

## CHAPTER II

### LITERATURE REVIEW

Extensive library search revealed that there are very few scientifically conducted studies on the impact of credit at the household level. Some selected studies are reviewed in this chapter with a view to examine the methodologies followed and for providing a background to our study. The literature analysis provided an insight into the problem under reference and guided us in the selection of impact indicators.

Most of the studies used sample data for measuring the impact of credit. In each study different impact indicators were used viz. income, production, employment etc. Data was mostly collected by structured-questionnaire-cum interview method. Two methods were adopted for estimating the impact indicators. First, the "pre-and post-loan approach", where the variables (income etc) in a pre-loan year are estimated by the memory recall method and the post-loan variables are estimated in the year of data collection for arriving at the incremental values. Usually a time lag of one or two years is allowed for the income effect of credit to work out. Second, the with and without approach, which permits differential indicators to be estimated at a point of time between the observation groups which has received credit and another group which has not received credit. Both these methods have limitations, but the former is more popular than the latter, in spite of the fact that the pre-loan estimates are not very

accurate due to memory lapse. Whereas in the second method there is a problem of identifying two groups of borrowers and non-borrowers having exactly similar socio-economic characteristics and activities.

Income is the most commonly used indicator of credit impact. Though, it is difficult to estimate, almost all studies have chosen it. It is a comprehensive indicator which reflects the overall impact on production value, income and employment generation. It also serves as a proxy for the standard of living of the borrower. The problem usually lies in arriving at accurate cost estimates as the respondents are usually not literate and often do not maintain regular accounts. Yet in the case of PAPs this indicator has special relevance as the main objective is to enable the beneficiaries to cross the poverty line. Hence, all the studies undertaken by financial institutions and the government for evaluating the performance of PAPs invariably use the income indicator.

Incremental production turns out to be the next important indicator. This is easier to estimate as the data furnished is more dependable since it is easily recalled by the respondents.

Employment generation from incremental income is the third indicator. It has a special relevance particularly in the case of PAPs as erradication of unemployment is one of the primary objectives.

Change in consumption pattern and levels is the fourth indicator. Usually changes in the level of consumption of selected important articles are observed and recorded by scaling method. In case of studies focussing on women, changes in self-esteem and social status are also examined.

The following analysis of studies include those of general credit programmes and those with special focus on PAPs. Most of the studies are conducted by researchers and scholars for academic perusits, but a few all-India studies are supported by financial institutions like NABARD. All of them have policy implications which help policy-makers and decision takers to make changes for better achievements in terms of development and human welfare.

#### Ground Observations

Majority of studies have reported that the impact of credit on borrowers has been positive and favourable. However, the impact on relatively more resourceful persons has been better than on the poorer ones. The progress in terms of the poor crossing the poverty line has not been satisfactory and much less sustained. The poor had also much less access to credit compared to the rich. Particularly, the very poor were totally left out, even from the PAPs orbit.

The studies indicated that women, who are discriminated, deprived and impoversihed compared to men, had very little access to formal credit. PAPs had little better coverage of women. In

case of women, the activities financed were mostly traditional ones which were female stereotyped. Average size of loans was smaller and impact of credit usually less favourable when compared to men. Some notable findings, which have policy relevance are: a) compared to men, women were better and more regular in loan repayment; (b) all the loan amount was put to the allocated use; (c) incremental income from credit intervention was fully used by women for family consumption whereas, men often frittered it away on alcohol, etc.

Demographic data indicates that the number and proportion of female headed households (FHHs) is rising in India. Our literature review indicates that FHHs had very little access to credit and the impact of loans is much lower on them. FHHs are special class of borrowers who need attention and special credit intervention schemes for reaching out to them.

The studies also indicated that besides gender literacy, higher social and caste status and wealth were positive factors affecting both access to and impact of credit. Conversely, illiterates or those having very little education, those belonging to scheduled castes, scheduled tribes, other backward classes and the poor had relatively lower access to credit and the impact of credit on them is also very low.

