CHAPTER III

DESIGN OF THE STUDY

STATEMENT OF THE PROBLEM

Poverty in India is looked at essentially as a rural problem as its initial incidence is identified to be in the villages, and when it cannot be contained, it overflows to the cities and towns resulting in misery and poverty in the city slums.

Rural poverty assumes sinister proportions with the majority of the population depending on frequently undependable agriculture owing to varying agro-situations resulting in unemployment and under-employment, and consequently low income and purchasing power that keep the people in the vicious circle of poverty.

• In our country, poverty definitions emphasize a minimum level of living rather than a reasonable level of living or a good life. This approach also has serious drawbacks in the sense that it makes poverty appear more glaring as a significant proportion of the society is deprived of even the minimum basic needs.
Economists have made use of the concept of poverty line and regional factors to estimate the number of the "poor" and quantify (the extent of poverty) the levels of poverty. Yet, there is not much of an agreement among policy makers, development administrators and planners as to what is poverty, what constitutes it and its measurement.

Further, a review on poverty identification and measurement studies reveals that there is no unanimity in the various estimations and norms of measurement responsible for the discrepancies. Again, a large number of factors have been used to consider and measure poverty in various studies. While some factors are identified, many factors go unidentified. A composite index to identify the poor at the field level, even though desirable, becomes inoperable for various reasons.

In the earlier studies, for estimating the level of poverty, emphasis was placed on the macro level by using aggregate data with short reference periods. Even in the present day context 'poor' family identification does not guarantee the real target touch. Therefore, studies based on macro level data quantifying poverty incidence are of no avail in operational terms in the field at the micro level.
Estimates of poverty levels at the village among the farming communities have become all the more important as there is a shift from centralised planning to grassroot level planning by the planners for reducing poverty.

The incidence of poverty among the marginal farmers and landless agricultural labourers operating under irrigated and unirrigated tracts and their socio-economic characteristics form the main theme of the present study. It is assumed that irrigation facility which determines the crop raising activity could be a major factor responsible for varying levels of poverty. Again, within the locations too, season-based poverty could also be identified. Hence, the policy of 'identifying' the poor for poverty alleviation programmes should take into consideration the average poverty base of the target groups for designing anti-poverty programmes.

The present study is an attempt to expose the factors deciding the poverty levels operating at the micro levels which again are not static or constant. At best, a poverty band could be drawn rather than keep a fixed thin horizontal line which assumes to decide the poor and non-poor. It is therefore, hypothesized that the same family oscillates/between poor and non-poor conditions in the same location
within the same year.

METHODOLOGY

The present study is an analytical and empirical study based on both primary and secondary data.

OBJECTIVES

The major objectives of the study are:
1. To analyse the living conditions of the marginal farmers and landless agricultural labourers in the selected areas;
2. To assess the levels of poverty prevailing among the marginal farmers and landless agricultural labourers operating under varying agrosituations;
3. To identify the indicators of the level of poverty prevailing among the marginal farmers and landless agricultural labourers, and
4. To offer suggestions for improving the living conditions, reducing poverty levels and promoting the welfare of the poor through appropriate policy and programme measures.
SAMPLING DESIGN

The present study has three dimensions: (i) to study the living conditions of the marginal farmers and landless agricultural labourers under irrigated and unirrigated conditions in the selected villages; (ii) to identify and assess the levels/shades of poverty prevailing among them and (iii) to suggest suitable measures for poverty alleviation. Such an attempt calls for an indepth study and therefore the researcher has selected four villages (two irrigated and two unirrigated) in Madurai District.

SELECTION OF THE DISTRICT

The present study is confined to Madurai District (bifurcated into Anna and Madurai districts in 1985) in Tamil Nadu since this district has been identified as one of the districts where mass rural poverty prevails.

