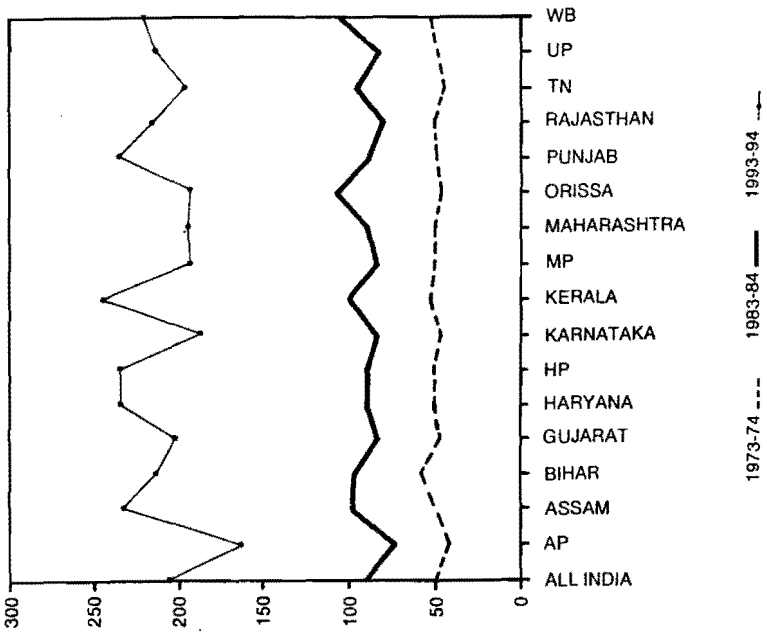
1. The updated poverty line by the Expert Group for 1987-88 are lower by a magnitude of 10 to 12 per cent as compared to the poverty lines earlier by the Planning Commission in rural areas. With no other change in the methodology, this would have resulted in reducing the magnitude of poverty by 1987-88 about 9 percentage points. In urban areas, the updated poverty line although at the same level as the earlier poverty lines upto 1983-84, it was higher for 1987-88 by 6 per cent which resulted into increasing the poverty ratio by about 3 percentage points.
2. The use of unadjusted NSS distribution of per capita consumption expenditure as compared to the adjusted NSSO distribution in both rural and urban areas resulted into an increase of poverty for 1987-88 by about 15 percentage points.
3. As a net result of (1) and (2) above the poverty ratio for 1987-88 increased by about 18 percentage points in urban areas and 6 percentage points in rural areas.

4.6 **Differential Poverty Lines Across States:** The method of computing State level poverty lines and their updating as suggested by Expert Group indicate that in the base year for State like Andhra Pradesh in rural areas the poverty line is less than 85 per cent of All India level poverty line. On the

STATE WISE POVERTY LINES : URBAN AREAS (Rs.)



STATE WISE POVERTY LINES : RURAL AREAS (Rs.)



other hand, for State like Bihar the poverty line is more than 110 per cent of All India level poverty line. Further, the inter-state variations in the poverty lines which were minimal in the base years have widened in the recent years. Also the movement of poverty lines with time do not follow any set pattern. These poverty lines have implication in terms of poverty ratio. These results have implications on the allocation of funds for poverty alleviation programmes as well as Public Distribution System (PDS).

**4.7 All India Poverty Line and Poverty Ratio:** The All India poverty ratio is derived from the results of poverty at the State level and the All India Poverty Line is thus implicit corresponding to the All India Poverty Ratio. This is at variance with the earlier methodology where the All India Poverty Line was calculated with base poverty line and an appropriate price index. The All India level poverty ratio was earlier calculated using All India level data of NSSO Consumer expenditure and All India Poverty Line.

In the methodology used at present there is heavy reliance on State level data. This may be all right for bigger States but for smaller States the sampling errors may be large. The implication of this should be kept in mind for any research to be pursued.

## 5. Issues

**5.1 The Trends in Calorie Intake:** Since the concept of poverty is linked with calorie norm, it is worthwhile studying the trend in calorie intake. The National Nutrition Monitoring Bureau (NNMB), under National Institute of Nutrition, ICMR, established in 1972 has been generating data on food and nutrient intake and nutritional status on a continuous basis. The data so generated provide an insight into the variations in dietary patterns across States, the changes in consumption of foods and nutrients, and the extent of under nutrition both in children and adults.