### Studies Reviewd

A.Mohuddin and C.H.Prasad (1982) studied the impact of Integrated Rural Development Programme (IRDP) and Development of Women And Childeren In Rural Areas (DWCRA) on women beneficiaries, in four states. Their study aimed at assessing the impact of these programmes on the socio-economic status of women and measuring the extent to which these women utilized the benefits of these programmes.

A sample of four hundred women beneficiaries was drawn from the four states of Bihar, Manipur, Rajasthan and Tamil Nadu. The relavent information was collected through a pre tested schedule.

The findings of the study revealed that a large percentage of beneficiaries were in the agriculture sector. A higher percentage of IRDP beneficiaries belonged to forward communities while majority of DWCRA beneficiaries belonged to SC and ST. A high percentage of SC and ST beneficiaries opted for forest-and animal husbandary-based schemes while forward class women chose household based activities.

A majority of the beneficiaries were financed by the commercial banks, a few by RRBs and the role of co- operatives was only marginal. Most of the women (a more than half) beneficiaries preferred to obtaian loans from commercial banks in spite of the higher rates of interest.

This is chiefly because of the easy accessibility due to large number of commercial bank branches. Secondly, commercial banks offered a wider variety of schemes.

The impact of both IRDP and DWCRA on the economic status of the beneficiaries was positive but was less favourable in case of DWCRA. The impact of training was favourable for both the programmes. Women preferred IRDP for linkage aspects and benefitted mainly from inputs supply system. Marketing was a general problem for both IRDP and DWCRA beneficiaries but was more crucial for the latter. The majority of the assets provided under IRDP were found to be intact. Prompt repayment was a very steady feature with most of the women beneficiaries of both IRDP and DWCRA. Most of them repaid the loans from the income generated by the assets financed.

Mahabub Hossain (1983) studied the impact of credit provided under the Grameen Bank Project. (The project is a specialised credit programme for the landless and poor women in Bangladesh.) Its exemplary performance has been universally acclaimed. Further this credit intervention model has been replicated in parts of the world. Hence we considered it relevant to our study. The study is based on data and information collected on various aspects of the impact of the credit programme from six hundred randomly selected loanee households through structured interviews.

About 68 percent of the loanees did not own land and only 5 percent owned more than 40 decimals, hence land was not an

important source of income for majority of the loanees. Very few of the loanees had sizable amount of non land assets and about 62 percent had assets valued upto Tk.1000 only. Hence loanees were not only land poor but in general were resource poor.

The GBP project tests the hypothesis that "If financial resources can be made available to the poor at reasonable terms and conditions they can generate productive self employment without any external assistance." (qtd. in Hossain Mahabub 1983: pp 4) The extended credit was used for pursuing a large number of non crop activities i.e. petty trade, cottage industry and livestock farming as at the time of application, 65 percent of the female members did not have any productive employment. The corresponding percentage for males was 2.5. About 52 percent of the loanees reported per capita income below Tk.1000 at the time of loan application. The impact of the project is such that .pa this number was reduced to 23 percent in the post loan period. On the other hand, the percent of members who had more than Tk.2000 per capita income increased from 5 to 34. The average per capita of the loanee households is estimated to have increased over a two and a half year period by about 68 percent in monetary terms and by 35 percent in real terms after discounting for the increase in the consumer price index.

It was found that with every repeat loan, the average loan size increased, but the income increased at a much smaller rate than the increase in the amount of loan. This may be because once the loanee was fully employed, the marginal rate of return from

credit fell rapidly.

For assessing the impact of the project on the consumption pattern of the loanees, the members were classified in groups according to the size of the loan taken. The information on consumption of food items was collected on a weekly basis for three weeks and the annual expenditure was estimated from the three weekly averages. Annual expenditure on non-food items was collected through a shot survey.

The findings of the study revealed that the size of the loan had a direct bearing on post-loan cereal consumption. The impact of GBP on per capita income expenditure on cloth, health and other non-food items was much higher than that on the cereal consumption.

