CHAPTER - I
CHAPTER - I

INTRODUCTION AND DESIGN OF THE STUDY

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1.1 Introduction

Agricultural progress is normally regarded as a prerequisite for economic development. It is true that the economic development in the modern times has been associated with industrialisation. It is generally accepted that industrialisation can follow only on the sound heels of agriculture. Or, to turn the metaphor, agriculture is the foundation on which the entire superstructure of the growth of industrial and other sectors of the economy has to stand. This theory is one of the early insights of classical political economy going at least as far back as Adam Smith (1776). It has been frequently restated in the last two centuries most transparently by Arthur Lewis in his celebrated Janeway lecturer on the evolution of the international economic order.

1.1.1 Agriculture in Indian Economy

Indian economy is one of the world’s oldest agrarian economies. Our ancestors were growing rice and sugarcane at the time when the Europeans were hunting boars and huddling around fire fires. In the present day India, the vital role of agriculture arises out of the position the agrarian sector occupies in the overall economy of the country.¹

India is primarily an agricultural country. About 70 per cent of its population depends on agriculture as against 50 per cent in Japan, 5 per cent in U.K., 22 per cent in West Germany, 27 per cent in France, 13 per cent in Netherlands, 42 per cent in the USSR, 12 per cent in the USA, 15 per cent in Australia, 19 per cent in Canada and 25 per cent in Argentina. Agriculture is not merely an occupation or a business proposition for the people, it is a tradition, a way of life which for centuries has shaped their thoughts, outlook and culture. Agriculture, being the mainstay of people in India, affects the country's life and economy significantly. Hence, agricultural development is intimately connected with industrialisation and economic growth. It is the backbone of all the plans of economic development.

India's agriculture sector has an impressive long-term records of taking the country out of serious food shortages despite rapid population increase. This was achieved through a favourable interplay of infrastructure, technology, extension and policy support backed by strong political will. The main source of long-run growth was technological augmentation of yields per unit of cropped area. This resulted in tripling of foodgrain yields and foodgrain production increased from 51 million tonnes in 1950-51 to 217 million tonnes in 2006-2007. Production of oil

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seeds, sugarcane and cotton has also increased more than four-fold over the period, reaching 24 million tonnes and 355 million tonnes and 23 million bales in 2006-2007.

Although GDP from agriculture has more than quadrupled, from Rs.108374 crore in 1950-51 to Rs.485937 crore in 2006-2007 (both at 1999-2000 price), the increase per worker has been rather modest. GDP per agricultural worker is currently around Rs.2000 per month, which is only about 75 per cent higher in real terms than in 1950 compared to a four-fold increase in overall real per capita GDP.4

The Mid-Term Appraisal (MTA) for the Tenth Five Year Plan had drawn attention to the loss of dynamism in agriculture and allied sectors after the mid-1990s. In fact, during the last decade or so Indian agriculture has faced a number of severe challenges, superimposed on the long-term demographics. Recent trends have raised concern regarding food security, farmer’s income and poverty etc.:

- Slowdown in growth
- Widening economic disparities between irrigated and rain-fed areas.

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- Increased vulnerability to world commodity price volatility following trade liberalization. This had an adverse effect on agricultural economics of regions growing crops such as cotton and oilseeds.

- Uneven and slow development of technology.

- Inefficient use of available technology and inputs.

- Lack of adequate incentives and appropriate institutions.

- Degradation of natural resource base.

- Rapid and widespread decline in groundwater table with particularly adverse impact on small and marginal farmers.

1.1.2 Features of Indian Agriculture

Indian agriculture demonstrates certain distinguishing features. The chief features of Indian agriculture are the following:

1.1.2.1 It is predominantly a rain-fed-cultivation:- Nearly 65 per cent of the cropped area is under cultivation. Some areas though classified under irrigated land, they enjoy irrigation facility under the conditions of rainfall. Minor irrigation (wells, tube wells, irrigation tanks etc.) continues to be a predominant source of irrigation in India.

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1.1.2.2 Indian agriculture is characterised by multiplicity of crops:- Under the varying climatic and soil conditions, a variety of crops grown in different parts of the globe are all grown in India.

1.1.2.3 Inequalities of higher magnitude in the ownership of land:- While very few farmers own fairly large extent of land, large number have very small size holdings or remain landless.

1.1.2.4 Small and marginal farmers predominate the Indian agriculture:- Small and marginal holdings together constitute around 80 per cent of the total holdings and their average size is less than one hectare. Under these circumstances cultivation in many cases has been uneconomical and therefore not a well paying proposition.