The data of NNMB although relate to only ten States, is a rich source for studying the trends in energy intake as well as on relationship of diet with nutritional status. The latest report entitled "25 Years of NNMB" provides information on energy intake from 1975 to 1995.

The NNMB data do not indicate any increasing trend in the energy intake as it ranged from the level 2296 during 1975 to 2409 in 1981 and 2172 in 1995. On the contrary poverty ratio shows definite decline. One might argue that the trend in energy intake has been examined through NNMB data whereas poverty has been estimated using NSSO data. It is worth mentioning that the trend in energy intake by NNMB data is broadly similar to that revealed by

**Table G : Energy Intake – Pooled for all ten States**

Year	Calorie (Kcal)
1975	2296
1976	2368
1977	2306
1978	2341
1979	2366
1980	2404
1981	2409
1982	2243
1990	2283
1992	2136
1995	2172

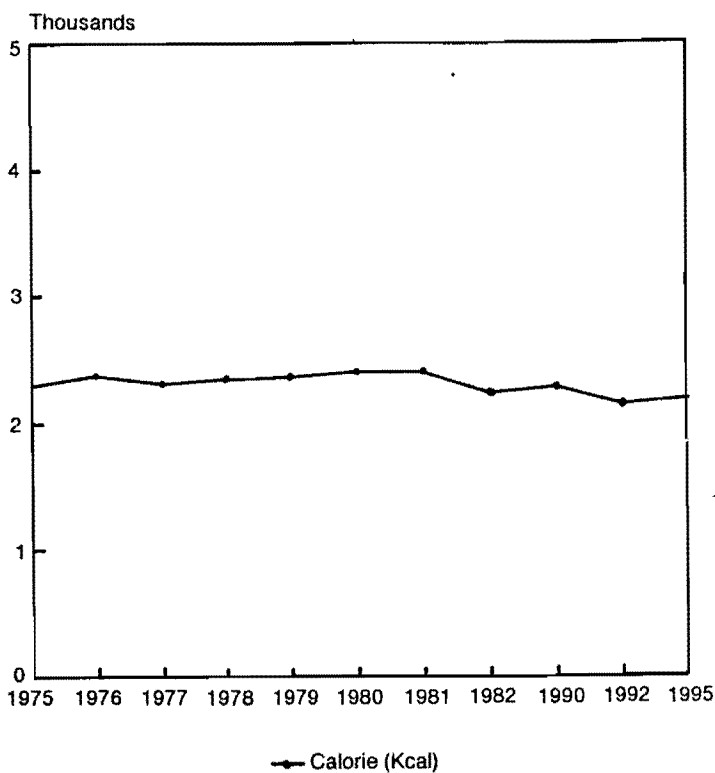
**ENERGY INTAKE POOLED FOR TEN STATES**

Table H : Calorie Intake per C.U.

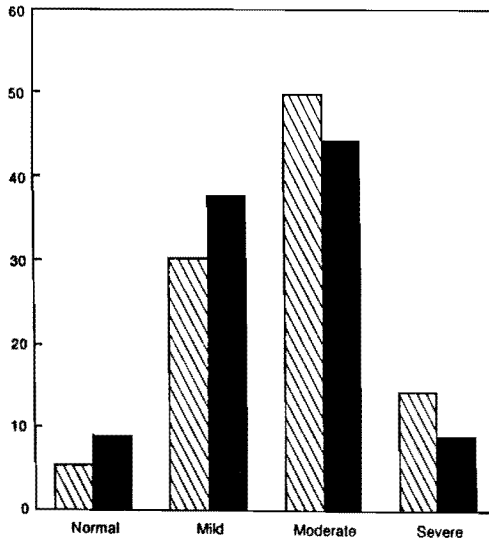
State	NNMB			NSSO		
	1992	1995	AVG	Rank	93-94	Rank
Andhra Pradesh	2247	2430	2339	7	2559	5
Gujarat	1969	2298	2134	3	2470	3
Karnataka	2293	2196	2245	5	2575	6
Kerala	2055	2231	2143	4	2541	4
Madhya Pradesh	-	2238	2426	8	2697	7
Maharashtra	1922	2065	1944	2	2427	2
Tamil Nadu	1950	1814	1882	1	2347	1
West Bengal	2297	-	2297	6	2733	8

NSSO for the time points 1972-73, 1983 and 1993-94. Further, for the ten States covered by NNMB a comparison of energy intake with NSSO for 1993-94 revealed approximately similar ranking of States indicating consistency and the reliability of the data generated by two sources.