SELECTION OF THE VILLAGES

It was assumed that the level of poverty varies with

* The study has been conducted in 1989-90 in the selected villages, taking the composite and undivided Madurai District as one.
the changing agrosituations in the villages even within the selected district. Therefore, four villages representing both irrigated (two) and unirrigated (two) tracts have been randomly selected— They are: (i) Alanganallur (Alanganallur block); (ii) Kodikulam (Madurai East Block); (iii) Sengottai (Nilakottai Block); and (iv) Kalvarpatty (Vedasandur Block). While villages in Alanganallur Block and Madurai East Block represent irrigated tracts, villages in Nilakottai Block and Vedasandur Block represent unirrigated tracts.

The main purpose of the selection of villages has been to find out the extent of poverty prevailing among the marginal farmers and landless agricultural labourers both under irrigated and unirrigated regions and also to find out whether the poor remain poor throughout the year or only during the off-season.

SELECTION OF THE HOUSEHOLDS

The focus of the present study is on poverty identification and levels of poverty among the marginal farmers and landless agricultural labourers. Hence, the sample households selected for the study constituted the marginal farmers and landless agricultural labourers of the selected villages. The lists of the marginal farmers (from Kodikulam
and Sengottai) and landless agricultural labourers (from Alanganallur and Kalvarpatty) were obtained from the Village Administrative Officers of the villages concerned. The lists consisted of 879 households of both the marginal farmers (412) and landless agricultural labourers (467). Out of the total 879 households, 400 households were chosen by applying Stratified, Disproportionate Sampling Method resulting in 200 marginal farmers from two locations and 200 landless agricultural labourers from the other two locations. It has to be noted that the irrigated (canal) sample areas of Kodikulam and Alanganallur as well as the two unirrigated areas of Sengottai and Kalvarpatty are homogeneous.

The total number of households, the selected households and the percentage of sampling are shown in Tables 3.1.A and 3.I.B.
Total Number of Marginal Farmer and Landless Agricultural Labour Households
(4 Villages)
(879)

No. of Households in the Irrigated 2 Villages (460)

- Number of Marginal Farmer Households (210)
  - Selected Marginal Farmer Households (100)

- Number of Landless Agri. Labour Households (250)
  - Selected Landless Agri. Labour Households (100)

No. of Households in the Unirrigated 2 Villages (419)

- Number of Marginal Farmer Households (202)
  - Selected Marginal Farmer Households (100)

- Number of Landless Agri. Labour Households (217)
  - Selected Landless Agri. Labour Households (100)

SAMPLE SIZE
400
Table 3.1.B

SELECTION OF HOUSEHOLDS

<table>
<thead>
<tr>
<th>Tracks</th>
<th>Name of the Selected Villages</th>
<th>Total No. of Households</th>
<th>Selected Households</th>
<th>Percentage of Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Irrigated tracts</td>
<td>1. Kodikulam</td>
<td>210</td>
<td>- 100</td>
<td>- 47.61</td>
</tr>
<tr>
<td></td>
<td>2. Alanganallur</td>
<td>-</td>
<td>250</td>
<td>- 40.00</td>
</tr>
<tr>
<td>Unirrigated tracts</td>
<td>3. Sengottai</td>
<td>202</td>
<td>- 100</td>
<td>- 49.50</td>
</tr>
<tr>
<td></td>
<td>4. Kalvarpatty</td>
<td>-</td>
<td>217</td>
<td>- 46.08</td>
</tr>
</tbody>
</table>

|                |                                | 412                     | 467                 | 200                 | 200 | 48.54 | 42.82 |

(From each stratum an equal number of samples are drawn resulting in a sample size of 400; 200 from irrigated area and 200 from unirrigated area; Again subdivided into 100 MF and 100 LAL in each one of the groups)

M.F, Marginal Farmers

L.A.L. - Landless Agricultural Labourers
METHOD OF DATA COLLECTION

The information for the study has been gathered from the selected households in respective villages by personal interview using a pretested interview schedule consisting of questions related to the socio-economic profile and living conditions of the selected households. The head of the households provided the data from memory as they are generally not in the habit of keeping records. However, the recall bias could only be minimum since the data collected pertained to the month prior to the month of survey.

