CHAPTER II

REVIEW OF LITERATURE

In this chapter a review of the available literature, both theoretical and empirical, has been done for gaining a perspective on the problems and issues related to the present study. The review is presented in two sections.

The first section reviews the theoretical propositions formulated by various economists from time to time relating to the role of credit/capital and credit institutions in the process of development of both developed and developing countries. It also presents a brief summary of various viewpoints expressed about some of the credit linked development programmes which were formulated and implemented with respect to specific regions and/or specific target groups. This section thus serves a useful purpose of providing a theoretical framework for the present study.

In the second section, a review of empirical studies conducted by (i) the government organizations
like Programme Evaluation Organization (PEO) of Planning Commission, Reserve Bank of India (RBI) and National Bank for Agriculture and Rural Development (NABARD); (ii) research institutions, and (iii) individual researchers on the role and impact of banking institutions and their credit schemes on the economic conditions of rural poor, is presented. Since the present study has taken up the question of institutional finance to small borrowers relating to two specific schemes - Dairying and Minor Irrigation - the review of literature centres around studies relating to these two schemes.

SECTION I

REVIEW OF THEORETICAL ISSUES

The role of financial institutions in the economic growth of the developing economies has come under scrutiny by economic planners and other policy makers in these countries. Mobilisation of domestic financial resources, either to supplant or to supplement external financial assistance where it is available, has assumed a central role in development programming. Financial institutions are also being increasingly
utilised to channel such resources to economic sectors considered essential for growth and social equity. The attention focused on the financial intermediaries has induced the governments of a wide range of developing countries to assume direct control of financial institutions. In India, the nationalization of 14 major commercial banks in 1969 was considered as the best example to this phenomenon. And the consequent developments in handling the banking sector by the Indian government were an indication that financial intermediation was recognised as an important source in the search for ways to improve the growth prospects.

Financial System and Economic Development

One of the most important problems in the field of finance, is to understand the effect of the financial system and its development on economic growth.² The question of whether financial structure and development have any impact on the productive sectors of the economy, and if so, how much, has elicited a wide range of answers from economists. A major point of the resulting controversy is whether the development of financial institutions matters at all for economic growth. The diversity of opinions varies from considering the development of financial institutions
banks in particular and occasionally including non-
monetary financial institutions) as a necessary factor for the economic growth of developing economies, to holding that it is neither necessary nor sufficient for growth.

The more positive view on the role of financial institutions in economic development is held by a substantial proportion of the students of financial development. They all attribute a positive role to financial institutions in the development process. This view is traditionally associated with Schumpeter's analysis of the theory of economic development, more aptly termed the theory of capitalist economic development. According to Goldsmith, both economic theory and economic history assure that the existence and development of a superstructure of financial instruments and financial institutions is a necessary, though not sufficient, condition of economic development.

Other proponents of the positive view of the role of financial institutions include Adelman and Morris, Cameron et. al., Gerschenkron, McKinnan, Goldsmith, Patrick, and Shaw to name a few. The relative magnitudes of the impact attributed to banks and other financial institutions in developing economies
differ among these authors. In the following paragraphs, the earliest and some of the more recent positive views are presented.

Schumpeter spoke of credit as a phenomenon of development and regarded the banking system, along with entrepreneurship, as being the key agent in the process of development. Gerschenkron's seminal work has shown the important role banking system played in European economic development. According to Cameron, the positive contribution of financial institutions, in igniting the process of growth of a country depends upon how banking policies are pursued and on the pattern of evolution of the banking structure. Gurley and Shaw made an elaboration of the financial intermediation and widened the spectrum of financial assets available to the community in the process of development. Cameron thus concludes that both theoretical reasoning and the historical evidence suggest that the banking system plays a positive, "growth-inducing" role as well as responding passively to the demand for financial services.

**Capital Formation and Growth**

A meaningful role of banks in the savings-investment process of developing economies is often
emphasised by the modern economists. This approach is based on the generally accepted assumption that a continuous/permanent increase in physical capital formation is essential for the growth of an economy.

That physical capital formation exerts a strategic influence on the path and pace of economic expansion is well founded in economic thought. The vital role of physical capital accumulation in growing economies has indeed been a point of agreement of all major schools of economic thought. This emphasis on capital formation is found in classical, Marxist, neoclassical and Keynesian analysis of the growth process. The current literature concerned with the economic development problems of developing countries also stresses, in varying degrees, the role of capital formation.

In classical doctrine, the growth of economy was thought to be determined by the availability of the factors of production alone.\(^1\) As the supply side of the economy was dominant, the more abundant were these factors of production, the fewer were the limitations on the capacity to grow. Moreover, since land was assumed to be fixed, and labour was considered a surplus input, capital accumulation was allotted centre stage.
According to Marx, by means of the banking system the distribution of capital as a special business, a social function, is taken out of the hands of the private capitalists and usurers. But at the same time, banking and credit thus become the most potent means of driving capitalist production beyond its own limits, and one of the most effective vehicles of crises and swindle.  

The Neo-classical doctrine is based on a truly perfect capital market. It advocated that the intervention in any form in its functioning like low deposit rates and the low ceiling on loan rates restrict financial development and subsequently real development.  

Keynes, in his General Theory of Employment, Interest and Money, offers capital investments as an explanatory variable of economic expansion, decline and stagnation. In Keynesian analysis of the path of economic growth, the rate of investment is a definite indicator of the turning points, be they booms or crises. In Keynesian theory, not only did capital investment play a central role in the capacity of production expansion and labour productivity, but was also found to be the most volatile component of aggregate effective demand of the economy.
Post-Keynesian capitalist growth theory for the matured economy generally has insisted on placing capital accumulation at centre stage and focusing on the resultant secular increases in labour productivity.