The project also had a sizeable impact on capital formation and construction of houses. Information on the average household's expenditure on materials for house construction and investment on various capital items revealed that the large size loanee households invested about two-thirds more on house construction/ repair and about 1.5 times more on other capital items compared to the small size loanee households. The investments of the medium size loanee households on these items were also higher as compared to small size loanees.

The loan recovery performance was excellent. Considering a two year repayment period, the percentage of overdues after the first year was only 6 percent and almost nil two years after loan distribution. It was found that the female loanees had a better



repayment record than the male loanees, 98.4 percent of the loans were fully repaid within one year as compared to the 96.8 percent for male loanees.

Mahabub Hossain (1984) studied the impact of Grameen Bank's credit programme on employment, productivity and income of poor women in Bangladesh. The primary data was collected from 612 randomly selected loanees during 1982-83 and the secondary data was collected from the monthly statements and annual reports of the Grameen bank.

About 54 per cent of the GB loanees were women and they received 42 percent of the total loans disbursed to all members. The different activities for which loans were extended were grouped under five broad sectors; 1) agriculture, 2) forestry, 3) livestock and fisheries, 4) processing and manufacturing, 5) trading, shopkeeping and transport services. The major proportion of loan went to livestock sector followed by processing and manufacturing sector. Women took loans largely for non-farm activities.

Those who reported having no previous occupation at the time of loan application were only 2.5 percent among the male applicants but about 65 percent among the women.

Information collected on time allocated by workers in the loanee households to different productive activities revealed that female workers devoted on an average about 28 hours per week for income earning activities most of it on account of self-

employment compared to about 44 hours for the male workers. Thus the intensity of productive work put in by women was about 35 percent lesser than that of men. Nearly a quarter of the men's employment was generated outside the family which the women cannot avail of because of socio-religious factors.

About 85 percent of the employment for women was generated in activities which the Grameen Bank financed. Of which, about 52 percent was in cottage industries and 20 percent in livestock raising. About 74 percent of the male loanees worked in activities not financed by the Grameen Bank and only 55 percent of their labour time was devoted to activities for which loans were taken. Hence the GB contributed much more to employment generation for poor women as compared to men.

The net return to households was estimated by deducting the cost of credit from the annual gross income from these activities. The labour productivity was obtained by dividing the net income by the number of labour hours put in by all the members of each household during the year. Though the net income was reported to be positive, the labour productivity was reported to be extremely low for most of these activities. Only in 4 out of 7 activities the labour productivity was found to be higher than the wage rate.

The rate of return on capital was estimated by deducting the imputed cost of family labour from gross annual income and expressing it as a percent of the loan. When the agricultural wage rate was used for imputing family labour the rate of return

was found to be higher than the effective rate of interest on the Grameen Bank loan, only in a few of the activities and was found to be negative in the rest.

For determining the actual rate of return on investment in activities undertaken by women and for comparing it with the male counterparts, those cases were picked up where only female members took loans from the Grameen Bank and the rate of return on labour and credit was estimated and compared with those households with only male loanees. The labour productivity in case of female loanees was Tk.1.31 per hour, about 41 percent lower than that for the male loanees. The reason is because of the socio-religious factors most of the women are not available for work outside their residence, which agricultural employment demands, except in post-harvest operations.

The average annual income of the women loanee household was about 13 percent less compared to the male loanee households and about 25 percent less compared to households in which both male and female members have taken loans.

The income earned by GB loans was estimated from the difference in income earned from the above three sources between households with only male loanees and households with both male and female loanees. The difference is 37 per cent higher than the income earned by the male loanee households from these sources.

With regard to clothing, health, and education the condition of women borrower households was better as compared to male borrower households. Only with respect to housing the male member

households had invested more but the proportion of households incurring such investment was more among the women borrower households.

Compared to male loanees the repayment performance of women was better. About 81 percent of female member had no overdue instalments. In case of males the corresponding percentage was 77. Repayment was found to be more regular in manufacturing and processing activities than in the live stock sector. This may be due to irregular flow of income from live stock raising and in some cases owing to the death of the animal purchased with the loan.

