CHAPTER V

SUMMARY AND CONCLUSION

SUMMARY

The summary of the study is presented below.

Scope

This study on the Extent of flow of institutional credit and its impact on agricultural development in Annur Block of Coimbatore District was undertaken, with the specific objectives: (i) to assess the supply of farm credit in terms of size, composition, source of supply and adequacy vis-a-vis the requirements of the farmers; (ii) to assess the extent of overdues and causes thereof; (iii) to assess the impact of credit in terms of returns per rupee, per hectare, repayment capacity, risk-bearing ability and productivity gains; and (iv) to identify the strategies for the expansion of supply of institutional credit to farm sector to serve as an instrument of agricultural development.

The Coimbatore district was purposively selected for this study because of its pioneering role in agricultural and industrial activities in Tamil Nadu State. Among 21 blocks in the district, Annur block was chosen
because (i) it had the maximum of marginal and small farmers, besides having the largest number of holdings in the district, (ii) it had nil balance at the Central Cooperative Bank level for 1981-82; (iii) its overdues to the Avanashi Primary Land Development Bank Ltd had a declining trend; (iv) it had limited number of financial institutions compared to other blocks facilitating the collection of secondary data; (v) it was totally rural in character, and (vi) there was cultivation of all major crops of the district in it.

The objectives of the study required the collection of both secondary and primary data. The secondary data were collected from 25 cooperative societies/bank branches, 13 branches of the commercial banks and three Government departments providing all types of agricultural loans. Data from the cooperatives and Government were confined to nine year period from 1974-75 to 1982-83 (with the restriction of agricultural jewel loan to five years from 1979 to 1983). The data from the commercial banks were collected from 1979 to 1983. Data were collected from the annual reports, audit reports, ledgers and consolidated reports of the three major institutions.

To evaluate the impact of credit at farm level, the sample households in the villages of Annur block
were contacted. Eleven out of 22 villages of the block were selected by systematic sampling method. By giving equal weightage to every village, a total of 220 sample farms was selected for the study by simple random sampling method, with the help of voters list. Primary data, collected from the farmers, related to the faalī year, 1392 (i.e., from July 1, 1982 to June 30, 1983). Opinions relating to credit were collected from officials also.

Personal investigation method was adopted in the collection of secondary and primary data, using the pretested data sheet and schedule. Sample farmers were post-stratified into five size groups such that each group accounted for approximately one fifth of the total operational area of all the 220 farms.

Average, percentages, descriptive tables, frequency tables, standard deviation and co-efficient of variations and Lorenz curve were applied wherever necessary. Functional analysis was carried out to estimate the demand for credit. Farm technology index was constructed. Risk aversion/preference of the farmers was also assessed by a risk index.

Results

(1) General features. Annur block had 22 revenue villages and 151 hamlets. As per 1981 census, the block
had 87,293 human population. The annual average rainfall in the last five years varied from 464.17 mm to 1127.90 mm. Black cotton soil, red and deep-red soils were the major types of soil found in the block. There were 21,992 farm holdings of less than 2 ha. each. Thus the block had a large number of small and marginal farmers. The net sown area formed 75 percent of the total area of the block. Sugarcane, tobacco, cotton, chalam, groundnut, banana, turmeric and vegetables were the major crops cultivated in the block. Wells were the main source of irrigation. Thus, agriculture was the basic source of employment, with dairying as subsidiary source of income for the people.

(ii) Flow of funds. Overall flow of institutional funds for the five years ending 1983 was Rs.550.74 lakhs. The cooperatives, commercial banks and Government contributed 21.78 percent, 76.41 percent and 1.81 percent respectively. Thus, the commercial banks had a lead role to play. Among the commercial banks, Indian Overseas Bank had the largest share, followed by State Bank of India.

Overall achievement of the institutional sources was only 33.60 percent in 1980; 56.41 percent in 1981; 69.06 percent in 1982; and 49.27 percent in 1983 in relation to targets for the years. Thus, the targets of the Lead
Bank for the block had not been achieved fully during any of the four years, under review.