The emphasis on capital formation in the contemporary growth models is based on the fact that investment increases income as well as productive capacity. The literature pertaining to the economic problems of developing countries has also stressed the shortage of savings and low levels of investments. In its most popular presentations, the emphasis on the savings/investment process in the limited growth of developing countries is indicated by the vicious circle of poverty arguments.\(^{21}\) Both Lewis and Rostow emphasised this viewpoint and stated that the increase of capital investment from 5 to 10 percent or more of net national product is a necessary requirement for the take-off of any economy.\(^{22}\)

The emphasis on capital formation has been dominant among modern development economists and however, at the same time, reservations are held about the strategic role assigned to capital formation to the neglect of all factors.
Alternative Hypotheses with Respect to the Role of Banks in Economic Development

The literature on the role of commercial banks in the savings-investment process, and in particular comprehensive studies on the contribution of the banks to capital formation, may be classified under two distinct hypotheses: the financial repression hypothesis and the structuralist hypothesis.

Financial Repression Hypothesis

The financial repression hypothesis is associated with the works of Cameron, Mckinnon and Shaw. All the three authors are strong advocates of the efficacy of financial development in contributing significantly to the real growth of developing economies. They contend that the banking system (financial institutions system in the case of Mckinnan and Shaw) is invariably growth-inducing and that only when it is repressed, which in their view is often the case, would it fail to make a positive contribution and would act as an obstacle to real growth.

The financial repression hypothesis essentially preaches the virtues of reliance on market forces. According to the authors of this proposition, the financial system—primarily the banking system in
these economies - is most conducive to economic growth once it is allowed to operate under free-market direction. In summary, this hypothesis explains the most, if not all, the factors contributing to the "poor" performance of the lagging economies in terms of internal policy-induced distortions. (The regulated interest rates and other forms of intervention in bank lending policies are said to be the reasons leading to financial repression). The low ratios of bank deposits to total domestic savings is traced to the low ceilings on deposit rates. The record of organised bank loan issues being biased against small industrial and agricultural producers is explained as a direct manifestation of the low ceilings on loan rates. Therefore, the more pervasive the government's intervention in terms of deposit and loan rates, in direct portfolio control, and so on, the less responsive will the banking system be to economic development.

Another school of thought is also against the government intervention in the credit market and opposes the provision of cheap credit through the formal credit institutions to the small borrowers but for other reasons. Particularly Adams, Donald Graham, and Von Pischke in their writings emphasise this aspect for the following reasons. Firstly, viability of financial
institutions serving small farmers could be eroded by low interest rates, high administrative costs associated with administering small loans, and cumbersome banking practices that are inappropriate to the needs of the small farmers. Secondly, the village moneylenders will continue to dominate the rural credit scene because of their easy approach - ability, informality and flexibility. So, the private moneylenders can be utilised as agencies by the formal lenders, to reach large number of clients with minimum cost. Thirdly, the product prices, crop yields, and the costs of production are much more powerful determinants of farmers' decisions than are credit availability or interest rates. And, finally, interest rates are critical in determining the performance of financial markets, and cheap-credit policies are a major reason for the poor performance of rural financial markets in low income countries. They destroy the incentives for rural households to save in financial form and seriously distort the way the lenders allocate loans.

**The Structuralist Hypothesis**

The structuralist hypothesis, better known as the Gerschenkron hypothesis, is derived from historical interpretations of the role of banks in the
capital formation processes of early European industrialisation. In generalising from the industrial capital needs and financial sources of early European industrialisations, and in particular the English, German and Russian experiences, Gerschenkron concludes that the role of banking in industrial capital formation is determined by the relative backwardness of an economy and its structural peculiarities.

The relationships he found, following the chronological order of European industrialisation, are:

(i) The more advanced economy requires only minimum capital investments; that is, for advanced (developed) economies, the capital needs of industrialisation are met outside the banking system - household earnings and internal business or agricultural savings were sufficient to finance the small plants necessary for manufacturing.

(ii) In contrast, the relatively backward economy (moderately backward) does require some special institutions to supply long-term funds for industrial capital.

(iii) Finally, in the case of extremely backward economies (developing countries) the structure is such that not even the banks could supply the
necessary capital and entrepreneurship for industrialisation. This has been due to the drastic shortage of private savings and extreme lack of enterprise, in these economies.

Implicit in the above characterisation is the notion that banks are either unnecessary or ineffectual in the extreme stages of development and could be utilised as a source of capital only in the intermediate stages.

In short, according to financial repression hypothesis, it is the extent and nature of government intervention in the working of financial institutions that determines their (banks) contribution to economic growth, while the other hypothesis holds that the structure of the economy and its level of development decides the nature of financial institutions and their involvement in capital formation and real growth. However, when it comes to the applicability of the above mentioned two alternative hypotheses with respect to the role of banks in economic development of the developing countries like India, both have serious limitations. The assumptions underlying the financial repression theory like minimum state intervention in the functioning of banks and the free play of market forces (liberalisation) as a pre-condition for economic
development are not suitable in explaining the case of developing countries. The reasons are many and important among them are:

(i) Dominance of agriculture (which is carried out mostly for subsistence) with highly inequitable asset structure (mostly land).

(ii) Dualism in the capital/credit market, and

(iii) Low-monetisation in the economy.

As far as the second hypothesis is concerned, it may be questioned in terms of its general applicability, since it is based on the historical analysis of the experiences of the industrialised countries. However, the importance of capital formation and the role of banks in the economic development of the developing countries have hardly been emphasised here. Taking clue from the theories and explanations analysed in the earlier paragraphs an effort has been made to analyse the theoretical ramifications of the role of banks in capital formation in India with a special reference to agricultural and rural development.
The vast majority of developing countries are agrarian in economic, social and cultural outlook. Agriculture, both subsistence and commercial, forms the principal economic activity in terms of the occupational distribution of the labour force, if not in terms of proportionate contributions to the gross national product. Inspite of many common problems these nations face (low levels of living, low levels of productivity, high rates of population growth, high and rising levels of unemployment and under-employment, significant dependence on agricultural production and primary sector exports, and dominance, dependence and vulnerability in international relations), the development strategies vary from one country to the other depending on the nature, structure, and degree of interdependence among its primary, secondary and tertiary sectors.