TOOLS FOR ANALYSIS

The data compiled from both the primary and secondary sources have been analysed and interpreted by using (i) 'ratio' to assess earner-dependent ratio, (ii) 'average' to assess family size, land holding, annual income, earning members of the families, value of livestock owned and the propensity of the households to consume (iii) 'percentage' to assess the size of the family, educational level, number of days of employment, consumption expenditure and value of assets and livestock of the selected households under the study. Diagramatic representations have also been made for
depicting the size of the family, the educational level of the members of the family, size of land holding, the number of days employed, the consumption expenditure and the type of houses of the selected households through bar and pie diagrams. Further, Mean, Median, Range, Standard Deviation, Co-efficient of Variations, Gini ratio and Lorenz Curve techniques have also been applied to find out the extent of income inequalities among the different categories of the sample households.

CONCEPTUALISATION

The concepts used in this study are defined in the section.

Household: Household is a family unit with a common kitchen and common accounts maintained commonly even for those employed outside.

Household Income: Household income is the earning from sources like employment in their own farm, farm wage in come through working on their fellow farmers' land, and non-farm wage income in the case of the marginal farmers, and agri-cultural and non-agricultural wages and income from live-
stock in the case of the landless agricultural labourers.

Full Employment: Full employment is a condition when the members of the family are engaged in income-earning activities for more than 320 days in an agricultural year (July to June).

Unemployment: Unemployment refers to that labour - force which is on the look out for work, but does not get it.

Poverty: Poverty is defined as a social phenomenon in which a section of the society is unable to fulfil even its basic, necessities of life. When a substantial segment of a society is deprived of the minimum level of living and continues at a bare subsistence level, that society is said to be plagued with mass poverty.

Poverty Line: The most popular approach in defining poverty is to draw a poverty line. This approach considers a person or a family poor if his/its income or means of living is less than the minimal. In the present study, the poverty line criterion provided by the Government of India in the Seventh Plan is followed and as such those families whose annual family income amounts to less than Rs.6400 are con-
sidered to be below the poverty line.

Levels of Poverty: In this study, the levels of poverty have been worked out as follows. The annual family income of the marginal farmers and landless agricultural labourers is considered as the indicator for assessing the levels of poverty. The annual income of Rs.0 to 2265, Rs.2,266 to 3500, Rs.3501 to 5000 and Rs.5001 to 6400 are considered for assessing the different levels of poverty and thus the poverty levels are fixed accordingly: (i) Destitutes, (ii) Very Very Poor, (iii) Very Poor and (iv) Poor.

Marginal Farmers: In this study, the concept 'marginal farmers' refers to those with land holdings of 2.50 acres of unirrigated land and 1.25 acres of irrigated land or below.

Landless Agricultural Labourers: According to the present study, landless agricultural labourers are those who are not in possession of land and who are engaged in and depend upon farming and non-farming activities for wages.


Irrigated Condition: Irrigated condition is defined as a condition in which there is the availability of irrigation which refers to the artificial application of water to soil for the purpose of crop production. Irrigation water is supplied to supplement the water available from rainfall and the contribution of soil moisture from surface as well as ground water.

Unirrigated Condition: In the present study, unirrigated condition is defined as a condition in which the average annual rainfall is low and is limited to 25 to 50 cm.

Agricultural Seasons: In the present study, 'Agricultural seasons' refers to the first and second seasons in agriculture. The first season is the cropping season (from July to December) and the second season is the agricultural off-season (from January to June) in the respective areas of the study.

Earner Dependent Ratio: Earner Dependent ratio is defined as the ratio of dependent members to the total number of earning members in a family.
Consumption Expenditure: Consumption expenditure is defined as the expenditure incurred on food, clothing, rent, medical, education, transport, recreation, festival, ritual, etc.