Purposewise analysis of the Lead Bank targets and performances revealed that there was no progress with respect to land development loans and other term loans. The performance was good in dairying and gobar gas plants on account of their subsidy components. Varying percentages of achievements to targets were seen in different loans. The loans and loan expenditures came from the Government for specific purposes along with necessary technical support. Loans for contour-bunding, land-leveling, tractor-ploughing, silt-application and pipe-laying were provided by Agricultural Engineering and Soil Conservation Department.

Total planned investment for various activities for the entire block was about Rs.1086 lakhs for 1982-83. The total planned credit was about Rs.674 lakhs which was 62.07 percent of the former. But the total supply of agricultural credit for different purposes including agricultural jewel loan was Rs.144.83 lakhs for 1983. Thus total credit gap in the agricultural sector of the block was Rs.529.48 lakhs which was 78.52 percent of the total planned credit. There were cent percent credit gaps in activities like fencing, deepening well, digging well and bore-well, construction of
farm house, cattle-shed and thrashing floor. The credit gap was minimum (40.80 percent) in other activities, followed by crop loan (44.90 percent).

The institutional agencies should provide credit for farmers to undertake permanent improvements like deepening well, digging well and boro-well, construction of cattle-shed, farm house, thrashing floor, and steaming wall and pipeline in the block. Then only, the tempo of activity created through crop loans and other loans to some extent could be sustained in the process of transforming agriculture into a commercial business generating surplus income over its investment requirements. In context of marginal and small farmers' inability to expand their area of operation, the possible alternative to augment their income would be the provision of development credit to diversify their farming activities. This would also enhance their risk-bearing ability. The study revealed that the rate of growth in facility was insufficient in meeting the demand for credit creditfully even though there was an uptrend in credit supply in general.

Of the total loan, the agricultural jewel loans topped the list, followed by crop loans. Milch animals loans, dry animals loans, bullocks and carts loans were the other prominent loans among the different types of loans. In recent years, loans for gobar gas plants
and sugarcane crushers assumed significance. Thus, farmers had borrowed for several purposes.

(iii) **Beneficiarywise and schemewise institutional performance.** Cooperative institutions were found helping the target group of marginal and small farmers better than the commercial banks for short and term loans' needs. The single largest group of beneficiaries of short, medium and long term loans was the "other" farmers. The pattern of investment of the "other" farmers was on land improvements, using the large part of the borrowed funds, while the small and marginal had their investments, availing credit on a small scale, on crop cultivation and creation of farm assets like livestock and equipments.

The entire disbursements of the VCACS/ASCs were under non-subsidy schemes. But 57.21 percent of the supply of loan from the Avanashi Primary Land Development Bank was under non-subsidy schemes. For commercial banks, 13.45 percent and 86.55 percent were under subsidy and non-subsidy schemes respectively. In respect of term loans, commercial banks concentrated on loans involving subsidy elements.

In general, the cooperatives charged lesser interest rates than the commercial banks. Regarding the duration of loans, the maximum periods allowed by the cooperatives and commercial banks were 15 years and nine years respectively.
(iv) Overdue. Total number of defaulters was 3450 by the year end, 1983. Of this, there were 2229 defaulters in the cooperatives and 1221 in the commercial banks. Thus the cooperatives had larger number of defaulters. Small farmers constituted the largest number of defaulters to the commercial banks. Other farmers had the largest overdues to the Avanashi Primary Land Development Bank and commercial banks. This had affected the borrowing by the marginal and small farmers from the institutional sources. Large overdues in relation to outstandings at the VCACS/ASCs level had crippled the functioning of the cooperative credit movement.

In 1983, the largest number of small farmers had the conversion of their short term loans into medium term loans. In general, the administration of VCACS/ASCs of the block by the Coimbatore Central Cooperative Bank was on healthy lines. Declining trend of overdues at the central bank level in recent years would vouchsafe the active role of the central cooperative bank through recycling of the funds.