However, one point which is common among them is the realisation that a sound strategy has to be developed to mobilise capital resources to invest in their developmental activities. And to this effect they have been gearing up their banking structure – central banks, development banks, commercial banks, cooperative banks – and formulating policies and programmes from time to time.
In what follows, by leaving aside an in-depth analysis into the issues relating to central banking (like Reserve Bank of India) and development banking (like Industrial Development Bank of India) since they are not directly relevant in the present context, the issues raised with respect to the role of commercial banks and cooperative banks in agricultural and rural development are discussed in brief.

In developing countries like India, as most of the farmers don’t have their own resources to finance the process of modernisation, they rely heavily on borrowings. In other words, farm credit plays the role of an 'accelerator' of agricultural development. However, for this, credit should be adequate in quantity, cheap and development oriented as suggested by scholars like Belshaw, Baun, et.al., Murray, Gurley and Shaw, and Schultz.

Schultz contends that the farmers who practice the traditional farming are 'efficient but poor'. To turn the farmers towards the modern methods of cultivation and to increase the agricultural productivity he suggests two things: technological change and institutional innovations. Implied in this theory is that the modification of financial institutions is of crucial significance, as farmers
particularly the poor farmers require external financial assistance to adopt the new technology in agriculture since it is capital intensive.

Hayami and Ruttan's "induced Development Model" built on the Schultz theory develops an "explanation of the mechanism by which a society chooses an optimum path of technological change in agriculture". This theory advances four interrelated mechanisms as critical elements of agricultural development:

(i) Induced innovation in the private sector;
(ii) Induced innovation in the public sector;
(iii) Induced institutional change, and
(iv) Dynamic sequences in the development process.

And this model proposes that institutional change is induced by individuals perceiving new economic opportunities that could be secured by institutional modifications.

Stevens further hypothesises that the institutions that govern the use of technology or the mode of production can also be induced to change in order to enable both individuals and society to take fuller advantage of new technological opportunities under favorable market conditions. According to him, labor is abundant but land is a constraint in the
developing economies and under these resource constraints small farmer development requires increased productivity per unit of land. However, as the agricultural transformation accelerates, capital resources and credit are emerging as limiting factors. Workable procedures, for the delivery and repayment of credit in small farm areas, therefore, become essential to rapid growth.

After reviewing some of the literature on credit and agricultural development, Bathrick refutes the traditional-simplistic-view that the provision of low interest credit alone is the key to the economic development of the small farm sector. Ursula K Hicks also points out that in respect of credit for the little man there is considerable danger that a government may entangle itself in bad debts and open-ended subsidies which contribute little to development. So the administration of credit can usefully be combined with other agricultural services and advisory organisation.

A host of studies, reports (by Reserve Bank of India and other organizations) and documents prepared by international organisations like Food and Agricultural Organisation (FAO) and World Bank, consider credit as an essential instrument for agricultural and rural development and point out that
the technology should be modernized and the small farmers should be given a special treatment. However, a glaring omission of this type of 'generalistic approach/theory' is the inadequacy of attention to the interrelationship between agrarian structure, on the one hand, and inadequacy of credit to the small farmers and the preferred model of the institutional system of credit on the other.

**Urban-bias Theory**

Myrdal,39 Lipton,40 Streeton,41 Raj Krishna,42 and Nanjundappa43 and a host of others hold that there is an urban-bias in rural banking and planning. Myrdal remarks that "studies in many countries have shown how the banking system if not regulated to act differently tends to become an instrument for siphoning off the savings from the poorer regions to the richer and more progressive ones where returns on capital are high and secure".44 His principle of circular and cumulative causation explains the flow of rural savings into the urban economy through the banking mechanism in a market economy.

**Bio-farmer Bias Theory**

Griffin,45 Lipton,46 Rao,47 Parthasarathy,48 and a large number of Indian Economists hold the view
that there is a big-farmer bias in rural banking. For example, Griffin provides an interesting explanation for non-innovation by small farmers in terms of (i) inequalities in land ownership and (ii) 'Landlord-biased' technical progress. According to him the most important reason for the bias of the 'green revolution' (in favour of the big farmers) is the bias of government policy.

For Lipton, the relation between big-farmer-money lenders and small-farmer-borrowers can frustrate investment by both the groups.

According to Rao, a major criticism of institutional financing is that large farmers are able to secure a large finance from institutions, some of which might have been diverted for unauthorised purposes or money lending to small farmers, with a view to securing economic and social hegemony.

This set of theories argues that though the new agricultural technology is scale-neutral, the access to the capital and other input markets is not scale neutral. That is, the access to the institutional credit market becomes proportional to the size of the owned assets. According to Tendulkar the access to relatively low interest bearing institutional loans is
extremely limited for the virtually assetless social classes such as the agricultural labour and the artisan households and those cultivator households (in particular, the marginal and the small farmers) who are at the lower end of the asset scale.