1.1.2.5 Indian agriculture is in a state of semi-commercial agriculture:- In India, a bulk of foodgrains produced is meant for domestic personal consumption. However, in the case of non-food crops a large part of it is marketed. In recent years, the trend is towards commercial farming. Even small and marginal farmers under pressing cash requirements raise cash crops intended for marketing.

1.1.2.6 Average level of productivity is low:- The productivity or yield per hectare of land of different crops remains low in India as compared to that in Japan and many other countries. This aspect of
backwardness in agriculture may be attributed to several factors such as inability of the small size landholders to invest in modern inputs and inadequate institution support in terms of credit, marketing and crop insurance.

1.1.2.7 Seasonal Unemployment:- In the absence of assured irrigation, timely and adequate rainfall and supplementary occupations, farmers do not have effective work provided throughout the year.\(^6\)

1.1.3 Agricultural Credit

Credit is an essential requirement for revitalizing agriculture and there have been some important positive developments in this area. The total credit to agriculture increased from Rs.62045 crore during 2001-2002, the terminal year of the Ninth Five Year Plan to Rs.2,00,000 crore during 2006-2007, the final year of the Tenth Five Year Plan. This was more than three fold increase over five years. The share of commercial banks in total agricultural credit increased from 54 per cent in 2001-2002 to around 69 per cent in 2005-2006. The share of investment credit increased from 35 per cent in 2001-2002 to around 41 per cent in 2004-2005, despite the negative growth achieved by the long-term co-operative credit structure. As against a target of Rs.736570 crore, the total

\(^6\) Venkata Reddy, "Agriculture and Rural Development", Professor of Rural Development (Retd) and Former Vice-Chancellor, Sri Krishnadevaraya University, Andhra Pradesh.
institutional credit flow to agriculture during the Tenth Five Year Plan is expected to be above Rs.6,50,000 crore that is a likely compound annual growth rate (CAGR) of 26 per cent. This is much better than the CAGR of 18 per cent achieved during the Ninth Five Year Plan.

However, the total agricultural credit has increased during the Tenth Plan period and there are serious quantitative as well as qualitative concerns. The outreach of the formal institutional credit structure is very limited. The findings of the National Sample Survey Organisation (NSSO) 59\textsuperscript{th} Round revealed that only 27 per cent of the total number of cultivator households received credit from formal sources while 22 per cent received credit from informal sources. The remaining households, comprising mainly small and marginal farmers, had no credit outstanding. The agrarian crisis led to default by many farmers, and a consequent freeze on their ability to access institutional credit.\footnote{\textit{op.cit.}, Eleventh Five Year Plan, p.20.}

1.1.4 Co-operatives and Agricultural Credit

The credit disbursal by commercial banks covers only 1.1 per cent of operational holdings in the country. As seen in Table 1.1, credit growth by the co-operatives to the agriculture sector has gradually picked up during the course of the Tenth Five Year Plan. The number of loan accounts have, however, declined from 224.6 lakh in 2004-2005 to 192.8
lakh in 2005-2006. The most potent means for widening and deepening access to institutional credit to the innumerable small and marginal farmers are the Co-operative Credit Societies that are autonomous and democratic. The revitalization of the co-operative credit structure in order to transform them into vibrant and viable democratic financial institutions is therefore vital.\textsuperscript{8}

\begin{table}
\centering
\caption{Credit Flow to Agriculture Sector by Co-operatives}
\begin{tabular}{|c|c|c|c|}
\hline
Year & Credit (Rs. in Crores) & Growth \% & Number of Loan Accounts (lakh) \\
\hline
2001-2002 & 23604 & - & - \\
\hline
2002-2003 & 23716 & - & - \\
\hline
2003-2004 & 26959 & 14 & - \\
\hline
2004-2005 & 31424 & 17 & 224.6 \\
\hline
2005-2006 & 39404 & 25 & 192.8 \\
\hline
2006-2007 & 42480 & 8 & 188.7 \\
\hline
\end{tabular}
\end{table}

Source: Various Issues of Economic Survey, Department of Economic Affairs, Ministry of Finance and Information provided by Department of Agriculture and Co-operation, Krishi Bhawan, New Delhi.

\textsuperscript{8} Ibid., p.21.
1.1.5 Primary Agricultural Co-operative Banks

Primary Agricultural Credit Societies are meant to develop the spirit of mutual help and cooperation among their members, besides meeting their credit and other needs. The following are the main features of PACBs.