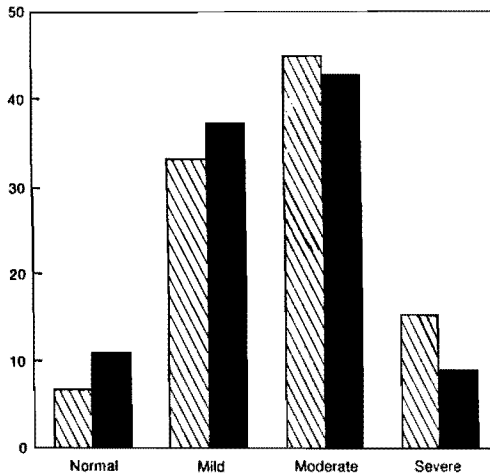
**5.2 Trends in Nutritional Status:** In view of no clear cut relationship between poverty ratio and calorie intake there is a need to look into other variables/parameters reflecting nutritional status. According to nutritionists, the nutritional status can be best assessed using anthropometric measurements. Using the data of NNMB for 25 years the nutritional status of children and adults has been studied. The measurements are anthropometric indices, viz, Gomez Classification for children and BMI Classification for adults. In the Gomez classification using weight for age, those below 60 percent of the standard are classified as severely mal-nourished, 60 to 75 percent as moderately mal-nourished, 75 to 90 percent as mildly nourished, and more than 90 percent of standard as normal. For adults Body Mass Index has been calculated as the ratio of weight to square of the height. Using BMI those with values less than 18.5 are termed as Chronic Energy Deficient (CED), between 18.5 to 25 as normal and more than 25 as over weight. These indices for children as well as adults show improvement over time. This analysis together with trends in calorie intake indicates that the nutritional status does not depend only on energy intake but is also influenced by other factors such as quality and pattern of food, medical care, safe drinking water, sanitation, etc. Thus, the concept of poverty which takes into account only the calorie intake should incorporate other factors which have bearing on nutritional status. It is important mentioning

### WEIGHT FOR AGE

#### BOYS



#### GIRLS

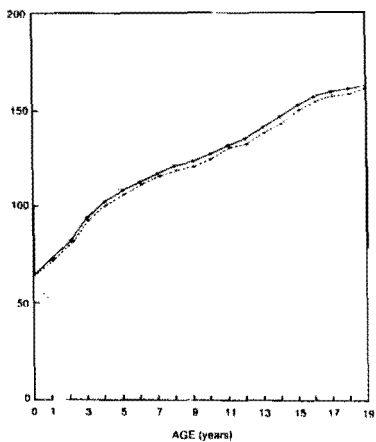


▨ 1975-79    ■ 1988-90

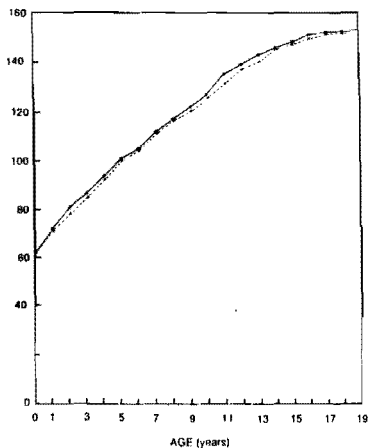
Source : 25 Years of NNMB

### DISTANCE CHART

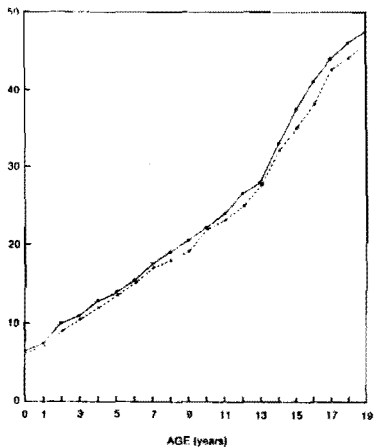
#### HEIGHT BOYS



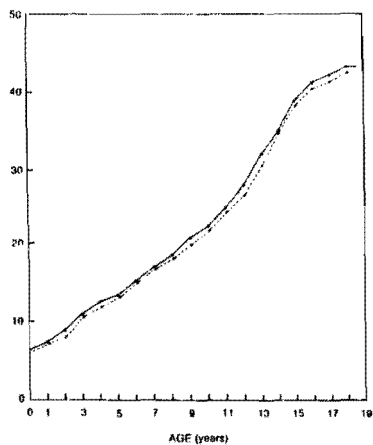
#### HEIGHT GIRLS



#### WEIGHT BOYS



#### WEIGHT GIRLS



— 1975-79

- - - 1998-90

Source : 25 Years of NNMB

here that although there has been no increase in the energy intakes as per the data of NNMB, (also supported by NSSO) there is a shift in favour of better quality food through increase in the consumption of fruits, milk and milk products etc. thereby increasing the intake of other nutrients.