In terms of numbers, the small farmers dominate the rural scenario in all the underdeveloped countries. However, they are usually outside, or at best only marginally involved in the commercial sector and have little capital to invest in output increasing activities.50

Self-Liquidation Theory

This theory has been advocated by the bankers who strongly believe that once the necessary amount is sanctioned to a project it automatically becomes viable and the loan amount is repaid in the process. A report prepared for the Reserve Bank of India51 says that the criterion of feasibility ensures that the investment proposed to be financed is justified on economic considerations and at the same time provides a built-in-cover for the loan by demonstrating that it is self-liquidating.
The Growth with Equity Theory

Even as the socialistic ideals of reduction of inequality and a more even distribution of economic power were reiterated during the fifties and early sixties, the emphasis on "growth first" gained greater validity with the writings of Rostow on the stages theory, Simon Kuznet's on the legitimacy of widening gaps in the initial stages of development, and Lewis's on economic growth and use of surplus labour from agriculture. However, the hopes built on 'Trickle down effect theory' have been belied during the fifties and sixties when the world found the lack of trickle-down effects of growth, the increasing inequalities, and the impoverishment of the bottom 40 percent of the underdeveloped world.

Since the late sixties and the early seventies there has been an attempt to translate development in humane terms with an emphasis on providing basic standards for the poorest sections. There has been a marked shift from the dominant "growth-first-redistribute-later" approach to strategies promoting growth with equity and redirecting resources with a favourable bias towards the poor 'target groups'.
In the writings of eminent Indian economists, especially by agricultural economists, like Rao, Desai, Bhalla, Bhalla and Chadha and Dantwala the concept of equity has been given a predominant place. The official realisation of this phenomenon came when the All India Rural Credit Review Committee Report was submitted in 1969, which revealed the inequitable distribution of credit by the cooperative societies. And to arrest the situation of increasing inequalities, the 'target group approach' seems to be a popular well-organised top-down method favoured by among others, the World Bank and the Indian Government. This may be called a 'technical-managerial approach.' The usual method is to set up institutions and redirect resources towards these "target groups".

In the past, inequality has been defended by some economists on the ground that it is a source of capital accumulation and economic growth. They have argued that to try for equitable distribution before completing the task of capital accumulation is to work for redistribution of poverty only. As put forward by Joshi here lies an intellectual challenge of creating a theory which can harmonise the task of capital accumulation with that of poverty eradication, i.e. what is termed as "Development with Social Justice".
The Structuralist Theory/Approach

Considered from objective standpoint, neither the classical capitalist nor the classical socialist pattern should serve as the ideals to be followed by the Third World Countries like India today. The problem (of Indian economy) lies in the fact that the planners have accepted the legitimacy of a model of development which facilitates growth but accentuates inequality. And the logic of the argument is that if the present distribution of assets left in tact and the modern technology is brought into this structure, it will, as Mahatma Gandhi said, bring 'Mass Production' but destroy 'Production by the Masses'.

Those who advocate a structural change as a pre-condition for economic growth with equity include among others, Bardhan, Rudra, Kurien, Joshi and Bhaduri.

The structuralists are the opponents of the target group approach. They view that this kind of redirection of resources invariably finds its way towards more influential sections of the community. According to them agricultural credit should be viewed not in isolation but in relation to supporting services and the needs of improved technology. The U.S.
agricultural credit models based on individualised supervision approach cannot be replicated in developing countries. And adequate attention should be paid to the inter-relationship between agrarian structure, on the one hand, and institutional credit system and the state policies towards the input and output markets, on the other.

Various theories/view points discussed hitherto (relating to the role of agricultural credit in the Third World Countries) may be summarised under alternative perspectives as follows:

**Agricultural Credit Markets - Different Perspectives**

The development of agricultural credit markets and the provision of agricultural credit have been major programme activities in agricultural development by the U S Agency for International Development, World Bank, and the several Regional Development Banks. This emphasis on credit is based on five perspectives.

First is the Schumpeterian view, which identifies innovation as the critical element in economic development and credit as the principal instrument that allows the innovator to bid resources away from other activities.
A second perspective is based on a view similar to that of market reform: The farmer obtains credit, sells his output, and often gets his job or rents his land from the same middleman and is thought to be exploited in each transaction.

Third perspective (which is closely related to the second), views public credit institutions as providing part of the supervised education and credit package designed to induce traditional farmers to adopt modern inputs.

A fourth perspective views credit as an income transfer mechanism to lessen inequalities in income distribution in rural areas.

The fifth perspective views subsidized credit as an incentive to farmers to expand production in spite of disincentives resulting from market interventions or exchange rate distortions that discriminate against farmers in product markets.

The ongoing programmes of the Indian government to develop the rural areas in general and small and marginal farmers and agricultural labourers in particular, with the help of credit institutions are based on the fifth perspective.
SECTION II

REVIEW OF EMPirical STUDIES

This review (of empirical studies) focuses on the aspects/issues discussed and the methodologies adopted by the selected studies.

Several aspects/issues touched upon in these studies may be categorised, for the convenience in discussion, as follows:-

i) Availability/Accessibility and utilisation of credit,
ii) Impact of credit - Dairy loans,
iii) Impact of credit - Minor irrigation loans,
iv) Loan repayment, and
v) Viability of loans.

1) Availability/Accessibility and Utilisation of Credit

While studying about the problems of small and marginal farmers in India, the National Commission on Agriculture71 (1976) observed that "it has been increasingly realised that the small and marginal farmers, if helped with necessary resource and guidance, can increase their crop production. The handicaps from
which the small and marginal farmers suffer are lack of resources, facilities, technical guidance and allocative efficiency."

Mukhopadhyay and Rao\textsuperscript{72} stated that the strategy of agricultural development during the sixties and seventies was characterised by accent on higher productivity of foodgrains, rather than on equity norms in terms of accessibility of material, advisory benefits to different categories of farmers and gains therefrom.

Patel\textsuperscript{73} in his study found that the large farmers were cornering the institutional credit because of their easy access to these institutions. Hadimani\textsuperscript{74} found that since the rural poor were not having the political power to control credit organisations like cooperatives they were deprived of credit facilities. Moreover, the process of getting loan itself was not easy and liberal to the small farmers, as observed by Singh and others.\textsuperscript{75} And they also stated that the small and marginal farmers were not receiving required assistance from the extension officials to adopt new technology since most of them were illiterates.

