

### CHAPTER III

#### METHODOLOGY AND DATA SOURCES

Most of the evaluation and impact studies are conducted with the objective of assessing the socio-economic impact of development programmes/projects/schemes on the beneficiaries. These studies either adopt a 'Pre- and Post-Evaluation Approach' or a 'With and Without Approach'. While the former approach attempts to analyse the impact by comparing the conditions and status of the beneficiaries prior to receiving the benefits and after receiving the benefits, the latter attempts to capture the impact by measuring the changes in the socio-economic status of the beneficiaries, with the help of a control group which has not received the benefits of the programme or scheme. This study has adopted the pre- and post- approach as the latter approach requires comparable sample not influenced by other factors, which is difficult to find if the sample size is big is, hence the with and without approach is more suitable for conducting case studies.

As the major objectives of the study included the assesment of the impact of credit on employment, production and income of the rural borrowers who had obtained loans from the institutional sources of credit, it was thought appropriate to select the sample borrowers from a cluster of villages so as to ensure homogeniety in the agro-climatic and infrastructural conditions.

The sampling was done in three stages, first one taluka, out of the twelve talukas of the Vadodara district was selected, then 10 villages were purposively selected from the sample taluka and finally, 260 borrowers were selected for the study.

The cluster of villages selected, comprised of 10 villages with similar socio-economic and geographical conditions. They were purposively selected from the Vadodara taluka of Vadodara district in the state of Gujarat. The selected villages included 1) Varnama, 2) Raghavpura, 3) Hansapura, 4) Untiya (Mehdad), 5) Ramangamdi, 6) Por, 7) Ankhi, 8) Fajalpur (Ankhi), 9) Ramnath, and 10) Rasulpur.

The above villages were identified in consultation with the lead bank officials of the district as they had a good number of borrowal accounts. The sample borrowers included all the borroweres of each village who had obtained loans in the reference year 1986-87, from the commercial and co-opretive bank branches serving these areas. In all two hundered and sixty borrowers from these villages were selected as sample units.

As the study deals with impact of credit at the household level, the borrowers from the sample households were the respondents in our primary survey.

Questionnaire cum-interview method was used for collecting primary data from the sample borrowers. Details regarding the socio-economic characteristics of the borrower at the time of interview such as age, sex, caste, marital status and educational

status, occupation etc. were obtained. Details of loans of these borrowers such as amount of loan, purpose, tennure, rate of interest etc were also obtained.

For studying the impact of credit on employment, production and income, data was obtained for the pre-loan period (year ending march 1987) and the post-loan period (year ending march 1988). The pre-loan information was based on the memory recall of the borrower.

The economic impact of credit on the borrowers was examined using three indicators, namely, employment, production and income. The incremental values for employment, production and income were obtained by subtracting the pre-loan values from the post-loan values. All the economic activities persued by the borrower in the pre- and post-loan periods were considered for arriving at his/her additional employment, production and income.

#### Impact on Employment

The impact on employment was measured by calculating the labour hours put in by the borrower, in the post loan period and the employment of additional family labour or hired labour in the activity financed and subtracting from it the hours worked by the borrower in the pre-loan period.

The additional employment was expressed in hours instead of days because a large section of the rural poapulation is unemployed during the slack season and some times may get work

for a few hours every day; further, activities like dairying under IRDP may offer only limited hours of employment everyday. Hence, calculating additional employment in hours is much simpler and also precise.

#### Impact on Production

The impact on production was examined by computing the pre- and post-loan gross value of physical production in case of agriculture, milch cattle, and manufacturing and by obtaining the value of sales in case of petty business and self-employed persons. Some borrowers sold their produce through co-operatives while the rest sold in open market. The value of produce retained for self consumption was incorporated in the value of production. This part of the produce was valued at the same price at which the rest of the produce was sold. The value of production from all the activities pursued by the borrower was computed for the pre- and post-loan periods and the value of incremental production was obtained by subtracting the pre-loan values from the post-loan values.

#### Impact on Income

The incremental income was computed by adding the income of the loanee from all the economic activities pursued including the activity financed in the post-loan period and subtracting from it the total income of the pre-loan period. The income was arrived at by deducting the major costs and expenditures from the gross

value of production.