Asset: Asset is defined as the total present value of all inventories, namely, land, buildings, wells and irrigation structures, roads and fences, livestock and dead stock, including physical inventories like utensils, radio, cycle and watch, and liquid assets like jewels (gold and silver) and savings.

ARRANGEMENT OF CHAPTERS:

The First Chapter throws light on the basic concepts of poverty such as absolute poverty and relative poverty relevant to rural poverty studies of developing countries like India. Besides, it deals with poverty situations in India and strategies adopted by the Government to alleviate the same.

The Second Chapter exclusively reviews the relevant literature on poverty in India and abroad.
The Third Chapter brings out the design of the study, which includes the objectives and methodology pursued by the researcher.

The Fourth and Fifth Chapters examine the living conditions of the marginal farmers and landless agricultural labourers respectively.

The Sixth Chapter discusses the levels of poverty and the factors responsible for variation in the levels of poverty among the selected households. In addition, the income inequalities have also been assessed, using Lorenz Curve, Gini Ratio and Co-efficient of Variation.

The Seventh Chapter presents a summary of the findings of the study and recommends policy measures for poverty alleviation.

PERIOD OF STUDY

The micro level village data for the present study has been collected during the agricultural year 1989-90 i.e., from July 89 to June 90.
LIMITATIONS AND SCOPE OF THE STUDY

Limitations: The present study is confined to only one district viz. Madurai district (even though bifurcated in '85) in Tamil Nadu and covers only a limited area of four villages in that district and therefore, the results and conclusions cannot be generalised too far. The study is limited to a period of one year and hence the results of the study may not reflect a long-term trend.

The researcher has attempted to assess the levels of poverty only among the marginal farmers and landless agricultural labourers since the focus of the present study is confined to the assessment of the living conditions and levels of poverty among these categories. Accordingly it has excluded other segments like big farmers, small farmers, tenants, share croppers, non-agricultural labourers, rural artisans, rural entrepreneurs, etc.

As the study was chiefly concerned with the use of primary data, it is bestowed with certain limitations which are bound to arise in primary data collection. The data was collected through the interview method which is subjected to recall bias, but sufficient care was taken at every stage to reduce the errors through cross-checks.
Scope

The present study is a sincere attempt to assess the living conditions, poverty levels and inequality of income among the marginal farmers and landless agricultural labourers operating under different agro-situations under varying seasons. The study has also exposed the operating and deciding indicators of poverty prevailing at the micro level. On the basis of the results of the study, suitable policy measures have been suggested for the alleviation of rural poverty.

PROFILE OF THE STUDY AREA

In this section, an attempt has been made to examine the conditions of the study area, namely the unbifurcated Madurai District. A brief outline of the profile of the selected four blocks, namely, Madurai East, Alanganallur, Nilakottai and Vedasandur is given along with the profile of the selected four villages of these four blocks, namely, Kodikulam, Alanganallur, Sengottai and Kalvarpatty respectively.
MADURAI DISTRICT

Madurai District lies on the Eastern of Western Ghats between 9°30' and 10°50' Northern latitude on 77°10' and 78°30' Eastern longitude. The district covers an area of 12,624 sq.km. The climate of the district on the whole is hot, dry and variable. The South West Monsoon (October-December) brings an annual average rainfall of 875 mm to the district. The district headquarters is Madurai, popularly known as the city of Temples and Festivals.

Madurai, being one of the largest districts, comprises of 13 taluks and 34 Community Development Blocks. The district is divided into four revenue divisions, namely Madurai, Dindigul, Periyakulam and Usilampatti.

The total population as per 1981 census was 43,99,069, of which the rural population was 33,54,463 (76.25 per cent) and the urban population was 9,40,009 (21.39 per cent). Of the total population, Scheduled Castes/Tribes numbered 5,75,971 (13.09 per cent).