**5.3 Calorie Intake and Nutritional Status:** As per the time series data of NNMB there is no direct relationship between nutrient intake and nutritional status. However, studying the relationship of dietary intake and nutritional status using time series data has its own limitations. Cross-sectional data provide better insight into studying such relationship. Institute for Research in Medical Statistics, New Delhi has recently undertaken a study on District Nutrition Profile in the States of Rajasthan and Bihar. In this study, information has been collected for about 35,000 households covering all the Districts in two States. The data on socio-economic conditions of households and dietary intake have been analysed. For these States, the nutritional status of children was measured using Gomez Classification and those of adults using Body Mass Index. The salient findings of the study are as under:

- (i) The availability of piped drinking water, flush toilets, separate room as kitchen, pucca house were much lower in Bihar as compared to Rajasthan.

**Table I:** Household characteristics (Per cent)

Characteristics	Rajasthan	Bihar
Pucca House	49.0	14.6
Separate room as kitchen	55.3	28.5
Electricity	68.9	14.0
Piped water	36.8	4.0
Flush toilet	18.9	5.1

- (ii) The average calorie intake was higher in Bihar as compared to Rajasthan.
- (iii) The severely malnourished children as well as adults with Chronic Energy Deficiency were much higher in Bihar as compared to Rajasthan, inspite of higher calorie intake in Bihar as compared to Rajasthan.

Thus the magnitude of malnutrition is affected by both the diet as well as sanitation conditions.

- (iv) The energy intake was lower for the children which were severely and moderately under-nourished as compared to those with mild form



**Table J-1:** Consumption of food stuff(gm/cu/day)

Items	Rajasthan	Bihar
Cereal	483.57	541.70
Pulses	29.12	37.68
Leafy Veg.	24.19	18.26
Roots & Tubers	79.15	154.90
Other Veg.	45.25	106.73
Fruits	21.80	17.75
Condi. & Spices	16.00	12.42
Meat, Fish & Egg	5.88	8.14
Milk Prod.	197.69	43.96
Fats/Oils	22.31	12.52
Sugar	25.25	7.39

**Table J-2 :** Nutrient intake (per cu/day)

Items	Rajasthan	Bihar
Protein (g)	77	70
Fat (g)	46	24
Energy(kcal)	2386	2464
Calcium (mg)	734	433
Phos (mg)	2130	1757
Iron (mg)	31	22
Thiamine (mg)	3	2
Ribo (mg)	1	1
Niacin (mg)	21	20
Vit-C (mg)	46	60
Vit-A (corot) (ug) ~	1599	1051

of undernourishment and normal. Similarly, the calorie intake was much lower for adults with Chronic Energy Deficiency (CED) as compared to normal adults. Although factors such as safe drinking water, sanitation etc., also affect the nutritional status, the energy intake remained the important factor influencing the nutritional status and

**Table K-1: Nutritional status of children 1-5 Years Gomez Classification (per cent)**

Malnutrition Grade	Male	Female	Combined
<b>RAJASTHAN</b>			
Severe	10.0	9.9	10.0
Moderate	32.3	32.7	32.5
Mild	40.2	38.2	39.2
Normal	17.5	19.2	18.3
<b>BIHAR</b>			
Severe	27.2	25.0	26.2
Moderate	29.4	30.4	29.9
Mild	27.1	25.3	26.2
Normal	16.3	19.3	17.7

**Table K-2: Nutritional status adults (18 years and above) BMI Classification (per cent)**

State/Sex	Male	Female	Combined
<b>RAJASTHAN</b>			
CED	44.4	43.1	43.7
Normal	52.2	53.9	53.2
Over Weight	3.4	3.0	3.1
<b>BIHAR</b>			
CED	39.8	58.3	50.3
Normal	56.3	40.5	48.2
Over Weight	1.9	1.2	1.5

therefore should continue as the basic criterion for the definition of poverty line.