The CRAFICARD\textsuperscript{76} study found that the access to relatively low interest bearing institutional loans was extremely limited for the virtually assetless social
classes such as the agricultural labour and the artisan households and those cultivator households (in particular, the marginal and the small farmers) who were at the lower end of the asset scale.

Mohana Rao examined the accessibility of the borrowers from a different point of view. According to him the typical borrower in the unorganised credit market has no access to the organised market. This isolation, coupled with an inelastic demand for credit, allows the private moneylenders to decide freely what interest rate to charge. Furthermore, the highly personalised relations between lender and borrower permit the lender to secure from the borrower the collateral which the latter cannot employ in the organised market.

A study conducted by Roshan Singh and others in Bidpuri block in U.P. revealed that the availability of commercial bank credit was much higher on large farms as compared to small and medium farms. It concluded, on the basis of primary and secondary data analysis, that the problem of providing adequate credit to small farmers deserved immediate and adequate attention.

Rao observed that even the inadequate supply (credit, fertilizer, pesticides, storage and marketing facilities) was not well distributed among the farmers.
of various categories and between irrigated and unirrigated areas. The small and marginal farmers were having a low and sometimes even nil rate of access to such supplies in the rural areas. This observation was found to hold good by an empirical study conducted by Thingalaya in Karnataka.

The PED study which covered 16 states, 33 districts all over India in 1985 found that nearly 613 beneficiary households out of a total of 1170 households selected faced problems in getting loans. Around 23 percent of the selected households experienced delays in getting loans sanctioned. And another 20 percent of the households complained that the bank branches catering to their areas were located at a considerable distance from their villages.

The NABARD study which covered 60 blocks and 30 districts in 15 states all over India and 122 branches of the financing banks and a sample of 1498 programme beneficiaries noted that the actual amounts of subsidy and loan provided were relatively low. The information collected from sample beneficiaries showed that 50 percent of beneficiaries, financed for minor irrigation schemes, found the amount of loan and subsidy received inadequate to cover the actual investment cost.
Subba Rao demonstrated that the demand for short-term production credit for both small and large farmers was directly related to the current level of input requirements and inversely with the self financing ability of the farmers, given risk and uncertainty. And the supply of long-term institutional (cooperative as well as commercial bank) credit was a direct function of asset (land) endowments.

On the basis of 'internal progress reports' on Marginal Farmers and Agricultural Labourers (MFAL) programmes and empirical studies carried out in Delhi, UP and West Bengal, Pandey concluded that due to lack of effective expansion of banking facility, and lack of effective adoption of various programmes, the large share of advantages had gone to the better-off section among marginal farmers and agricultural labourers. Mishra and others in their study conducted in Basti district of Uttar Pradesh found that nearly 76 per cent of the credit borrowed from cooperatives, 98 percent of the credit borrowed from commercial banks and 95 per cent of the Land Development Banks by the 100 farmers selected have been spent for production purposes.

According to the studies conducted by PEO and NABARD, the beneficiaries, to receive the subsidized loans under IRDP, were selected mostly by the
village level workers and block level officials without consulting the bank officials. This led to the misutilisation of loans by the beneficiaries. These studies also found some cases of misappropriation of subsidy amount by the lower level functionaries with the connivance of the bank and block officials.

Precisely for this reason the CRAFICARD report, on the basis of the survey warned that if the beneficiaries were not properly identified, the credit would become a burden on those borrowed.

Mohana Rao in his study found that in irrigated areas the loans borrowed from a RRB were almost completely utilised for productive purposes (the utilisation was 98%). However, Raju and Patel in their study on IRDP found that only 34 per cent of the small borrowers utilised the assistance properly, and nearly 22 per cent of the borrowers completely misutilised the loans, and the remaining 44 per cent of them partly misutilised.

Indira Hirway elaborately explained how the improper identification of beneficiaries led to the misutilisation of loans by the rich in the rural areas. Supporting evidence to this came from the PEO study which noted that as many as 302 out of a total of 1170 sample beneficiary households (26%) had an annual income
exceeding the poverty line limit (Rs.3500) at the time of their selection.

According to Dhawan93 what really tilted the balance in the matter of income benefits per unit of irrigation water (Public canal) in favour of large farmers was their superior access to all inputs: irrigation, credit, agricultural extension services, bureaucracy, education, cooperatives, etc.

A large number of studies found the problem of non-eligible borrowers getting loans by submitting false records to the credit institutions., Notable among them are by Sinha and Jagdish Prasad94 (1980) and Rao and Malya.95 Sinha and Jagdish Prasad in their study about the special programmes implemented for the weaker sections in Musahari block in Muzaffarpur District, Bihar found that the large bulk of beneficiary households belonged to the richer sections of the community and not to the poor sections. However, they further noted that the programmes resulted in creating a positive impact on generating employment and increasing earnings of those poorest sections of the society who managed to get the loan assistance. Rao and Malya in their study conducted in South Canara district in Karnataka found that big farmers by manipulating the land records availed loans meant for small farmers.
A large number of studies about the impact of dairy loans on the small borrowers is available. However, the methods they have followed to collect data and the techniques they have used to analyse the collected data are found to be weak and inadequate in the sense that they could not demonstrate clearly the impact of dairy development alone on the social and economic conditions of farmers as pointed by Sidhu in his Rapporteur's report on 'Dairy Development and Bovine Economy'. Another point is that most of the studies have taken into account the case of small farmers by neglecting the marginal, farmers and agricultural labourers.