Shahidur R. Khandker and Binswanger (1989) estimated the output, investment, employment and wage effect of institutional credit using district level panel data from 85 districts of India for a period of 9 years beginning from 1972-73 to 1980-81.

The study revealed that institutional credit had a positive effect on both the fertilizer demand and aggregate output. The Hausman-Wu test suggested that the fixed effects procedure is appropriate for explaining variations in both the fertilizer demand and output supply over time. A 10 percent rise in the formal credit lead to almost 3 percent increase in fertilizer consumption and only 0.2 percent in aggregate crop output. Hence the output effect of credit was fairly low.

The Hausman-Wu test indicated that the random effects model is more appropriate than the fixed effects in the private investment over time. Institutional credit has an overwhelming

effect on all types of private agricultural investment. A 10 percent increase in the amount of institutional credit advanced raised private investment in irrigation pumps by 4 percent, 6 percent in milk animals, about 5 percent in draft animals and almost 7 percent in sheep and goats. The credit effect of investment was thus much higher than its effect on fertilizer use and aggregate crop output. The Hausman-Wu test confirms that the random effect model is more appropriate than the fixed effect model in explaining variations in employment and wage over time.

A 10 percent increase in institutional credit increased non-farm employment by almost 18 percent, while reducing farm employment by only 0.4 percent and consequently, increased agricultural real wage by 0.4 percent. The aggregate crop output price increased both the farm and rural non-farm employment and hence, the real wages in agriculture.

More bank branches and more credit for either agricultural or nonagricultural purposes increased agricultural output with an elasticity of about 0.02, and fertilizer use with an elasticity in the range of 0.1-0.3. Although the co-operatives seemed to have no significant effect on rural employment and wages, commercial bank branches and rural credit had significant impact on these outcomes.

Econometric estimates suggested that formal credit played an important role in fertilizer demand, private fixed investment, crop output, farm- and non-farm employment and agricultural real wages. A 10 percent increase in the formal credit supply

increased fertilizer use by almost 3 percent. A similar percentage increase in the supply of institutional credit spurred a 4 percent increase in private investment in irrigation pumps, 5 percent each in draft animals, 6 percent in milk animals, and about 7 percent in small stocks. In contrast, a 10 percent increase in formal credit supply increased aggregate crop output by only 0.2 percent. Hence compared to the credit effect of investment and fertilizer demand, the effect on crop output appears to be fairly small.

A 10 percent increase in the formal credit reduced agricultural employment by 0.4 percent. However, institutional credit had a modest positive effect on agricultural real wage. This is because it had created more jobs in the rural non-farm activities than it had reduced in agriculture.

The study found that the formal credit expansion in rural India, therefore, has had a major effect on rural non-farm sector and a modest effect on agriculture despite directed policy to increase formal credit supply to agriculture.

Feder Lau and Lin (1991) studied the economic effect of credit on output supply in North-East China. They recognised that credit transactions are not necessarily in equilibrium at the household level. That is, the amount of credit desired and the amount offered are not necessarily equal: credit supply rationing, with unsatisfied demand and non borrowing, while supply is potentially available, are both possible. Only about 37

percent of the farmers in the study area were constrained by inadequate formal credit. Informal credit sources provided funds for specific non agricultural activities that were not tangible.

The analysis utilized cross sectional household level data from a study area in North-East China. Two hundred households with main activity as agriculture were randomly selected from eight randomly selected townships. Information was collected regarding inputs, outputs, financial assets, credit transactions and household characteristics.

The data revealed that nearly three quarters of the sample borrowed from formal sources, the rural credit co-operatives (RCCs) during the period of study. The frequency of informal credit transactions was much lower than that of formal transactions (about one fifth of the sample, and three quarters of these loans were provided free of interest obtained mostly from relatives and friends. Given the significant differential between the rates of interest on the two types of loans, this may be taken as evidence that informal credit is not a good substitute for formal credit, otherwise every borrower would exhaust his or her informal credit first before going to the RCC. The share of formal credit in the total volume of new credit was 66.5 percent.