**Table L-1: Calorie Intake of children according to Nutritional Status (per CU)**

	Rajasthan	Bihar
Severe	1636	1750
Moderate	1776	2052
Mild	1914	2054
Normal	1996	1975
Total	1860	1973

**Table L-2: Calorie Intake of adults as per Nutritional Status (per CU)**

	Rajasthan	Bihar
CED	2483	2690
Normal	2619	2740
Over Weight	2578	2865
Total	2561	2717

**5.4 Correspondence of Updated Poverty Lines with Calorie Requirement Norm :** One could obtain the poverty line directly using the relationship of expenditure and calorie for different years. The poverty line one would have obtained directly, for different years, using the corresponding year data are as under:

**Table M : Poverty Line corresponding to fixed calorie norm using the relationship of Consumption Expenditure and Calorie Intake for the respective years**

Year	Rural	Urban
1973 - 74	49.09	56.64
1977 - 78	60.53	65.96
1983 - 84	122.61	166.28
1987 - 88	167.80	254.88
1993 - 94	320.00	398.00

A comparison revealed that the directly calculated poverty line are much higher specially in the recent year.

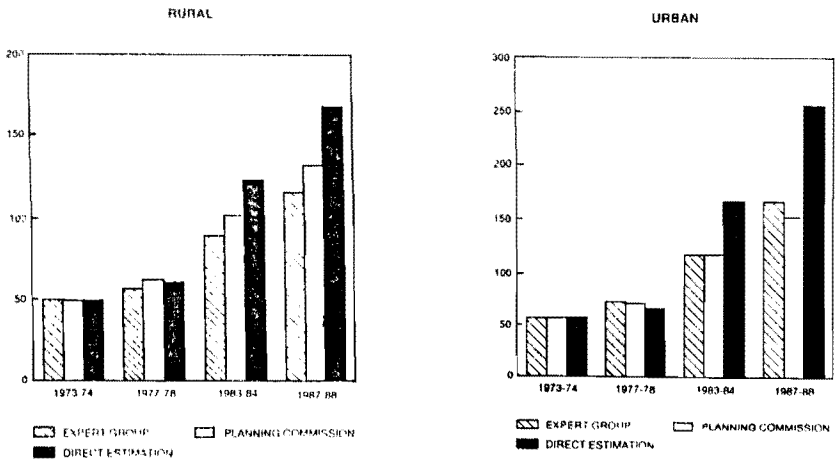
The nature and pattern of consumption has important bearing on caloric intake. The consumption pattern is different for different States depending upon their development levels. The contribution of cereals in total caloric intake is relatively less in richer States and more in poorer States. For example, in rural areas of Punjab, about 50% of the calorie intake comes from cereals and as much as 20% of the calorie from milk and milk products whereas in Orissa, more than 80% of the calorie intake comes from cereals and merely one per cent from milk and milk products. Also within each State the pattern is different for poor and non-poor. For example, for poor group, the contribution of cereals is about 80 per cent in rural and 70 per cent in urban. The corresponding figures for non-poor are 68 per cent in rural and 55 per cent in urban.

Further, with the overall development over years, the share of cereals in caloric intake has declined. Because the consumption basket has undergone significant change, the mere updating the base year basket by price changes

does not capture totality. Thus, the price updated poverty line do not correspond to the calorie requirement in a manner it does for the base year.

**5.5 Mix Up of Poor and Non-Poor:** The proportion of persons below poverty line (expenditure terms) and below calorie norm broadly remained same for 1973-74 and 1977-78. Thus, the assumed relationship between calorie intake and update poverty line appears to hold good on an average for 1973-74 and 1977-78. But for years beyond 1977-78 the relationship did not hold good as there were differences of even 30 percentage points in the percentage of persons below the expenditure cut off (updated poverty line) and the calorie norm (Table 6). In certain forums, it is commented that the updated poverty line do not correspond to the calorie norm. This is also viewed in certain quarters as mix up of poor and non-poor. Although there is very high proportion of non-poor among those below calorie norm, among poors, the proportion below calorie norm is small. Thus, the possibility of non-poor taking the benefits meant for poor is remote if one continues with the current definition and the methodology of poverty line.