The main objectives of PACBs are:

i) to provide short-term and medium-term credit

ii) to foster the habit of saving

iii) to distribute fertilisers and seeds

iv) to provide help in milk production, egg production, sugar production or any other product depending upon the resources of the area and

v) to distribute consumer goods to their members.9

1.2 Statement of the Problem

India is a country of villages. The total number of villages is 6,82,862 and according to the 2001 census 72.2 per cent of the total population of the country live in villages. Of the rural population 31.7

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per cent are cultivators and 26.7 per cent are agricultural labourers. According to the 2001 census, 26.10 per cent of them are living below the poverty line.\textsuperscript{10}

One of the reasons for the economic backwardness of the rural farmers is the lack of adequate finance to pursue their agricultural operations profitably. The result is that the average Indian farmers have become regular borrowers of funds. They borrow funds year after year, but they are not in a position to clear off the principal together with its large interest, if borrowed from private money lenders. The loan amounts are often larger than the value of the meagre output they are able to produce with outmoded traditional methods of cultivation.

Primary Agricultural Co-operative Banks are double-pronged instruments designed to fight against the contagion of rural indebtedness and to improve the lot of the poor peasants. They provide credit both for production and for other purposes on easy terms and educate them to practise modern methods of high yielding cultivation as well as inculcate in them the habit of thrift, frugality and self-help. On the other hand, PACBs attempt to make cultivators their own masters and encourage them with necessary money and materials to increase agricultural production for their own advancement and for the nation’s economic development.

\textsuperscript{10} \textit{Indian Co-operative Movement – A Profile}, National Resource Centre, National Co-operative Union of India, New Delhi, 2004.
An analysis of the achievements of so vital an institution as the PACB engaged in the economic activity of increasing the country’s agricultural output and of improving the socio-economic conditions of a large segment of a rural population seems rewarding. This study systematically attempts to analyse whether credit disbursed by the PACB and other inputs provided by them have increased agricultural production in Kanniyakumari district and improved the standard of life of the beneficiaries.

1.3 Scope of the Study

The present study, which is basically a research, provides an opportunity to create an awareness among PACBs regarding their functioning and providing credit for agricultural purposes. This research also helps PACBs to strengthen the credit lending activities which will result in more profitable business. An examination of the achievements of PACBs engaged in the activity of increasing the country’s agricultural output and of improving the socio-economic conditions of a large segment of rural population seems rewarding. This study further examines whether credit disbursed by the PACBs and other outputs provided by them have increased agricultural production in the district and improved the standard of living of the beneficiaries.
1.4 Review of Literature

The problem of rural development and institutional finance has been received increased attention and many scholars have attempted to analyse the impact of institutional rural credit on the economic and social status of the rural masses in India. Various yardsticks have been used to examine the impact of institutional rural credit by different scholars. These studies have also attempted to identify the factors responsible for improper utilization of rural credit and analysed the reasons for default in repayment of loans. A brief review of the major studies in this area have been analysed.

Bhupal Singh Megi\textsuperscript{11} in his study in Pauri-Garhwal area identified various problems related to institutional credit such as inefficient management and inadequate supervision over the working of PACS diversion of credit from productive to unproductive uses, problems of over dues, forced lending policies implemented merely for achieving statistical targets, lack of co-ordination between co-operative institutions and nationalized banks, insignificant role of LDBS etc.

Parithran\textsuperscript{12} in his study examined the impact of credit provided by commercial banks, PACB, PADBS and Kerala Financial Co-operation in Trichur District in Kerala. The study analysed the causes that influenced the non-borrowers in keeping themselves away from financial institutions and the problems faced by borrowers in obtaining loans. The study revealed that there was considerable delay in the sanctioning of loans. The cumbersome procedures followed by the institutions were the major reasons for keeping the non-borrowers away from financial institutions.

Rasith\textsuperscript{13} studied the role and functions of Co-operatives and Co-operative credit societies and other institutionalised agencies in rural areas and also examined how far these institutions succeeded in wiping out money lenders from the rural scenario. The study reported that even though the role of institutional agencies increased continuously, the money lenders had a prominent role in rural areas along with institutional agencies. The study revealed that the credit granted by the co-operatives to the agriculturalists was inadequate to meet their requirements and this was the reason behind the existence of the money lenders.