(v) Sample households. Average family size of the sample farm households was about five. The heads of the farm households with education upto middle school or no education accounted for 73.18 percent of the total sample
farms, implying that the investment decision might be largely based on customs and experience.

Most farms were small or medium in size. This was the unique feature in the study area. The areas of land leased-in and leased-out were not large in the sample farms. The total operational area for the whole sample was 710.03 ha, which was 95.85 percent of the total land owned. Overall average size of operational area was 3.23 ha per farm. The sample households had wide inequality in the distribution of operational area and farm income.

Total net sown area amounted to 84.26 percent of the total operational area of the selected villages. The farmers could not make use of the entire operational area due to scarcity of irrigation. Net area sown was 2.72 ha per farm. Cropping intensity for the selected villages was 109.52 percent. As farms were largely reinfed, mostly single crops were raised. Farmers went for single long duration commercial crops where irrigation from well was available.

Gross cropped area of the sample farms was 655.24 ha. The crops grown were (i) Paddy (ii) Cumbo (iii) Ragi (iv) Cholam (v) Sugarcane (vi) Cotton (vii) Groundnut and (viii) others. Cereals accounted for 40.90 percent
of total area under all crops, while all other crops accounted for 59.10 percent. Cholam was the largest single crop raised in 30.40 percent of the gross cropped area. Sugarcane was the largely grown commercial crop (20.14 percent) in garden lands with well irrigation facilities, other commercial crops like banana, tobacco, mulberry, turmeric and tapioca were cultivated only in a few villages. In some cases, banana and tobacco were raised as intercrops in young coconut plantations.

All crops excepting groundnut showed higher productivity as compared to State level average productivity. Turmeric and banana had the highest returns per hectare, while Cholam and groundnut had the lowest returns per hectare.

Returns per rupee of investment for different crops ranged from Rs.1.53 to Rs.4.4. The highest returns per rupee of investment was found in tapioca (Rs.4.4), followed by turmeric (Rs.3.42). The lowest of the same was found in groundnut (Rs.1.53), followed by cotton (Rs.2.24). Increased cost of cultivation due to pests and plant diseases, and high cost of pesticides were the major reasons for low returns.

Liability of the sample farm households formed 6.33 percent of the average value of farm assets. The farm asset
components namely land, buildings, farm machineries and equipments, and livestocks accounted for 66.10 percent, 18.78 percent, 9.74 percent and 5.38 percent respectively. Land, therefore, constituted the most important form of farm asset conforming to the general rural Indian situation. Livestock constituted only 5.38 percent of total assets. Viewed in the context of predominance of fodder cholam in the crop pattern of the villages, livestock farming formed a very low share. This pointed the potential for future development of farms along with livestock farming.

(vi) Borrowing. In the sample of 220,174 (79.09 percent) farm households borrowed 320 loens from different sources in the agricultural year, 1982-83. The sample farms had availed Rs.15.33 lakhs, of which the institutional agencies provided 62.23 percent, and the non-institutional agencies' share was 37.77 percent. Three sample villages had gone to the non-institutional sources for more than 50 percent of their credit requirement. This revealed that still non-institutional sources had hold over rural masses in the supply of credit.

Among the institutional sources, the commercial banks topped the list by providing 49.54 percent of the total supply, while the cooperatives extended only 12.69 percent of the total supply. It should be stressed that
the non-institutional sources provided credit for purposes like deepening of wells, construction of farm house, family expenses, social functions, medical expenses and other agricultural purposes which were not in the purview of institutional lending. Among the non-institutional sources, friends extended 48.54 percent of credit, followed by relatives (17.45 percent) and traders (15.18 percent).

Purposewise, crop loans accounted for 48.95 percent, followed by other agricultural purposes (31.96 percent) in the total credit provided by the non-institutional agencies. If institutional agencies were to compete with and replace non-institutional agencies, they should diversify their lending to cover the other credit needs of the farmers also.