The results indicated that (i) the supply of output was not affected by the level of liquidity, including credit, the size of the household's own family labour force or the size of the household; (ii) however, output supply was positively affected by

increase in liquidity (e.g. increased credit supply) and in the household's labour endowment.

The results revealed that one additional yuan of liquidity (credit) yielded 0.235 yuan of additional gross value of output. Estimated coefficients indicated that if every credit-constrained household in the sample was given an additional credit of 17.82 yuan (equal to 1 percent of the average level of liquidity of the credit constrained households), the total output of these households may be projected to increase by 201.08 yuan, or approximately 0.04 percent of the total output. Thus, on an average, one additional yuan of liquidity (credit) yielded  $201.08 / (17.82 \times 48) = 0.235$  yuan of additional gross value of output.

Also a significant proportion of the short term credit provided by the rural credit co-operatives as 'production credit' may actually be utilized for consumption and investment (medium and long term credit is nil in the study area). Another study by Feder et al. (1990b) finds that the diversion of short term credit for farm investment was about 40 percent for an average household in the study area. This in turn, implies that more than one-third of the formal credit was utilized for consumption, either on consumption goods or durables.

The results of the study highlight two important factors which should be considered while evaluating the likely impact of agricultural credit expansion: (1) Not all farmers, and sometimes only a minority, are constrained in their farming operations by inadequate credit, (ii) expanded supply of formal credit will be



diverted in part to consumption, thus the likely output effect will be smaller than that which is expected when all funds are assumed to be used productively. These ideas have been propounded by the Ohio state school critics of credit supply-led development schemes.

V.K. Bhargava (1974) conducted a study to examine the factors underlying the growth of small farms and to analyze the effect of publicly supported credit programmes (PSCPs) on them under different financial behavior assumptions. Data was collected from an agro economic survey of farmers for the year 1969-70 in two regions of U.P. in India. Of the two regions one was more developed and the other a less developed region. The two regions also differed in agro-climatic conditions. The survey covered 300 farms of varying size of land holdings.

A cluster of sixteen villages in the two regions formed the first stratum; the second stratum comprised of five groups of farms differentiated by area and size. The individual farms were selected by random numbers. Extensive information was collected on production, marketing, consumption and financial aspects of small farm operation. Credit-use information was given by source and purpose.

The study aimed at assessing the impact of 13 independent variables which were the major factor inputs in the production process of the of the small farmers. The impact was also examined with reference to sale of farm produce and value of farm produce consumed.

The study used income as a measure of economic growth. Income of the small farmers from the following sources were considered ; (i) Income from sale of farm produce, (ii) income in the form of the value of farm produce consumed, (iii) income from off-farm employment, and (iv) income from the sale of farm assets.

Multiple regression analysis was used to identify the relationship between these broad factors and the small farm income. In view of the small sample size, detailed information was collected on each sample case and principal component analysis was used to identify the relationships in the available data and to reduce the large number of variables to a smaller set of composite variables. This method also helped conserve degrees of freedom for further analysis. Composite variables (factor constructs) obtained from the principal component analysis were used as the independent variables in the regression analysis. Income was the dependent variable.

Three variations of the basic model were analyzed using three types of income as the dependent variable. The three incomes were: (a) net income from the sale of farm produce, (b) the value of farm produce consumed, and (c) total income. Some of the important variables are mentioned here: Household consumption, operational expenditure, land ownership pattern, area sown, irrigated area, crop yield, and borrowings for productive purposes.

The following are the major findings of the study Firstly, the availability of less costly source of credit i.e. publicly supported credit programmes (PSCP) resulted in substitution of borrowings by small farmers from the money lenders. In a few cases the borrowers of PSCPS completely stopped borrowings of credit from money lender.

Secondly, it was noticed that there was a reduction in the amount borrowed from the PSCP while the net cash income increased. Thirdly, the effect of PSCP replacing money lenders was dual and as the interest payment as well as the aggregate borrowings declined due to release of owned funds for use.