\textsuperscript{13} Rasith, A., "Institutionalisation in Rural Credit. Role of Primary Agricultural Credit Societies in Agricultural Development", M.Phil Dissertation, University of Kerala, Thiruvananthapuram, 1993.
In a sample survey of 54 Primary Agricultural Co-operative Credit Societies of six districts in Orissa, conducted by the Registrar, Co-operative Societies,\textsuperscript{14} it was found that 24 per cent of the members were defaulters. Having contacted 162 defaulters it was ascertained that the reasons of their defaults were failure of crops due to frequent natural calamities, misutilization of some parts of the loan amount, financial difficulties and their lack of repaying capacity.

The Sixth Five Year Plan\textsuperscript{15} noted that mounting overdues had clogged the system of co-operative credit. At the end of June 1985, the percentage of overdues to demand at the PACs level was found to be 40 per cent. Wilful default and overdues were mounting even in co-operatively progressive states like Gujarat and Maharashtra.

The Institute of Management in Government, Kerala\textsuperscript{16} conducted a study on repayment performance of farmers and Rural Development Bank in Kerala. The study mentioned that one of the major advantages of the bank is the sincerity of the staff which led to improved and efficient recovery of its dues. The borrowers were fully known to the bank employees and they had a vigorous drive for collection of instalments. The notes are sent in time for repayment of loans.


\textsuperscript{15} Planning Commission, \textit{The Sixth Five Year Plan 1980-85}, Government of India, New Delhi.

A study on the Pattern Dispensation of Short term Loans in relation to the actual need of the farmers by the Planning Board, Government of Kerala\(^{17}\) revealed that there is no serious and systematic effort on the part of co-operative societies for the assessment of the credit requirements of farmers. In the dispensation of credit also the societies in general do not follow the crop loan scale approved for the district.

Bhatt's\(^{18}\) study of land development banks in ten selected districts of Andhra Pradesh, Gujarat, Orissa, Madhya Pradesh revealed that between 47 and 77 per cent of the loan applications were processed in a period of three months and the time lag in dispensing loan was quite long in all other states. He mentioned that the time consuming process and high cost of credit sometimes make co-operative credit least attractive for cultivators.

Bedi, R.D.,\(^{19}\) examined the performance of co-operative land development bank in India. He concluded that the performance of DBS in raising sources from rural areas was extremely poor. He also observed that land banks were functional not on a sound banking system but a mere


\(^{19}\) Bedi, R.D., Co-operative Land Development Banking in India, The Committee for Co-operative Training, New Delhi, 1971, p.76.
loaning shop for passing down public funds to the borrowers rather than being full fledged banks.

The Study Team on over dues of Co-operative Institutions\textsuperscript{20} studied the position of overdues and ascertained the causes. It stated that inefficiency of the managements was one of the important causes for poor recovery and suggested that there should be many controllable causes such as timely disbursement of loans, timely recoveries and minimization of lengthy procedures etc.

The Committee on Co-operative Land Development Banks\textsuperscript{21} in its report pointed out that the prevalence of high level of overdues in primary banks is basically due to defective loaning policies, ineffective field supervision and lack of consistent efforts and will on the part of the banks board of directors and staff to recover loans which are due for repayment.

\textbf{Elaria, B.H.,}\textsuperscript{22} examined the overdues position of the Gujarat Land Development Bank. He observed that the overdues position of the bank was fluctuating during the period from 1961-62 to 1973-74. He stated that some factors like drought conditions, misutilization of loans

\textsuperscript{20} RBI, The Study Team on Overdues of Co-operative Institutions, Bombay, 1974.
\textsuperscript{21} RBI, The Committee on Co-operative Land Development Banks, Bombay, 1974, pp.291-292.
\textsuperscript{22} Elaria, B.H., \textit{The Study of Co-operative Land Development Banking in Gujarat Baroda}, 1979, pp.78-80.
and lack of supervision over the use of credit were responsible for high overdues.

**Badbuck, H.K.,**\(^{23}\) empirically studied the potential role of the primary Land Development Bank on the modernization of paddy cultivation. The author also attempted to identify problems of lending of the bank and provide solution there of.

**Venkiteswaran, S.,**\(^{24}\) in his thesis mentioned that the confidence enjoyed by the public on those primary credit societies functioning in own building helped them to mobilize more deposits in their area of operation. He also revealed that the most of the sample lenders (65 per cent) demanded that insurance over should be given for deposit mobilization.