#### POVERTY LINE



#### 6. Recommendations

Definition of poverty line should incorporate all basic needs viz. food, clothing, shelter, safe drinking water, sanitation, education, health, etc. Since food is the basic of all basic needs, rightly the provision of adequate food was considered as basis for definition of poverty line, to start with. Further, the adequacy of food could have been considered in various ways. Of various

alternatives, adequacy of calories was considered appropriate as the criteria in the definition of poverty line. The concept as used was appropriate at that stage of development. But now even in the food adequacy of other important nutritionients should also be considered.

In working out monetary equivalent of the calorie norm the alternatives which could have been considered are:

- (i) Cost of the basket for a Balanced Diet (BD) corresponding to the average calorie norm.
- (ii) Least cost basket corresponding to average caloric norm.
- (iii) Cost of the basket based on actual Consumption Behaviour corresponding to average calorie norm.

Of these, the alternative (iii) was considered. It would be appropriate to construct a basket representing the balanced diet for each State/region taking into account the tastes and preferences.

The updating of poverty line all aspects should have been take care of viz., change in the nutrient requirement, consumption pattern and prices. Initially, it was felt that average nutrient norm would broadly remain the same and consumption pattern, for a short period may not change appreciably. The change in the prices was only considered in updating the poverty line. Thus, the updating of poverty line should consider all above-mentioned aspects.

There is presently a difference of about 40 per cent in the estimates of total private consumption by the National Accounts Statistics and National Sample Survey. The difference of this magnitude can not be just ignored. It is agreed that the pro-rata adjustment of this difference is not appropriate. It is suggested that NSS distribution should be adjusted using commodity specific adjustment factors derived using variations in the consumption behaviour of poor and non-poor as well as rural and urban. Such an adjustment could provide somewhat more realistic picture as compared to either adjustment of the distribution pro-rata or no adjustment at all.

This is the stage to incorporate all basic needs in the definition of poverty line. Poverty is a multi-dimensional phenomenon and should cover all aspects depicting different facets of well-being. For each aspect reflecting well being, set of indicators should be considered and appropriate methodology should be developed for measurement of each of these.

**Table 1: Norms and age, sex, occupation structure of the population and calorie allowances**

	Population		ICMR recommended Calorie Norm
	Rural (%)	Urban (%)	
< 1 year	2.97	2.56	760
1- 3 years	8.67	7.44	1200
4- 6 years	8.31	7.19	1500
7- 9 years	7.91	7.09	1800
10- 12 years boys	3.89	3.70	2100
girls	3.57	3.58	2100
13- 15 years boys	2.41	2.35	2500
girls	2.22	2.25	2200
15+ years Males			
Heavy Activity	22.03	4.27	3900
Moderate Activity	2.51	8.11	2800
Sedentary Activity	2.74	15.02	2400
Non-workers	3.29	6.25	2400
15+ years Females			
Heavy Activity	10.51	1.64	3000
Moderate Activity	.92	1.77	2200
Sedentary Activity	.50	3.23	1900
Non-workers	17.55	22.55	1900
Average Calorie Requirement (Per Capita)	2400	2100	

Source: Report of the Study Group, Planning Commission

**Table 2: Consumption Basket of persons near the poverty line  
(Share of items) 1983-84**

	Items	Rural	Urban
1	Total cereals	37.55	27.72
2	Gram	0.24	0.19
3	Cereal substitute	0.19	0.09
4	Pulses	3.83	4.04
5	Milk and milk products	7.02	8.66
6	Edible oil	4.23	5.74
7	Meat, egg and fish	3.08	3.71
8	Vegetables	5.22	5.84
9	Fruits & nuts	1.19	1.52
10	Sugar	0.81	3.08
11	Salt	0.18	0.14
12	Spices	2.53	2.62
13	Beverages & refreshment	3.13	5.30
14	Food Total	71.21	68.66
15	Pan, tobacco, intox.	3.12	2.80
16	Fuel & lighting	7.67	8.43
17	Clothing	5.55	3.19
18	Footwear	0.73	0.70
19	Misc. goods & services	10.98	15.70
20	Durable goods	0.72	0.53
21	Non-food total	28.77	31.34
	Total	100.00	100.00