In case of farming, the costs include wages paid to hired labour, purchase of seeds, manure/fertilizers, insecticides and water, sharing of crop or payment in cash to the owner of land if the cultivation is done on sharing or rental basis, operational and maintenance costs of assets like expenditure on fuel etc and the cost of transportation.

For business and self employment the costs include payment of wages/salaries to employed labour, cost of raw material/inputs, purchase value of stock, major repairs and rental.

For milch cattle and other similar activities like camel carts and bullock carts, the costs include expenditure on fodder, repair of the cart, veterinary expenses and repairs of sheds etc.

For all the activities the interest paid on institutional and non-institutional loans was also deducted from the gross value of production for obtaining the net income.

The sample borrowers and loans were divided into various homogeneous groups for assessing the access to and impact of credit on borrowers. While categorising the borrowers in groups, the credit policy focus was considered such as gender, caste, poverty alleviation programmes and diversification of credit.

The sample borrowers and loans were broadly classified in five groups:

1. Sizewise classification: All the loans were divided in three size groups, small (Rs.1000-15,000), medium (Rs.15,001-30,000) and large (Rs.30,001 and above) for analysing the impact of credit on the borrowers of different loan sizes. This was considered necessary in order to determine the right quantum of loan which will generate adequate production and income levels.

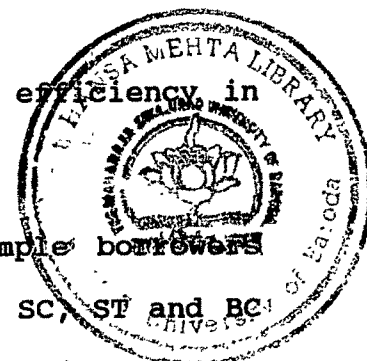
2. Activitywise clasification; The sample loans were classified according to the purpose of loan ie., activity for which the loan was obtained. Three activities were identified in this group: 1) Farming, 2) Business, and 3) Activities under IRDP. This classification was made with a view to capture the impact of credit in differnt activties by analysing the efficiency of credit use. This would help in formulation of viable schemes and reflect as to what extent diversification of credit has taken place in the rural areas. It will also throw light on the efficiency of credit under PAPS in rmoving poverty and upliftment of the target groups.

3. Genderwise classification: It includes the analysis of impact seperately on males and females for capturing any gender differences in the access, use and impact of credit.

4. Headshipwise classification; It includes the seperate analysis of the credit use and impact on male and female headed borrowres.

Women and FHHs are known to receive very small proportion of institutional credit and are covered mainly under the poverty

alleviation programmes. Hence, establishing their efficiency in credit use is very important.



5. Castewise classification: Lastly, the sample borrowers were classified into two groups: 1) borrowers from SC, ST and BC group and 2) borrowers of the general category. Separate analysis of these two groups was considered for capturing the access to credit, efficiency in credit use, and quantum of impact on these groups. As the borrowers of the former category come from the poorest of the poor class, they are target groups in poverty alleviation programmes.

The additional employment, production, and income were then used to find the incremental employment-credit, production-credit and income-credit ratios. The ratios were obtained by dividing the total incremental values in each category/group by the total credit to that group. The percent shares of each group in credit, additional employment, production and income were also obtained to have an idea of the group's access to credit and the relative impact on the borrower/category. The corresponding averages for all the groups were also obtained in order to assess quantitative changes in all the above variables for determining the impact of credit on classified groups.

Simple statistical techniques such as averages, ratios and percentages were used for analysing the data and establishing the relationship between credit incremental employment, production and income in the various categories.

## Data Sources

As stated earlier this study is based on a primary survey of the borrowers for analysing the impact of credit on them. The relevant information regarding the loans to the borrowers such as purpose, amount, tenure, rate of interest was collected from the borrowers and cross-checked with concerned bank branches of the Bank of Baroda and primary agricultural credit society serving the sample villages. Information regarding landsize and production data was obtained from the borrower but was cross checked with the records of the respective Gram Panchayat of each village. The demographic and other characteristics of the sample borrowers were obtained from the Gram Panchayat records and the District Census Handbook. The demographic data of the sample district, taluka and village was obtained from the District Census Handbook and the Statistics Branch of Vadodara District Panchayat.

A structured questionnaire was used for collecting the information. The borrowers were administered the questionnaire through personal visits to them. The questionnaire is given in appendix I.