Fourthly, PSCP credit amount varied inversely with cash supply for the farm suggesting that several farms with low cash positions were more dependent on borrowings.

Lastly, a substantial increase in income was reported in case of small farmers borrowing from PSCP. The incremental income ranged from 56 percent to 100 percent for various categories. The most notable finding of the study was that when the PSCP was considered a temporary factor its share in total credit ranged from 35 percent to 46 percent of total borrowings.

Desai and Tambad (1973) conducted a study to determine the impact of agricultural finance provided by Syndicate Bank on agricultural productivity and to find out the income utilization by farmers in India.

Data was collected from 156 participants out of the total number of 1296 participants who had borrowed during the year 1967-68, from 12 selected branches of the Syndicate Bank in four regions of India namely South Kanara, Ghataprabha, Tungabhadra, Bidar and other some areas. The branches were selected according to the probability proportion to number of participants in each region. From each selected branch 12 participants were selected randomly from the list of the participants in the agricultural finance scheme of the branch. The matching sample of non-participants was selected on the basis of the farm size of the participants in a particular village within the jurisdiction of the branch selected.

Seperate schedules were developed for participants and non participants. Details regarding cropping pattern, levels of inputs and outputs, disposal of produce, utilization of farm income and attitude towards borrowing were collected.

The impact of the agricultural finance extended by the Syndicate Bank was measured in two ways (i) in cases where it was assumed that the farmers had no source of finance and the credit obtained from the bank was a net addition to the resources of the farmer the productivity was measured in terms of incremental production due to the utilization of the additional financial resources provided by the bank and (ii) in cases where it was assumed that the farmers could obtain finances from sources other than the Syndicate Bank either at same cost or higher cost, the study attempted to find out the increase in productivity due to

credit provided by the commercial banks vis-a-vis other sources of finance either owned or borrowed.

The working hypothesis of the study was that "The value of farm production was higher for group of farmers who had borrowed from the Syndicate Bank than those who had not borrowed from the Syndicate Bank but belonged to the matching sample."

(Desai and Timbad 1973: pp. 8) This was obtained by estimating the value of farm production as a function of cash and kind expenditure assuming other variables in 'ceteris paribus' condition and more or less equal in case of participants and non participants.

The paired t-test for the participants and the corresponding non-participants with respect to age and family size indicated that there were no significant differences. The distribution of participants and non-participants according to the educational level indicated that the percentage of illiteracy was as low as 7.52 percent. About 87.22 percent farmers had primary or secondary education. The average size of holding of the participants was 11.37 acres for participants and that of the non-participants was 9.40 acres for non participants.

Production function approach was used to find for knowing whether the agricultural productivity of participants was different from that of non-participants. A Cobb-Douglas production function was fitted separately to the data pertaining to participants and non-participants. The results showed that the regression coefficients of both the functions were less than

unity indicating diminishing returns to scale.

The paired t-test for the estimated value of farm production per acre of gross cropped area for participants and non-participants showed no significant difference.

It appeared that the loans advanced by Syndicate Bank did not increase the productivity of farms of participants vis-a-vis the non-participants. This leads to the conclusion that the crop production loans of the Syndicate Bank were replacing the finance obtained from other sources or farmer's own funds without creating any substantial impact.

The loan utilization by the borrowers indicated that nearly 80 percent of the production loans were utilized for purchase of fertilizers and manure. Of the total agricultural loans, about 72 percent were pump set loans. Among the land improvement loans more than 50 percent were used for digging and construction of wells. A production function of the Cobb Douglas type was fitted to the data of 21 participants with value of farm production as the dependent variable and cash and kind expenditure as independent variable. The marginal value product of cash and kind expenditure at its geometric mean level worked out to Rs. 1.75 indicating that every rupee of investment in cash and kind expenditure would result in Rs.1.7 of the value of farm production

The Income utilization pattern indicated that participants were utilizing about 65 percent and non participants about 50

percent of their income on agricultural production. Item wise expenditure on agricultural production indicated that the important items of expenditure of participants and non-participants were (1) crop production (2) pump-set and (3) land improvement.