The following review takes into account only the important studies which have analysed the impact of dairy enterprise on the economic conditions of small borrowers. Further, the review has been done by grouping these selected studies on the basis of the methodology followed to workout the impact of dairy loans. The following are the major types:

a) Studies adopting inter-temporal analysis.
b) Studies adopting cross-sectional analysis
c) Studies adopting a combination of both (a) & (b)
(d) Studies comparing irrigated area with unirrigated area

(e) Studies using statistical tools like production function, linear discriminant function, and cost-benefit ratio, to workout the impact of dairy loans.

(a) **Studies Adopting Inter-temporal Analysis**

This methodology has been followed by Mishra,97 Chikara,98 Rao,99 Naidu,100 Pawar and Subhash,101 SBI,102 the PEO103 and NABARD.104 They have worked out the differences in the income and employment levels of the beneficiaries of dairy loans between two periods, i.e., before and after the dairy loan. In other words, they evaluated the *ex post* conditions of the selected beneficiaries in the light of *ex ante* conditions. By this way, they have attributed the differences in the selected variables, if any, to the dairy schemes. The NABARD study terms it as pre and post-development income. IRMA study105 terms it as 'Then and Now' approach.

* Chikara in his study conducted in six villages of Hissar district (Haryana) found that the advances given by the banks helped the selected households in increasing the gainful employment and income.
An evaluation study of a scheme refinanced by Agricultural and Rural Development Corporation (ARDC) conducted by State Bank of India (SBI) in Pondicherry in 1978 revealed that, of the total investment in dairy activity, the Bank's loan formed 55 to 67 per cent, subsidy 25 to 33 percent, and borrowers' share 10 to 18 per cent among the differential size groups of farmers. The gross return from dairy activity worked out to about Rs. 125 per month per animal. The net surplus was Rs. 41.48 per animal, while it was only Rs. 3.98 in the pre-loan period. Similarly, the dairy activity offered employment for 22.15 man days per month in the post loan period as against 12.95 mandays in the pre-loan period.

The study by NABARD found that the benefits were not sustainable in the case of animal husbandry schemes in general and the milch animals in particular. Apart from the poor quality animals, the other reasons for this state of affairs were death of animals (26 out of 273 sample units) and sale of animals (31 out of 273 sample units).

The PEO study found a significant increase in the income and employment levels of dairy loan beneficiaries during the study period. The similar conclusion has been arrived at by the other researchers listed earlier through their studies conducted in various locations at different points of time.
The second type of methodology, cross-sectional analysis termed as 'with and without approach' has been followed by Singh and Das, Pandey and Khanna, Satpute, Singh and Pandey, and Tej Bahadur and others. They have compared the income and employment levels of beneficiaries with that of non-beneficiaries, and the differences, if any, in the selected variables have been attributed to the dairy scheme. Almost all the studies found an improvement in the income and employment levels of the beneficiaries compared to non-beneficiaries.

According to Pandey and Khanna, due to SFDA scheme, the average levels of all the socio-economic indicators increased in the case of beneficiaries as compared to the non-beneficiaries in the two districts in Haryana, where the study was conducted. The findings further revealed that the SFDA made a positive impact in transforming the bulk of non-viable weaker sections into viable ones in both the districts.

Singh and Das used this 'With and Without approach' and attributed the observed differences in the values of selected parameters between the cooperatives (with) and the control villages (without) to Operation
Flood-I. They found that the income generation was more in the case of villages where the MPCSs were functioning.

(c) **Studies Adopting a Combination of Both (a) and (b)**

A few studies notably by Agarwal and Saini,¹¹¹ Peter and Sebastian,¹¹² and Kannathal¹¹³ analysed the impact of dairy programmes on the economy of small and marginal farmers by using inter-temporal, (comparing the overtime situation) and cross-sectional (comparing at a point of time) approaches. Agarwal and Saini concluded that the SFDA brought a significant positive impact on cropping intensity, farm investment, net farm income and human labour employment on the small and marginal farmers, who participated in the various programmes of the agency.

Peter and Sebastian studied the impact of SFDA assistance on the small borrowers and found that there was a positively significant increase in the levels of economic variables like net worth of farm, cropping intensity and net profit per acre, due to SFDA assistance. According to Kannathal though an increase in the income and employment level was observed after SFDA assistance, the standard of living of small farmers had not improved perceptibly.

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(d) Studies Comparing Irrigated Area with Unirrigated Area

In his study conducted in Parbhani district in Maharashtra, Satpute found that the impact of special schemes implemented under MFAL programme was better in dry region as compared to the irrigated region. A similar conclusion was arrived by Mohana Rao when he compared the impact of the RRB loans made in irrigated area. Even the PEO study, since it was conducted at the All-India level, divided the study areas into four categories namely, agriculturally developed area, agriculturally less developed area, areas with good administrative infrastructure and areas with poor infrastructure. Accordingly, the study found that the incremental income in the case of animal husbandry schemes was the highest in the areas with good administrative infrastructure and the lowest where the infrastructure was poor.

A study conducted by the AERC at Vallabhb Vidyanagar showed that the proportion of income from dairying to the total farm income was higher in the case of farmers with small holdings. Similar findings were arrived at by many studies. For example, in a review article, Mishra stated that the introduction of dairy enterprise on a small farm of 1.7 hectare could increase
the annual farm income from Rs. 5,692 to Rs. 12,275 and the employment level from 4,016 man-hours to 4,412 man-hours per year. On marginal farms also a similar increasing trend could be envisaged in income and employment. Further, Mishra noted that introduction of a dairy enterprise increased the incomes of small farms of 2.5 hectares by 67 per cent, of the medium farmers of 5.0 hectares by 32 per cent and large farmers of 10.0 hectares by 41 per cent.