The major types of soil found in the districts are black and red. Of the total reporting area of 12,92,477 hectares, the net cultivated area is 7,70,588 hectares and 69.43 per cent of the holdings are upto 2 hectares. Paddy
is cultivated extensively; the other crops grown are cholam, cumbu, sugarcane, cotton, groundnut, banana and sericulture. The Vaigai is the most important river and parallel to it on the west is the Suruli. Canals, tanks and wells are the other sources of irrigation.

MADURAI EAST BLOCK – KODIKULAM

Kodikulam village is located at the foothills of Yana-malai in the Kodikulam panchayat of Madurai East Block and is very close to Madurai-Madras main road. The Block lies between 9 31'N and 10 15' North latitude and 70 10'N to 78 31' East longitude. The block has an area of 75.56 sq. miles. The Vaigai forms the southern border of this block, and is a source of irrigation to this block. Kodikulam also comes under the catchment area of a canal from the Vaigai, namely the Periyar canal.

The Madurai East Block has a tropical monsoon climate with four main seasons. Although this area experiences two monsoons and receives an average annual rainfall of 425 mm, the total amount of rainfall is not sufficient to undertake cultivation. So farmers in this area make use of well irrigation as well when the river is dry and the rainfall is
insufficient.

The total population of Kodikulam panchayat is 2796. There are 634 households out of which 210 households, representing 33 per cent of the total households, are marginal farmers having landholdings of less than 2.5 acres. However, the majority of the households depend upon agriculture for their livelihood.

Almost all the farmers living in this village belong to the backward class; farmers belonging to the scheduled caste are very few. The farmers in this village cultivate paddy and sugarcane as the soil in this village is clay soil and sandy loam in nature which is more suitable for the cultivation of the same. Paddy is cultivated in this village in the first the season. When compared with the district level (50.77 per cent), the block in which this village is located has 96.50 per cent of the total cropped area under paddy which is highly significant. The per capita cropped area comes around 0.20 hectare in this block.

The presence of the Madurai Agricultural College and Research Institute in this block facilitates both the farmers and the officials to get easily exposed to the scientific practices in agriculture. The Meteorological Station,
Krishi Vigyan Kendra, Model Horticultural Farm and the Agricultural Engineering Cooperative Society are also situated in this block and they help the villagers adopt scientific farm practices.

In addition to these facilities, the village has a primary school, a post office, a mini Health Centre, a branch of State Bank of India and a Primary Agricultural Cooperative Bank and Cooperative Milk Society. All these institutions help the villagers undertake agriculture and allied activities.

ALANGANALLUR BLOCK – ALANGANALLUR

Alanganallur block is situated 10 kms. away from Madurai on the northern side and Vadipatty on the eastern side. There are 36 village panchayats and a town panchayat in the block. The block has 148 revenue villages and 93 hamlets. It has a total area of 160.26 sq. kms. Alanganallur has been selected in this block for this study.

The climate of the block is normal. It has four seasons based on its climatic conditions. They are (i) dry season, (ii) wet season, (iii) South West monsoon, and (iv) North East Monsoon. The climate can be described as
sub-tropical with hot humid summer and mild winter. The mean maximum temperature is 45°C and the minimum temperature is 19°C. Rainy season lasts from June to November, but during October and November precipitation is considerably high.

The soil of Alanganallur block can be classified into two categories by its quality and character, namely alluvial and red soil. The alluvial soil is found in two thirds of the total geographical area. This soil is found along the banks of the Vaigai and its Mulliyar irrigational areas. Alanganallur village receives water from the Sathiar canal, a sub-canal of the Periyar, and it flows through the heart of the village.

Agriculture is being carried out in this block according to the availability of the river water. The Periyar canal is the major source of irrigation. The big farmers whose lands are fed by this canal cultivate paddy and sugarcane. The small farmers and those who are not able to get irrigation through the Periyar canal, cultivate paddy and sugarcane through well irrigation. The other farmers depend upon rainfall for cultivating cholam, bajra and ragi. In the Alanganallur village paddy is being cultivated in 900 acres (50 per cent of the area), and sugarcane in 800 acres.
Coconut, banana, cotton, groundnut and cumbu are the other crops being cultivated in this village.