**Raj Kishore Pany,**\(^{25}\) in his study pointed out that mere multiplication of the institutional agencies was not the only answer to the problem of inadequate institutional credit supply and it indicated the importance of several qualitative aspect which was to be given due emphasis to achieve the desired objectives.

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Reddy, C.R.,\textsuperscript{26} had also made a similar attempt to supply the functioning of the District Co-operative Central Bank in Duddapah district of Andhra Pradesh. He suggested a reduction in the unique reliance an external reduction in the undue reliance and external resources by increasing the deposits and diversifying the loan business to the members which lead to improve the overall efficiency of the co-operatives.

Hemchand Jain\textsuperscript{27} undertook a study with a view to assess the impact of farm loans on production, income and employment of tribal cultivators as compared to non-tribal cultivators. He concluded that the institutional credit had a positive impact in raising the farm production, income and unemployment of tribal farmers in the area covered in his empirical study.

Pavithra, K.B.,\textsuperscript{28} studied the working of financial institutions in Kerala in general and Trichur district in particular. He summarized that the long term credit requirements of the agriculturists were mainly being met by co-operative Agricultural Development Banks in Kerala.

\textsuperscript{27} Hemchand Jain, "Impact and Institutional Credit on Farmers", \textit{Kurukshetra}, Vol.XXXVI, No.8, May 1988, pp.10-12.
Pawar, S.S., and Bhuvanendra, P.,\textsuperscript{29} analysed the impact of L.T. loans on agricultural production, income as well as the nature of overdues. The study revealed that there were not wilful defaulters. Due to the effective supervision of the bank, the farmers were able to utilize the loans properly.

Ananda Gopal, D., and Kulandaiswamy, V.,\textsuperscript{30} made a study to assess the nature and extent of overdues. The study was based on these defaulters of Primary Co-operative Land Development Banks of Coimbatore district in Tamil Nadu State. The study revealed that the high probability of wilful default was associated with large farm size, high annual income and expenditure, high educational status, lower age, affiliation to political parties and high caste status.

Srinivas, M.,\textsuperscript{31} exotically examined a number of crucial issues responsible for the weak functioning of a central co-operative bank in Andhra Pradesh and made some concrete suggestions to improve the functioning of the banks.


Patnaik, U.C., and Rabi N. Misra\textsuperscript{32} empirically examined the effectiveness of recovery management practices of rural banking institutions. They observed that the emergence of write off concept has tempted the borrowers towards non repayment of loans.

Balishter, A.K. Singh and Viswajit\textsuperscript{33} studied the problem of default in repayment of LDBs loans. They identified many reasons, some of which (regarding wilful default) were; 1) diversion of income for purchasing land and other property 2) Uncertainty about next fresh loan after repaying the overdues 3) Motivation by the political leaders not to repay loans because the Government would write off these loans in due course of time 4) Defaulters feeling that due to manipulative local influence the bank officials cannot pressurize them to repay the loans and 5) Lackness in timely recovery by bank officials.

Nayanan, N.V.,\textsuperscript{34} examined the supply of investment credit and its utilization by some member – borrowers and assessed the impact of investment credit on the crop production and income levels of sample farmers in general and sample farmer beneficiaries in particular.


\textsuperscript{34} Nayanan, N.V., "Institutional Credit Support for Small – Farm Agricultural Development", \textit{Land Bank Journal}, October 1994.
From the academic community too, some studies were made both at national and regional level and important among these are briefly discussed hereunder.

**Muthaiah**[^35] examined the causes of overdues and poor repayments in rice growing regions and came to the conclusion that successive crop failures, inadequate finance and misutilisation of the borrowed loan were the major factors that led to defaults.

**Chawdhari and Sharma**[^36] emphasized that the subsistence needs of the small farmers are not adequately taken into account under the crop loan system in Andhra Pradesh and Punjab. The important finding of the study is that the percentage of overdues in both the states generally tends to increase as the size of the borrowing holdings rises. This feature is more pronounced in Andhra Pradesh than in Punjab.

**Bisen**[^37] examined the role of co-operative movement in meeting the short-term and medium term credit needs of the farmers. Despite the increasing role of co-operatives in providing rural household credit, money lenders of both types – agriculturist and professional, still


occupy the first rank in meeting the financial requirements of rural households. According to him 28 per cent of the co-operative credit is diverted by farmers to non productive purposes.