(e) Studies Using Statistical Tools to Workout the Impact of Dairy Loans

A few studies used statistical tools to find out the impact of dairy loans. The AERC, Madras evaluated the dairy schemes of SFDA in Tirunelveli district (in Tamil Nadu) in 1979 by using production function analysis. George and Choksi, calculated costs and returns of dairying to analyse the investment worth in dairying. The same method was adopted by George and Srivastava, Pandey and Muralidharan and Singh and Pandey used an advanced statistical technique namely linear discriminant function analysis to know the impact of selected variables on the viability of the farmers who borrowed agricultural loans. The major findings of these studies were (i) the
returns from dairying were significantly influenced by the amount spent on fodder and cattle feed, and (ii) the viability of small farmers was determined by the cropping intensity and the value of inputs like fertilizer used in the crop production.

By working out the rate of return on investments made with the help of bank finance by the big, medium, small and marginal farmers in U.P., Shukla,¹²⁴ found that the unit return on investment was higher among marginal farmers followed by small farmers and medium farmers. The rate of return on investment was the lowest among large farmers.

**Impact of Credit - Minor-Irrigation Loans**

A few studies are available about the impact of minor irrigation loans on the small and marginal farmers. As observed by Pal,¹²⁵ in India, several researchers have touched upon different aspects of how irrigation may contribute to agricultural production. Many of the studies have adopted a simple production function approach to show quantitatively how irrigation raises agricultural productivity under the *ceteris paribus* condition. Another set of studies has analysed the impact of irrigation on cropping intensity and hence (indirectly) on agricultural production. Some studies
have also discussed the role of irrigation in bringing about changes in cropping pattern and stability in agricultural production. In accordance with the objective of the present study, a brief review of the available studies on the impact of minor irrigation schemes undertaken by the small and marginal farmers with the help of loans has been done in this section.

A study conducted in Karnataka found that though the irrigation facilities provided to the farmers positively contributed to the increase in the output of first crop, lack of credit facilities, among other factors, inhibited raising of second and subsequent crops.

According to the NABARD study, 50 per cent of beneficiaries out of 158 beneficiaries financed for minor irrigation found the amount of loans and subsidy received was inadequate to cover the actual investment cost. However the minor irrigation sources created by the loans increased the employment per beneficiary household to 120 mandays. And the income generation was decidedly better for minor irrigation in all the states.

Kulkarni analysed the returns to investment in minor irrigation by selecting four small farmers and eleven big farmers in Kolhapur district who have
borrowed from ARDC Credit Project II of the Maharashtra Land Development Bank to dig wells and to install pumps. He found that only 73 percent of the total cost was met out of the loan amount. The cropping intensity had increased, after the scheme was taken up. As far as cropping pattern was concerned, a wide difference between expected and actual positions of the selected farmers was observed. Despite the fact that farmers grew more cash-crops, the actual net income realised by the farmers was considerably less than the expected one.

Prasad 129 conducted a post-utilisation study on the advances to minor irrigation by a PLDB operating in Channapatna Taluk of Bangalore District of Karnataka during 1980. The sample was drawn from six villages of the taluka covering 15 small and 15 big farmers who had borrowed loans from the PLDB to dig new wells. By comparing the post-loan situation with that of pre-loan situation of the same farm, the study found distinct changes in the cropping pattern after the well was sunk by the selected farmers. The pre-loan per acre average net income of small farmers was Rs. 370 and this increased to Rs. 2132 during the post-loan period. The corresponding figures for big farmers were found lower at Rs. 308 and Rs. 1056 respectively.
iv) **Loan Repayment**

A large number of studies and reports is available about the loan repayment problems of farmers who have borrowed from cooperatives, commercial banks and Land Development Banks. However, only a few relevant studies are reviewed here keeping in mind the scope of the present study.

A study team of RBI\(^{130}\) noted that the large amounts of overdues to the cooperatives was a standing testimony to the wilful default and non-payment by some of the borrowers from cooperatives who were mostly large farmers.

Avadhani's\(^{131}\) study found that the repayment performance of large farmers was poorer than that of marginal farmers, implying thereby that part of their funds could have been used for unauthorised purposes.

Sinha and Prasad (1982)\(^{132}\) in their study found the repayment habits of 102 beneficiary households selected as fairly poor. One of the reasons, according to them, for poor repayment was that the schemes were generally accepted as a 'dole' or relief programme by the beneficiaries.
The PEO study\textsuperscript{133} reported that in many areas the percentage of overdues varied from 50 to 60 percent. It was as high as 70 percent in one of the selected districts in Uttar Pradesh which in real terms meant that no instalment of loan had been repaid, besides adjustment of subsidy.

A review of nearly 20 micro-level studies conducted in various parts of India during the period 1967 to 1991 on defaults of institutional loans to agriculture was done by Anandteerth and Basanna\textsuperscript{134}. On the basis of the results of these 20 studies, the review concluded that institutional loans to agriculture had been defaulted by all the categories of farmers - both wilfully and non-wilfully. The main reason for non-wilful default was found as the failure of the institutional loans to generate adequate income to the borrowers to repay the loans promptly. And the major reason for wilful default was found to be lack of supervision on the part of the officials of the financial institutions.

The CGRAFICARD report\textsuperscript{135} characterised defaults being, by and large, wilful arising from the lack of will and discipline on the part of the cultivators. It also mentioned that the State governments dominated as they are by the landed interests, condoned wilful non-
repayment, prevented coercive steps from being taken for the recovery of overdues and sometimes did even write-off debts for all cultivators by paying the same out of the exchequer. It thus appears that excessive politicisation and officialisation have been responsible for the twin factors of uneconomic size and rising overdues leading to the economic non-viability of PACs as a financial institution.

v) **Viability of the Schemes/Loans.**

A study sponsored by the Planning Commission in 1972\textsuperscript{136} went into the details of economic viability of farms in Udaipur district, Rajasthan. The study found that operational holdings below two hectares were economically non-viable and the economically viable size of operational holding varied with soil conditions, cropping pattern and irrigation. However, the definition of viability lacked precision in this study.