The investment patterns of participants and non-participants indicated that investments in sources other than agriculture included shares and saving certificates.

The relationship between the size of holdings and the lending agency revealed that banks had advanced loans to about 36 percent of the farmers having less than five acres as against 16 percent of the farmers having less than five acres, who were advanced loans by co-operatives. The main reason why these farmers did not avail themselves of the credit from the co-operatives: were the procedural delays in processing of loan applications and the delayed disbursement of loans by the co-operatives.

Chawla O.P., Patel and Shete (1983) undertook a study to evaluate the socio-economic impact of the Differential Rate Of Interest Scheme (DRI) on the borrowers under the scheme and to analyse their repayment behaviour. The study provided some useful findings having policy implications. It also provides some important all-India data on impact of credit.

Data for the study was collected by conducting a primary survey and collecting the relevant information through questionnaire cum interview method. The information related to

borrowers of 72 selected branches of 18 banks in 34 districts of India. The analysed data related to 4299 borrowers from 16 states of the country. The selected districts were divided into groups: one group which better endowed in terms of resources and where the DRI scheme had a successful performance, the other group comprised of the backward districts.

The findings of the study revealed that small business was the single most important activity, followed by Dairy. As a group agriculture and allied activities were the most important occupational sectors. Of the total loans extended 62 percent were term loans and 30 percent were working capital loans. 31 percent of the loans were in the range of Rs. 501-1500, 23 percent in Rs. 201-500 and 13 percent in Rs. 1501-2000. 26 percent of the loans had loan terms between 7 to 12 months and 25 percent between 19 to 24. Term loans up to 36 months constituted upto 78 percent of the total loans.

The findings revealed that in case of a large number of accounts, the amount needed for a particular purpose/scheme was mismatched with the term and periodicity fixed for the repayment of the loan. At the time of study more one half of loans outstanding were overdue. 30 percent of total borrowal accounts were closed on full repayment, only 6 percent of total borrowers has regular accounts.

Repayments by small business borrowers were better than by other groups, repayments were also better in loan amounts ranging between Rs.201-2000. Repayment behaviour of subsidiary recipients



was worse than of those who did not receive subsidy. Lending for terms of 13 to 16 months resulted in better repayment than lending for shorter or longer terms.

An important conclusion of the study is that to improve the impact and the repayment performance, the scattered lending in small places should be replaced by the development of appropriate credit scoring models to appraise large number of borrowers and clustered lending by specialised bank branches.

The impact analysis revealed that there were changes in the occupational patterns of the borrowers all types of activities, however changes in the small business, agriculture, agricultural labour and service were most significant. Maximum number of borrowers shifted away from agriculture and agricultural labour and more borrowers joined the service and the transport sector than any other occupation.

About 37 percent of the borrower families recorded a positive change in their employment status. About 58 percent of the borrowers recorded a positive change in the value of their assets and shifted to higher asset brackets. 72 percent of the borrowers registered a positive change in their income in the post-loan period while 42 percent registered a decline. Most positive changes were recorded in the income brackets between Rs.501 - 3000.

An analysis of the use of the incremental income revealed that majority of the borrowers predominantly used the incremental

income for obtaining better food and better clothing followed by improvement in house and purchase of household assets. Some borrowers started sending their children to school and a small number invested small amounts in post office/bank savings accounts. About 68 percent of the borrowers did not record any change in savings, 24 percent recorded a positive change and 8 percent registered a negative change.

The non DRI debt position showed that in the post loan period the number of loans from all other sources registered a decline and loans from the money lenders were reduced by more than one-half.

Data on change in social status of the borrowers revealed that about 58 percent felt that the loan had brought about a change in their social status, 25 percent of the borrowers did not feel any change in their social status and 17 percent were not able to respond. The percentage of borrowers who reported better social status was higher for those who had experienced a positive change in their incomes. Also a higher percentage of borrowers who had secured a loan of 500 or less and those who had used the the loan for intended purpose rather than on consumption or social ceremonies reported a positive change in their social status.