Apte\(^{38}\) in his study on co-operative agricultural credit found that overdue loans have executed the share capital. The overdues are mounting up with the anxiety to pump in more and more credit and hence reduction in overdues during the ensuring years, appears totally improbable.

Singh and Kalhan\(^{39}\) showed that bank recoveries were more effective in the villages adopted by the banks compared to the other non-adopted villages. They suggested that banks can follow the adoption approach or area planning as a starting point before they get too far in reaching out to the farmers scattered over many areas. This will reduce the lending costs and will also facilitate easy recovery of loans.

Saikia\(^{40}\) pointed out the difficulties faced in obtaining the non-encumbrance certificate of the mortgaged land. He further revealed that the time lag between the date of application and the date of the actual


receipt of the loan is very long and the inadequate loans could not be used successfully and were liable to be diverted to other uses.

Athavale suggested that to check the proper utilization of loans, additional supervisors need to be appointed to monitor misutilisation of loans.

A detailed study or relative position of overdues among small, medium and large categories of farmers in Maharashtra by Mohanan pointed out that overall position of overdues had gone up from 30.7 per cent in 1967 to 52.3 per cent in 1971. It has increased by 13.8 and 26 per cent per default in medium and big farmers respectively.

Mariyanthran, found that the main reasons for the accumulation of overdues were defective loaning policies, inadequate supervision and weakness of internal management.

Glenn C.W. Annes and David W. Brown observed that the large farmers were contributing to co-operative overdues. Their findings revealed that over 69 per cent of all defaulters were large farmers and they accounted for over 74 per cent of all overdues of short term credit in the poor and very poor repayment categories.

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44 Annes, Glenn, C.W., and Brown, David, W., “Co-operative Credit for Farm Production in Mysore State, India”, The University of Tennessee, Knoxville, 1973, p.31.
Michael Lipton\textsuperscript{45} studied the conditions of agricultural finance and rural credit in poor countries. He mentioned that it was big farmers whose default/loan ratio was the highest in Bangladesh and Sri Lanka. In Bangladesh and Sri Lanka, subsidized institutional credit overwhelmingly reached to big farmers of whom many defaulted.

UNDP Technical Assistance Mission\textsuperscript{46} reviewed that the main problem facing co-operatives in Bangladesh is that of economic viability. The lack of adequate internal resources in the form of shares capital, resources in the form of shares capital, resources and deposits commanded by the co-operatives has furnished their image vis-à-vis the higher financing agencies. The mission observed that the recovery performance of co-operatives was better than that of all other agencies.

CIRDAP\textsuperscript{47} studied the impact of co-operatives on the socio-economic development of the poor in Bangladesh. In that research SIRDAP indicated that (a) unsound management practices; (b) too much dependency on esteemed agencies for funds and support; (c) indifference and apathy of the members towards activities of the societies; (d) lack of training in efficient and low moral of employees; (e) lack of commitment

\textsuperscript{46} UNDP, Technical Missions, The Co-operative Credit Movement in Bangladesh, Dhaka, 1982.
and dynamism at the leadership level and (f) neglect of membership education and training were the principal reasons for poor performance of most of the co-operative societies.

Mittendor, H.J., in his study analysed the promotion of viable rural financial system of agricultural development. He also analysed major constraints in promoting viable rural financial system (including credit co-operatives).

1.5 Objectives of the Study

The main objectives of the study are:

1. To examine the constitution, functions and responsibilities of Primary Agricultural Co-operative Banks.

2. To assess the performance of PACBs in the disbursement of agricultural credit in the district.

3. To analyse the problems encountered in the disbursement of agricultural credit.

4. To find out the impact of credit on agricultural production.

5. To evaluate the impact of the functioning of the PACBs and their members in respect of income, employment, savings and standard of living.

6. To suggest measures for the improvement in the functioning of the PACBs on the basis of the findings of the study.

1.6 Concepts

1.6.1 Marginal Farmers

Farmers who own land upto one acre.

1.6.2 Small Farmers

Farmers who own land between one and two acres.

1.6.3 Medium Farmers

Farmers who own land between two and four acres.

1.6.4 Big Farmers

Farmers who own land above four acres.

1.6.5 Borrowers

Farmers who borrow short term agricultural credit from PACB.

1.6.6 Non-borrowers

Farmers who do not borrow from PACB.
1.6.7 Co-operative Bank

Co-operative Bank can be defined as mutual society, formed, composed and governed by working people themselves for encouraging regular savings and granting small loans on easy terms of interest and repayment.