Source: Report of the Study Group, Planning Commission

Table 3: State wise poverty ratio based on earlier poverty line 1987-88

State	Rural	Urban	Combined
Andhra Pradesh	33.80	26.10	31.70
Assam	24.50	9.40	22.80
Bihar	42.70	30.00	40.80
Gujarat	21.20	12.90	18.40
Haryana	11.70	11.70	11.60
Himachal Pradesh	9.70	2.40	9.20
Jammu & Kashmir	15.50	8.40	13.90
Karnataka	35.90	24.20	32.10
Kerala	16.40	19.30	17.00
Madhya Pradesh	41.50	21.30	36.70
Maharashtra	36.70	17.00	29.20
Orissa	48.30	24.10	44.70
Punjab	7.20	7.20	7.20
Rajasthan	26.00	19.40	24.40
Tamil Nadu	39.50	20.50	32.80
Uttar Pradesh	37.20	27.20	35.10
West Bengal	30.30	20.70	27.60
Small States & UT's	11.80	4.70	7.70
All India	33.40	20.10	29.90

Source: Planning Commission



Table 4: State specific poverty lines with base 1973-74

S. No.	States/U.T.'s	(Rs. per capita per month)							
		Rural			Urban				
		1973-74	1977-78	1983	1987-88	1973-74	1977-78	1983	1987-88
<b>States</b>									
1.	Andhra Pradesh	41.71	50.88	72.66	91.94	55.11	71.56	111.84	159.50
2.	Arunachal Pradesh	49.82	60.29	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	83.29	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	140.63
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.	Kerala	51.68	58.88	99.35	130.61	62.08	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	88.24	115.61	58.64	74.64	127.23	184.45
14.	Manipur	49.82	60.29	98.32	127.44	50.40	64.94	103.97	140.45
15.	Meghalaya	49.82	60.29	98.32	127.44	50.40	64.94	103.97	140.45
16.	Mizoram	49.82	60.29	98.32	127.44	50.40	64.94	103.97	140.45
17.	Nagaland	49.82	60.29	98.32	127.44	50.40	64.94	103.97	140.45
18.	Orissa	46.87	58.89	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

Table 4: State specific poverty lines with base 1973-74

S. No.	States/U.T.'s	(Rs. per capita per month)							
		1973-74	Rural 1977-78	1983	1987-88	1973-74	Urban 1977-78	1983	1987-88
<b>States</b>									
20.	Rajasthan	50.96	57.54	80.24	117.52	60.77	74.84	117.24	166.72
21.	Sikkim	49.82	60.29	98.32	127.44	50.40	64.94	103.97	140.45
22.	Tamil Nadu	49.09	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
<b>U.T.'s</b>									
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
28.	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.	Lakshdweep	51.68	58.88	99.35	130.61	60.08	71.82	127.84	175.11
31.	Pondicherry	49.09	56.62	96.15	118.23	54.34	71.18	123.73	174.82
	<b>All India</b>	<b>49.63</b>	<b>56.84</b>	<b>89.45</b>	<b>115.43</b>	<b>56.96</b>	<b>72.50</b>	<b>117.64</b>	<b>165.58</b>

Source: Report of the Expert Group

Table 5: Poverty ratio expert group 1987-88

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)	% of Persons
	<b>States</b>						
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

contd....

Table 5: Poverty ratio expert group 1987-88

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)	% of Persons
	<b>States</b>						
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
	<b>U.T.'s</b>						
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	45.25
28.	Chandigarh	0.04	12.91	0.76	12.91	0.80	12.91
29.	D & N Haveli	0.21	17.64	0.03	33.71	0.24	18.71
30.	Lakshdweep	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

**Table 6:** Cross tabulation of percentage of persons below poverty line and below calorie norm

	Rural			Urban		
	Below poverty line	Above poverty line	Total	Below poverty line	Above poverty line	Total
<b>1977-88</b>						
Below Calorie Norm	45.32	12.47	57.79	37.33	11.95	49.28
Above Calorie Norm	12.31	29.21	42.21	12.66	38.06	50.72
Total	57.63	42.37	100.00	49.94	40.01	100.00
<b>1983-84</b>						
Below Calorie Norm	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
Total	41.38	58.62	100.00	28.78	71.22	100.00
<b>1987-88</b>						
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
Total	32.36	67.64	100.00	20.86	79.14	100.00
<b>1993-94</b>						
Below Calorie Norm	31.20	26.20	57.40	29.00	35.87	64.80
Above Calorie Norm	6.10	36.50	42.60	3.50	31.70	35.20
Total	37.30	62.70	100.00	32.50	67.50	100.00