The total population of this village is 3600. There are 500 households, out of which 250 are landless agricultural labour households. The majority of the agricultural labourers belong to the scheduled caste.

The Village has about 10 public open wells and two overhead tanks with 22 outlet taps at different parts of the village to provide protected water to the people.

The Alanganallur village has a branch post office, a primary school, a government higher secondary school, a pre-school, a veterinary hospital, a police station and a Mahila Mandram. In addition to these facilities, the village has a Primary Agricultural Cooperative Bank and a milk society which help the villagers in cultivation through financial assistance.

NILLAKOTTAI BLOCK - SENGOTTAI VILLAGE

Sengottai village is situated on the Nilakottai-Dindigul main road, 13 kms. away from Nilakottai. Nilakottai block has a negotiable climatic condition with an annual
average rainfall of 80 mm. The average temperature of this block varies between 74.8 F and 93.8 F and the climatic condition is hot in the Sengottai village with the temperature ranging between 32 C and 34.5 C. It receives an annual average rainfall ranging between 120 mm. and 240 mm. which is insignificant, when compared with the annual rainfall received by the block.

Even though black, red, red loamy and clay soils are found in this block, about 90 per cent of the soil in the village selected for the present study is of red loamy soil in nature. Regarding the irrigational sources of this block, the Vaigai flows from the west to the east, and it provides irrigation to the wet lands of some of the village panchayats in this block. The village under study depends fully upon well irrigation. This village has 30 open wells which are mainly used for irrigation purpose.

The Sengottai village has a population of 1102 with 220 households, of which 202 are marginal farmer households and the remaining 18 family households are small and big farmers. The major crops raised by the farmers in this village are paddy, cholam, coconut, cumbu, ragi, flower and onion.

Agriculture is the primary occupation of this village.
and it depends mostly upon the rainfall, and as a result both wet and dry farming are present. The village under study has a primary school and a noon meal centre. There is no daily or weekly market in this village and the nearby urban centre, namely Nilakottai is the main mandi centre.

VEDASANDUR BLOCK - KALVARPATTY

Kalavarpatty village is situated roughly 25 kms. away from Dindigul on the northern side. This village comes under the Vedasandur block which is located between 28°N 10.37 North latitude and 77.48 - 78.10' East longitude with an area of 193.80 sq. kms. The climate of this block can be described as subtropical humid summer and mild winter as the mean maximum temperature is 36.8 C in the month of April while the mean minimum is 19 C in the month of January. The rainy season lasts from June to November, but during October and November precipitation is considerably high. In this block winters are short and comparatively mild.

The Kodaganar is the only river which originates from the Kannivadi hills and flows through the western part of the block. It provides water to the tanks which are located very near to its bank. However, this river is non-perennial
and as a result, dependence on wells for irrigation is unavoidable to the farmers in this area. In this regard the village under study experiences off-season half-of-the year.

The total area of the agricultural land in the village is 1800 acres, of which 400 acres are well irrigated and the remaining 1400 acres depend upon monsoon. The agricultural land in this village has clay, red and gravel soils. Groundnut, bajra, sorghum, ragi, cotton, tobacco and paddy are the crops being cultivated in this area as the soil type is most suitable to cultivate these crops.

The population of this village is 5200. Among them 2357 are males and 2843 are females. The total number of households are 800, of which 217 households are landless agricultural labourers. They represent more than 27 percent of the total number of the households. All the households in this village belong to the scheduled caste.

Kalvarpatty village has a sub-post office, a primary school, a balwadi, a noon meal centre and a branch of Indian Overseas Bank. There is a veterinary hospital, a primary Health Centre, and a Higher Secondary School in the neighbouring village, namely Kasipalayam, from where the people of this village get their health care and educational facilities.