1.6.8 Defaulter

A defaulter may be defined as one who does not repay his dues within the time stipulated for repayment.

1.6.9 Financial Institution

Financial institutions operate in financial markets and act as mobilisers of savings and purveyors of credit.

1.6.10 Overdues

The amount not repaid by the borrower within the stipulated period.

1.6.11 Self Help Group

It is a group consisting of 10 to 20 persons. The assistance (loan can subsidy) may be extended to individuals in a group or to all members in the group for taking up income generation activities.
1.6.12 Subsidy

It is the fund allotted by the government which is not refundable.

1.6.13 Kisan Card Credit

This card shows the maximum amount of loans sanctioned to one farmer. This maximum amount is fixed by the PACB as per the scale of finance. It is like a cash credit account.

1.7 Methodology

The present study is exploratory in nature based on the survey method. Both primary and secondary data are made use of in the study.

1.7.1 Collection of Data

Secondary data have been used in the study wherever necessary. They are obtained from the published and unpublished information from the PACBs, District Central Co-operative Banks, State Central Co-operative Banks, National Bank for Agricultural and Rural Development, Reserve Bank of India, other Financial Institutions, National Co-operative Union and State Co-operative Union etc. Reports of the
various administrative departments, publishing of State Planning Board, Journals, Periodicals dealing with the subject have also been consulted.

Primary data with regard to monetary and non-monetary assistance to individual member, credit recovery agricultural production, income, employment opportunities and changes in the living conditions of borrowers etc., have been collected directly from the beneficiaries of PACBs with the help of structured interview schedule. Necessary details have also been collected by holding discussions with the personnels of PACBs, District Central Co-operative Banks, State Central Co-operative Banks, Officers of the Co-operative and Planning Departments etc., on vital issues connected with the conduct of the study. The pieces of information so obtained have been assorted and used discriminately in preparing the report of the study.

1.7.2 Sampling Design

Twenty per cent of the PACBs have been selected for intensive study (i.e. 23 PACBs) using proportionate stratified random sampling. Table 1.2 shows the size of population from different strata and the size of sample drawn from each stratum on the basis of size of population.
**TABLE 1.2**

**POPULATION SIZE AND SAMPLE SIZE UNDER EACH STRATA**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name of the Block</th>
<th>Population Size (i.e. No. of PACBs)</th>
<th>Sample PACBs</th>
<th>Per cent Share in Sample Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Agastheeswaram</td>
<td>11</td>
<td>2</td>
<td>8.70</td>
</tr>
<tr>
<td>2.</td>
<td>Thovalai</td>
<td>9</td>
<td>2</td>
<td>8.70</td>
</tr>
<tr>
<td>3.</td>
<td>Rajakkamangalam</td>
<td>14</td>
<td>3</td>
<td>13.04</td>
</tr>
<tr>
<td>4.</td>
<td>Kurunthencode</td>
<td>18</td>
<td>4</td>
<td>17.39</td>
</tr>
<tr>
<td>5.</td>
<td>Thuckalay</td>
<td>9</td>
<td>2</td>
<td>8.69</td>
</tr>
<tr>
<td>6.</td>
<td>Thiruvattar</td>
<td>16</td>
<td>3</td>
<td>13.04</td>
</tr>
<tr>
<td>7.</td>
<td>Melpuram</td>
<td>11</td>
<td>2</td>
<td>8.70</td>
</tr>
<tr>
<td>8.</td>
<td>Munchirai</td>
<td>11</td>
<td>2</td>
<td>8.70</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>114</strong></td>
<td><strong>23</strong></td>
<td><strong>100.00</strong></td>
</tr>
</tbody>
</table>

From 23 PACBs 150 borrowers and 150 non-borrowers were selected on random basis.

**1.7.3 Tools for Analysis**

The tools employed for analysing the data include mathematical formulae such as percentages, ratios, and averages and statistical techniques like Correlation Analysis and Tests of Significance like t test, chi-square test and Garrett’s Ranking Technique.
i) Compound Growth Rate

To test the significance of the difference in the mean agricultural output, income, employment and savings of the borrowers and non-borrowers. "Compound Annual Growth Rate" is applied using the following formula.

\[
CAGR = \left( \frac{\text{Last year}}{\text{Beginning year}} \right)^\frac{1}{n} - 1
\]

\[
CAGR\% = \left( \frac{\text{Last year}}{\text{Beginning year}} \right)^\frac{1}{n} - 1 \times 100
\]