Studied purposewise, crop loans constituted the major share (47.07 percent) followed by 21.05 percent for other agricultural purposes. The cooperatives specialized in crop loans; commercial banks in crop loans, livestock and machineries. Avinashi Primary Land Development Bank provided long term loans particularly to buy carts and bullocks and to construct protective wall for wells.
Purposewise and sourcewise analysis of credit supply revealed that the Indian Overseas Bank located at Annur provided the maximum amount concentrating on farm equipments while the State Bank of India contributed largely towards cultivation of crops. It was found that four sample farmers borrowed loans from Banks located at distant place like Coimbatore and Sulur.

The sample farmers availed 76 jewel loans amounting to Rs. 3.042 lakhs. The institutional agencies had provided 81.10 percent of the total agricultural jewel loans. The commercial banks had the largest share in jewel loans. It was inferred that 11.18 percent of the institutional agricultural jewel loans was diverted to meet family expenses. Among the non-institutional sources, money lenders extended the maximum amount of jewel loans.

(vii) Performance. The sample had 64 (22.09 percent) defaulters having overdues of Rs. 4.16 lakhs. Of this, the relative shares of the institutional and non-institutional sources were 52.97 percent and 47.03 percent. Among the institutional sources, the Union Bank of India at Coimbatore had the largest overdues of 72 percent of the total loans sanctioned. Bank's lack of proximity to borrowers had been a problem in the matter of supervision and follow up actions.
Sample farmers were post stratified into five size groups. About 24 percent of farmers in group I (Small and marginal farmers) fully self-financed the investment. From group II through IV, the percentage of self-financing increased progressively. In group V, the percentage of self-financing to total investment was low at 11.28 indicating their ability to borrow offering suitable securities. Among those sample farms who managed their production operation partly with self finance and partly with borrowed funds, group I had the largest (74.47 percent) share of borrowing, reflecting the chronic credit need of this group. Group I had the largest number of farmers fully financed by credit. The percentage of borrowing in total investment varied between 64 percent and 71 percent with the exception of the group IV having 58 percent. Thus credit became sine qua non for farm operations.

Among the borrowers, returns per rupee of investment was Rs.2.22 for the sample as a whole. In the case of borrowers, the maximum of returns per rupee (Rs.2.36) was found in group III. The returns per rupee in Group I (Small farmers) and group V were Rs.1.93 and Rs.1.79 respectively. Though the farmers of the group V had less returns, they could manage as they had large income. But the farmers of the group I with low income per farm should
try to improve the rate of returns, and therefore, they should pay better attention to the choice of enterprise mix and resource use.

With regard to the non-borrowers, overall returns per rupee was Rs.2.22.

Overall, 66.67 percent of borrower-farmers had the repayment capacity. The repayment capacity increased with the size of farms upto a limit (group IV) and then declined. The overall average surplus after repayment in the case of 116 farmers, who had repayment capacity, was Rs.12,447.45. The overall average of deficit in case of borrower-farmers having no repayment capacity was Rs.6003.65. It could be inferred that the first group of small farmers (inclusive of marginal farmers) would require adequate attention in terms of credit and also adequate follow up measures for guidance and supervision to enhance their repayment capacity in future.

Among the borrowers, only 9.30 percent to 35.29 percent of farmers had the risk-bearing ability. In general, groups IV and V derived risk-bearing ability from their large resourcebase. Groups I through III managed risk through subsistence farming (dominated by food crops). The very high percentage of farmers without ability to bear
risk, should be recognised by policy-makers and financing institutions in the provision of credit and other complementary facilities to increase the risk-bearing ability of these farmers.