Georges and Srivatsava \textsuperscript{137} analysed the viability of a dairy scheme initiated by a bank in Baroda district (Gujarat) in 1972. They used pay-back period, net present value, internal rate of return and benefit-cost ratio analysis to determine the viability of the loans. They observed that the dairy development scheme was viable and feasible from the point of view of
both the direct beneficiaries (farmers and the bank) and indirect beneficiaries (cooperative societies and the Dairy). However, they did not analyse the viability of big, medium and the small farmers and marginal farmers separately.

Another study conducted by the Centre for Management in Agriculture, Ahmedabad in 1973 went into the question of how small farmer holdings could best be helped to become viable units based on their existing holdings. By preparing a Farm Business Index and by using a correlation matrix the study found that the size of operational holdings, availability of working capital, and intensity of cropping were a few variables determining the viability of the farm. Here the term viability was interpreted as a "situation in which a small farmer household is capable of atleast maintaining the prevailing standard of living in a particular region". The study used the benchmark of Rs.2,400 as the viability floor or the cut-off point to divide the sample farmers into viable and non-viable.

Singh and Pandey used the linear discriminant function analysis to identify those factors which would make the small farmers and landless farmers a viable entity. For their study they collected data from 71 non-beneficiaries and 22 SFDA beneficiaries from
four villages of Barara block in Ambala district of Haryana for the year 1977-78. A viable small farmer was defined as one who had positive net income after meeting all the farm and family expenses. They found that per hectare fertilizer use, area under high yielding varieties, operational size of holding and working capital were the major factors which affected the viability of small farmers.

Kurulkar, in his study, adopted financial feasibility analysis to estimate the benefits of the farm investment in new wells and pumps and tractors. He adopted cost-benefit analysis to measure the financial feasibility of the selected projects. By preparing feasibility equations he tested the financial feasibility of the selected projects, and found that all the three schemes studied were financially feasible.

Gunasekaran also did financial viability analysis by using cost-benefit analysis and production-function analysis to know the impact of credit provided to small farmers under SFDA programme in Thanjavur district, Tamil Nadu State, and found that the productivity of credit was high in the block where the SFDA was in operation compared to a non-SFDA block.

The IFMR evaluation study used the concept of incremental capital output ratio (ICOR) to know the
impact of loans sanctioned under IRD Programme. According to this study, the ICOR came close to the planning Commission's assumption of 1.5, in the better developed districts only while in the case of others, it ranged between 2 and 3. This being the case, the most optimistic projection of incremental income came to Rs. 2000, while the most pessimistic estimate worked out to Rs. 1,333 in 1984. By taking this result Bagchi argued that if the initial household income is Rs. 4,800 then the gross income will range between Rs. 6,800 and Rs. 6,133 but as this does not take into account the loan repayment amount the actual probability of the household crossing the poverty line would be low.

In their study conducted in Tamil Nadu, Namashivayam and Balasundaram analysed the financial performance of the agricultural-allied projects financed under IRDP in 1983-86. For this they randomly selected a sample of 230 beneficiaries (not classified) from four districts. Out of this, 60 beneficiaries (26%) were financed to undertake dairy scheme. The financial analysis showed that the milch animal scheme was financially feasible at 12 percent discount rate in terms of both NPV and BCR criteria. IRR was estimated to be 25 percent. It implied that it would be financially desirable to invest in the milch animal
scheme so long as the rate of interest on milk animal schemes is equal to, or less than 25 percent.

To find out the income generation under IRDP, Padmanabhan\textsuperscript{145} used the data collected by concurrent evaluation surveys on IRDP since 1985 at NIRD, Hyderabad in respect of Andhra Pradesh. He has analysed the changes in the total income of beneficiary through an income Shift Matrix. The study found that the average family income, which was Rs. 3284 prior to IRDP assistance has increased to Rs. 4827. In other words, there was an increase of 47 percent (or Rs. 1543) on an average without allowing for price changes.

Research Gaps Identified from the Review of Literature

From the foregoing review it appears that many of the studies are wanting either in terms of methodologies or in terms of issues covered by them. The following may be offered as important research gaps identified on the basis of our review.

a) Many studies while analysing the impact of loans on economic condition of borrowers looked into the question whether the income had increased or not and did not focus attention on the changes in other factors like employment and assets.
Most of the studies reviewed here were not able to demonstrate clearly the impact of dairy or minor irrigation loans alone on the income and employment levels of small and marginal farmers and agricultural labourers.

A very few studies analysed the financial viability of loans but failed to conduct such analysis, scheme-wise, as well as across different classes of borrowers separately.

Though the issue of effectiveness of credit programmes to the small borrowers in relation to their access to other infrastructural facilities and services in the rural areas was touched upon by many studies, their treatment to this specific problem was found to be inadequate.

Very few studies made an attempt to identify the role of subsidies in improving the financial viability of the project.

The studies dealing with the changes in the economic conditions of small farmers who had borrowed institutional finance limited their analysis to income and employment and did not
explain the changes in their farming practices like input use, cropping intensity, irrigation intensity, cropping pattern, etc. in detail.

g) Majority of the studies concentrated their analysis on the issue of the utilisation and impact of loans on the small farmers and to a certain extent on marginal farmers but very few studies took up these questions with regard to agricultural labourers.

h) The problem of cattle insurance with respect to dairying scheme adopted by small borrowers was not touched by the studies reviewed here.

Therefore, there is need for a comprehensive study on the role and impact of institutional credit to the small and marginal farmers and agricultural labourers. The present study is a modest attempt in this direction.
Notes and References


For want of space the list is not provided.

They are many and to name a few:


Important among them are:


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