CHAPTER III

METHODOLOGY

Levels of living are a manifestation as well as the end result of developmental efforts in any economy. It represents an interesting view of the structural balance or imbalance of an economy. One way of analysing the structural imbalance and inequality in household consumer expenditure. A study of size distribution of household consumer expenditure of tribal populations of Himachal Pradesh assumes special importance in order to know more about these people.

There are two approaches for studying levels of living: (i) Income approach i.e. disposable income, and (ii) funds of expenditure approach i.e. total expenditure. The present study followed the second approach for several reasons. It could not be possible to get reliable data on income. Also most studies similar to the present one used this method and hence the results of this study become comparable with those of others. Further, in India, the incomes of most of the people, being mostly dependent on agriculture, are variable and hence the use of total expenditure as determinant of household consumption is to

25. NCAER collected some data on household income but found it unsatisfactory, Demand and Supply Projections (1962). Further, Iyengar (1967) shows that income elasticity is 3% lower when compared to expenditure elasticity.
be preferred. This in a way is similar to the permanent income approach, because expenditure patterns are set by permanent income. Even if the information on income in India is available, its reliability will always remain questionable. To meet the objectives of the study, the data has been collected both from secondary and primary sources.

The Secondary Data: Necessary informations were obtained from the offices of Census Department H.P., State Directorate of Land Records, Tribal Development Department etc.

The Primary Data: Multi stage stratified sampling was adopted for the present study, the detailed procedure of which is as below: The first stage unit was the district, Tribal Development Blocks as the second stage and the third stage units being the villages. Of the two districts of Himachal Pradesh which are classified as tribal districts, the remotest one, Lahaul-Spiti was selected. This district has higher percentage of schedule tribe population to the total population largest geographical


area and lowest density of population. Lahaul-Spiti comprises of two blocks namely Lahaul and Spiti. Out of these two blocks, Lahaul was selected on the same basis. Further, Lahaul Block comprises of three valleys, namely Chandra, Bhaga and Pattan. Because of the extremely low density of population in these valleys, one village from each valley was selected randomly ensuring that one of the villages was located within a distance of 10 Km. from block headquarters, another 10 to 20 Km. away and the third one at a distance of more than 20 Km. Thus, on this basis Beling village of Bhaga valley, Gondhala of Chandra valley and Triloknath village of Pattan valley were selected for the detailed study. In each of these selected villages, complete census of the households was undertaken for the purpose of the study.

Field Work: The needed data was collected with the aid of a specially structured and pre-tested questionnaire from each of households of the three sampled villages. Additionally, a village schedule was also canvassed to get the general information about each of these three villages. Necessary data and informations from the households was obtained by personally interviewing the head of each household. Field visits were made in the month of June 1983 for testing of the questionnaire,
whereas the final data was collected by staying in the sampled villages during the period July to September 1983.

**Analysis of Data** The data thus collected from 101 households of the three sampled villages was analysed village-wise occupation-wise and class of expenditure-wise.

Item classification has been adopted from family living survey of Ministry of Labour Employment and Rehabilitation. The expenditure classes have been adopted on the pattern of National Sample Survey. Each monthly expenditure class was, however, converted to annual. This has been done because the people of this particular area make their purchases annually as the area is snow-bound and thus cut-off from rest of the world for about 8 months in a year.

Inter and intra-village disparities have been studied and their dimensions are also examined.

**Tools and Techniques** The levels of living with regard to expenditure class, occupation-wise has been studied with the aid of simple averages. The dimension of disparities has been examined with the conventional measure of range such as standard deviation and coefficient of variation.
For estimating expenditure inequalities among the village/items such as food, clothing, housing, fuel and light, education and health, miscellaneous, etc. Lorenz Curve has been used because a measure of inequality is essentially a measure of deviation from an optimum distribution which in itself is hard to define, short of complete equality as represented, for instance by the diagonal in Lorenz Curve. The Lorenz Curve\(^2\) (or Gini-concentration ratio) is widely used for the graphical representation of the inequality aspects of the size distribution of household consumer expenditure. The choice of Lorenz Curve over other measures of inequality is due to the fact that it does not depend on any distribution assumption and for the convenience it offers in computation.

In the following analysis, Gini-Lorenz ratio is the index of inequality. The Lorenz Curve has been obtained by plotting cumulative percentage share of consumer expenditure.

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\[ Q_j = \sum_{i=1}^{j} \frac{P_i \bar{Y}_i}{\sum_{i=1}^{n} P_i \bar{Y}_i} \]

against the corresponding cumulative percentage of population

\[ P_i = \sum_{i=1}^{j} P_i \text{ for } J = 1, 2, \ldots, n \text{ and } \]

successively joining these points and the points \((P_0, Q_0) = (0,0)\) by straight line. Gini Lorenz ratio has been computed as

\[ L = 1 - \sum_{J=1}^{n} P_j \left[ \frac{Q_j + Q_{j-1}}{2} \right] \]

Overall Index: An index of level of living for all the three villages has been computed and is based on three approaches (a) Rank base index (b) Composite index (c) Combined index i.e. Rank base index multiplied by Composite index.

Rank Base Index: After assigning ranks to various variables, the rank base index for all three villages has been calculated. Village having lowest inequalities has been ranked as highest and vice versa. Similarly ranks have been allocated to per capita average expenditure, i.e.
higher the proportion of expenditure on food, lower the rank assigned and vice versa. This based on this approach, ranks of inequalities as well as average per capita expenditure have been summed up.

**Composite Index**: This has been calculated with the aid of following equation:

\[
\sum_{i=1}^{n=22} \frac{I_{vi}}{I_c}
\]

where as

\[
\sum_{i=1}^{n=22} I_{vi} = \text{Aggregate score on the basis of 22 indicators}
\]

\[
I_{vi} = \text{Index value for village } i
\]

\[
I_c = \text{Index value for overall}
\]

**Combined Index**: Whether the levels of living index change or not, a combined index has been prepared with the aid of multiplication of ranks of particular variable with the composite index value.

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Period of study: The study relates to the period September 1982 to August 1983. This was almost unavoidable because the Rohtang Pass, entry gate to the area, remains closed from October to May and all the households make their purchases during the three months of June to August only. The farmers also sell their surplus during the same period. Some of the essential commodities are also distributed by District Food and Supply Department as well as by Civil Supply Corporation during September only. Each household is allowed to purchase for the entire snow period, which is for at least 7-8 months.

Limitation of the study: Snow bound area where avalanches are not rare, high altitude coupled with the closing of Rohtang and Kunzum passes from October to May, (road passes through Rohtang and Kunzum passes) general backwardness of the area, migratory character of Tribals to lower hills for grazing their animals, illiteracy among the people and single handedness of the researcher, have been the major limiting factors for this study.