The National Bank For Agriculture and Rural Development (NABARD) undertook a departmental study (1984) to examine the various aspects of the implementation of the Integrated Rural Developmental Programme (IRDP) in different states of India and

to evaluate the programme's impact on the beneficiaries. This is one of the few studies which provided us with some important analytical insight into our study.

The study covered 15 states of the country. From each state two districts were selected, one each from two important agroclimatic zones in the state. From each selected district two development blocks were selected, one with good performance and the other with poor performance in the implementation of IRDP. In all, the study covered 1498 beneficiaries of IRDP.

Data for the study was collected through 122 branches of the financing banks, of which the branches of commercial banks, co-operative banks (including LDBs) and RRBs were 78, 25, and 19 respectively. The branches of the financing banks were selected on the basis of their participation in financing IRDP in their concerned blocks.

The findings of the study revealed that the average post-loan income per beneficiary was Rs.3538. It ranged from Rs.2550 in Rajasthan to Rs.4957 in Punjab. It was higher than the poverty line income of Rs.3500 in six states, about the same in 3 states and less than poverty line income in the remaining six states. The average post-loan incremental income per beneficiary was Rs.1616, which represented an increase of 82 percent over the pre-loan income. It varied from Rs. 717 in Assam to Rs. 2502 in Maharashtra. The higher post-loan incremental income in some states could be attributed to relatively higher pre-loan income

levels and or substantial increase in the post-loan income realised from investments under IRDP.

Out of the 1195 beneficiaries 10 percent did not accrue any incremental income on account of non-functional status of their assets or due to inadequate investments. Those states with low post-loan incremental income had relatively greater concentration in financing of animal husbandry schemes in general and dairy schemes in particular. Most of the beneficiaries financed for dairy reported low milk yield due to poor quality of milch cattle supplied to them. In most cases the beneficiaries reported irregular flow of income due to the animal turning dry. Lack of marketing in some blocks also adversely affected the returns. Sometimes poor maintenance of cattle, particularly in case of landless agricultural labourers resulted in low yields.

Similarly in some states the sheep/goat units yielded low incremental income due to high mortality rate which was due to lack of veterinary care. Financing of inadequate unit size was also reported in a number of cases.

Income generation was better for minor irrigation in all states. In case of ISB sector, the income generation was of varied nature and was greatly affected by adequacy or inadequacy of local demand, in case of petty business like beedi-making, vegetables, grocery etc, inadequacy of demand resulted in poor income generation while income generation was better in demand based activities like ornaments making, handloom, tailoring etc.

Selection of investment portfolios without regard to local resource potential, lack of marketing arrangements and other infrastructural facilities, were some of the other causes of low incremental income of the beneficiaries in some states.

The additional income was sustainable in case of minor irrigation, but was not sustainable in case of animal husbandry schemes in general and milch cattle in particular. Activities under ISB could sustain additional income only if working capital support was provided to the units.

As most of the assets provided under IRDP were labour intensive, they mostly resulted in creation of additional employment in the reference year. It was 120 man days per beneficiary in case of minor irrigation investments, 109 man days from dairy, 163 man days from sheep/goat units, 134 mandays from petty business activities, 217 man days from tailoring, 151 man days for rural artisans and 136 mandays for handloom units.

The analysis of the repayment performance of the beneficiaries revealed that the year-wise overdues to demand for all 62 branches declined from 43 percent to 31 percent over a 3 year period (1980-81 to 1982-83), this was mainly due to recovery efforts made by the banks. The recovery was consistently better in case of commercial bank branches than those of co-operative banks and RRBs. Between co-operatives and RRBs, the latter showed better performance.

About 57 percent of the beneficiaries were regular in repayment and had fully repaid the amount by the due dates. The main reasons for defaults were found to be ; inadequate income generation from the assets financed, fixation of shorter loan maturity periods resulting in heavy repayment liability, high incidence of leakages and misutilisation of loans and settlement of prior debts. It was also observed that most of the wilful defaulters were generally the wrongly identified beneficiaries.