(viii) **Functional analysis.** The demand for farm credit was estimated by a system of three equations separately for the two categories of farmers namely group I and groups II to V. The system consisted of (i) a linear function for demand for credit; (ii) a cubic cost function; and (iii) a production function. Production response to input uses would determine the demand for inputs and in turn the cost of production, but higher input use might result in higher production also. Therefore, cost function, would relate production function to cost. Larger the cost more would be the demand for credit. Therefore, cost entered as an argument in credit demand function. Thus the three functions were inter-related and constituted a system. However, due to lack of facilities for estimation of systems of equations, the three functions were estimated by the iterative method. The Estimated linear equation for credit for category I showed good fit. Inference was that an increase of Rs.100 in cost of cultivation of crops in small farms, would increase the demand for credit by Rs.44, at their mean level. Thus farmers were in need of credit to meet their cultivation expenses; and its inadequate supply would result in low
productivity consequent to low investment. It was found that farmers were very responsive to the cost of credit. Farmers would be willing to meet the additional demand for credit by borrowing only at lower rate of interest. Thus, cheap credit would be a good policy to encourage the use of modern agricultural inputs in the context of rise in prices.

The cubic cost function showed a good fit, but only the coefficient of linear term was significant indicating absence of quadratic and cubic effects. Estimated linear production function had a good fit. Results showed that size of operational area, cultivation of commercial crops and high yielding varities would significantly contribute to farm income; but the price of fertiliser (inputs in general) should be reduced to increase their use and contribution to farm income. Thus farmers in this category stood to gain from additional investment in farm development activities, but to meet the cost of these investments they required credit. Therefore expansion of farm credit supply from institutional agencies would positively contribute to the income of farmers of this category.

The estimated linear equation for credit for the category II (group II to V) showed a good fit. An increase in cost of cultivation by Rs.100 would increase demand for
credit by about Rs.85.00. The results showed that the small farmers (category I) were more sensitive to change in interest rate than other farmers of category II (group II to V) because for the same one percent increase in interest rate small farmers reduced borrowing by Rs.80.77 in contrast to the reduction by only Rs.47 in other farms. Thus the concessional rate of interest allowed for small and marginal farmers was justified.

Estimated cubic cost function for the category II of other farmers showed a good fit, with only the coefficient of linear term being significant. Linear production function estimated for category II showed a good fit. The results showed that increase in operational area, cropping intensity, commercial crop index and price of fertilizer would increase farm income. Thus the inference was the same as for category I, i.e., farmers could increase their income by investing more on development of farm; but such an investment would require more credit. This category of farmers also required credit at lesser rates of interest. So a policy of cheap credit would contribute to farm development. But, development efforts would depend upon the initiative and interest of the farmers to adopt new technology.
In general, the level of adoption of farm technology was not low in the block. About 92 percent of the farms adopted technology to the extent of 76 percent or more. Farmers stated different reasons for non-adoption of technology in different crops. Among them, lack of sufficient finance was the main reason in almost all crops. This indicated the dire need for farm credit to adopt farm technology.

More than 60.00 percent of farmers were risk averters totally and further 10.00 percent to 13.00 percent farmers were highly risk-takers. Thus, risk aversion was the basic attitude variable affecting decisions by farmers.

CONCLUSION

(i) The results of the study summarised above showed the extent of flow of institutional credit and its impact on agricultural development in Annur block. In view of 79.09 percent of the sample households borrowing from different sources during 1982-83, percentage of borrowing in total investment ranging between 58 percent and 71 percent among the different groups of the sample farmers, and the results of the functional analysis, it is clear that credit is sine-qua-non for farm production.
(ii) Results of the functional analysis would further show that expansion of institutional credit substituting non-institutional credit resulted in more efficient use of credit by farmers. Significant influence of interest rate on demand for credit showed that interest rate would be an effective policy instrument for the purpose, even with small farmers.

(iii) The results as revealed in the opinion survey, analysis of returns per rupee of investment and repayment capacity show that there is scope for improving gains from supply of credit to farmers through changes in pattern and procedure for lending.

(iv) Analysis pertaining to risk-bearing ability and discussion of the opinions of the farmers interviewed and officials concerned indicate that the efficient use of credit depends also upon the availability and use of complementary inputs like technical advice, irrigation, and policy support for input supply and marketing of products.