N = Number of years

Last year = last year amount

Beginning year = beginning year amount.

ii) Chi-square test

To test the significance of difference between the borrowers and non-borrowers in the standard of life, chi-square test is applied.

\[
\chi^2 = \sum \frac{(O_{ij} - E_{ij})^2}{E_{ij}}
\]

\[
\chi^2 = \text{Chi-square value}
\]

\[
O_{ij} = \text{Observed frequency of the cell in the } i^{\text{th}} \text{ row and } j^{\text{th}} \text{ column}
\]

\[
E_{ij} = \text{Expected frequency of the cell in the } i^{\text{th}} \text{ row and } j^{\text{th}} \text{ column}
\]
iii) Correlation

Co-efficient of correlation is used to study the relationship between credit and agricultural income, credit and employment and loan repayment and overdues.

\[ r = \frac{\sum xy}{\sqrt{\sum x^2 \times \sum y^2}} \]

\( r \) = Karl Pearsons Co-efficient of Correlation

\( x \) = Deviations from the mean of x series

\( y \) = Deviations from the mean of the y series

iv) Garett's Ranking

Garrett's ranking technique is used to rank the problems faced by PACBs in the study area. The percentage position for each rank is found by using the following formula.

\[ \text{Percentage Position} = 100 \left( \frac{R_{ij} - 0.5}{N_j} \right) \]

\( R_{ij} \) = Ranking given to \( i^{th} \) for \( j^{th} \) individual.

\( N_j \) = Number of factors ranked by \( j^{th} \) individual.

By referring to the Garrett's table the percentage position estimated was converted into scores. Then, for each factor the scores of various respondents were added and divided by the number of respondents to arrive at the mean score. The mean score thus obtained for each factor
was arranged in descending order. The factor with highest mean scores was given first rank followed by second, third and so on. It is to be noted that, under each problem, the respondents were asked to give only rank to a factor.

V) T-test

The ‘t’ test has been used to find out the significant difference among the two means. It is calculated by

\[ t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{(n_1 - 1)\sigma_1^2 + (n_2 - 1)\sigma_2^2}{n_1 + n_2 - 2}} \times \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}} \]

With the degree of freedom of \((n_1+n_2-2)\)

Where as
- \(t\) – ‘t’ statistic
- \(\bar{X}_1\) – mean of the first sample
- \(\bar{X}_2\) – mean of the second sample
- \(\sigma_1^2\) – Variance in the first sample
- \(\sigma_2^2\) – Variance in the second sample
- \(n_1\) – number of samples in first group
- \(n_2\) – number of samples in second group
In the present study, the ‘t’ test have been used to find out the significant difference among borrowers and non-borrowers with regard to agricultural production.

1.7.4 Period of the Study

The present study covers a period of eleven years beginning from 1997-1998 to 2007-2008 wherever they are found valuable in making correct assessment and drawing right conclusions.

1.8 Limitations of the Study

The main objectives of the present study is to evaluate the impact of the PACBs on agricultural production, income, savings and employment of the rural agriculturists. But the evaluation is subject to two incorrigible limitations. One is that accurate and precise information regarding the income and savings of the farmers is difficult to obtain. Most of the farmers are not in the habit of accounting their income and savings. Memory often tends to flag and therefore, the information given by the sample beneficiaries regarding their income and savings has been verified with such variables as their total yield etc.

The second limitation arises out of the contradictions found in the secondary data. Accounts regarding production of crops, yield of each crop per acre or hectare, quantity of produce sold etc., kept in the
books and ledgers of PACBs, Apex credit institutions and other related
government offices differ one another. The disparity is so wide and
staggering in respect of many perennial and seasonal crops that book
entries which form secondary data are kept out of the purview of
evaluation.

1.9 Chapter Scheme

The present study has been classified into seven chapters.

Chapter one consists of introduction and design of the study, features of
Indian agriculture, agriculture credit, statement of the problem, objectives,
review of literature, concepts, methodology, limitation of the study and
chapter scheme.

Chapter two deals with the agricultural background of
Kanniyakumari district.

The profile of Primary Agricultural Co-operative Banks is
exhibited in chapter three.

Chapter four discusses the performance of PACBs in
Kanniyakumari district with special reference to agricultural credit.

Chapter five evaluates the problems encountered by PACBs
in agricultural finance.
Chapter six analyses the impact of co-operative agricultural credit.

Chapter seven presents the summary of the findings and brings out the suggestions and policy implications.