**IMPLICATIONS**

The results of this study and inferences drawn from them have some important implications for policy and research. They are listed below.
production and consumption purposes. The delay in the sanctioning of the cooperative credit was due the preparation of annual credit limit statement with elaborate formalities. Hence, as desired by both farmers and officials, the procedure followed so far especially in cooperative credit would require a review and revision. Issue of certificates from the Revenue Department had obstructed the farmers from obtaining credit in time. This should receive immediate attention.

(v) Further, the village societies should be rejuvenated through making the secretaries of the societies as the central bank staff and making them more responsible. Large amount of short and medium term loans should be made available by VCACS/ASCS. Creation of godown facility, arrangement for purchase and sale of agricultural produce, arrangement to hire out agricultural implements and machineries, and disbursement of jewel loans largely by the cooperatives would increase the returns of the societies. Procedural and policy changes in this direction would make the VCACS/ASCS viable units in future.

(vi) Problems in recovery of loans were either nature caused or man-made. The solution for tackling the former would be the quick execution of long pending Pandiar-
Poonampuzha Canal Project to augment water resources, and conservation of rain water through percolation tanks. Policy decision in this direction would deserve urgent attention. Regarding man-made problems, solution could be found in remunerative prices for agricultural produce, availability of subsidy for marginal and small farmers in crop loans, extension of regulated market facilities covering more villages, un-interrupted supply of power during day time with no short-fall in voltage, supply of quality agricultural inputs like seeds, fertilizers, chemicals and other essential items at reasonable prices at VCACS/ASCs.

The wilful defaulters would be of the order of 10 percent of the total borrower members. This was due to anticipation of write-off of the cooperative loans as happened in 1980. Write off should be totally avoided in the larger interest of the nation. Organization of joint recovery camps, inculcation of social responsibility and financial discipline among the rural people would be the other measures to be pursued. Stern action as per rules on erring wilful defaulters would create a healthy climate for the functioning of the lending institutions especially the cooperatives.
(vii) Sanctioning of Integrated Rural Development Programme loans by the District Rural Development Agency in time through the cooperatives, avoiding of frequent transfer of officials, periodical training for the secretaries of the VCACS/ASCS, regular elections to the cooperatives, periodical and planned visits to villages by the officials of the Veterinary Department and Training and Visits Programme in the diversification and demonstration activities, better follow up measures taken by the officials of the lending institutions providing technical advice especially for small and marginal farmers, and periodical conduct of soil testing and advice, and propagation of the ideas of scientific agriculture would be other measures, that deserved policy consideration and strategy changes.

(viii) Institutional financing agencies should evolve a common strategy in providing credit with other technical supporting services, keeping in view the conservative decision making attitude of the farmers in general and of small and marginal farmers in particular.

(ix) Up-dating of land-records and its periodical revision deserve attention of the State to help proper identification of marginal and small farmers, and agricultural labourers.
Research Implications

(i) The results of this study show that in credit, sufficiency is an important criterion in relieving farmers from the clutches of usurious money lenders. Sufficiency implies meeting all the credit needs and also timely supply. The study shows that institutional credit is not available for consumption and the farmers go to non-institutional agencies. But, at present the institutional agencies are not able to meet fully even the target of productive credits. Therefore, studies must be undertaken to develop models for credit planning.

(ii) More important than sufficiency is the criterion of efficiency in the use of credit. This study has pointed out the need for technical advice, supply of inputs and follow up to prevent diversification of productive credit to other purposes. Therefore efficiency in use of credit needs organizational changes in supply and follow up. Strategies for bringing out such changes smoothly but quickly must be evolved through research with particular attention to the causes of overdues and attitude of farmers towards default and risk management.

(iii) The operational bottlenecks of VCACS/ASCs and solutions for them should be identified. Alternate
approaches for achieving steady growth of cooperative credit institutions should be evaluated and suitable strategies suggested.

(iv) The agricultural jewel loans constituted the largest share among the institutional loans. A detailed study of the different categories of the borrowers of this loan and its utilization could be undertaken in future.