An Analysis of Farm Credit Provided by Kodia Branch of District Central Co-Operative Bank Narsinghpur, Madhya Pradesh

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by

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CERTIFICATE – I

This is to certify that the thesis entitled ***"An Analysis of Farm Credit Provided by KodiaBranch of District Central Co-operative Bank, Narsinghpur (Madhya Pradesh)".****submitted in partial fulfillment of the requirement for the degree of* ***MASTER OF SCIENCE*** *in Department of* ***Agricultural Economics and Farm Management*** *of RajmataVijayarajeScindiaKrishiVishwaVidyalaya, Gwalior, is a record of the bona-fide research work carried out by* ***MISS AMRITA SHRIDHAR****I.D. No. RA/GW/002/2008 under my guidance and supervision. The subject of the thesis has been approved by the Student's Advisory Committee and the Director of Instruction.*

No part of the thesis has been submitted for any other degree or diploma or has been published. All the assistance and help received during the course of investigations has been acknowledged by the scholar.

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CERTIFICATE – II

This is to certify that the thesis entitled ***"An Analysis of Farm Credit Provided by Kodia Branch of District Central Co-operative Bank, Narsinghpur (Madhya Pradesh)"*** *submitted by* ***MISS AMRITA SHRIDHAR*** *I.D. No. RA/GW/002/2008 to the Rajmata Vijayaraje Scindia Krishi Vishwa Vidyalaya, Gwalior, in partial fulfillment of the requirements for the degree of Master of Science* ***Agricultural Economics and Farm Management*** *has been accepted in* ***AGRICULTURE*** *in the Department of after evaluation by the External Examinerand approved by the Student's Advisory Committee after an oral examination of the same.*

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Chapter - I

INTRODUCTION

Agriculture is the most important sector in the Indian economy. "Agriculture and allied activities constitute the single largest contributor to the Gross Domestic Product (G.D.P), accounting for almost 33 per cent of the total. They are vital to the national well-being as, besides providing the basic needs of the society and the raw materials for some of the important segments of Indian industry, they provide livelihood for almost two thirds of the work force. The share of the agricultural products in the total export earnings, both in primary and processed form, is very significant.

The emergence of green revolution during late sixties and introduction of new agricultural technology in India, has converted the nature of agriculture. Due to these, the farmers tended towards the replacement of traditional methods of farming with scientific and developed methods. For instance, use of High Yield Variety (HYV) of seeds, fertilizers, pesticides, irrigation, machinery and equipment etc. requires huge amount of capital which is beyond the capacity of most of the farmers. Due to this the farmers compulsorily depend upon borrowed funds. This causes the increasing demand for credit. So, in respect of transformation of traditional or subsistence farming into commercial farming, the importance of agricultural credit has increased comparatively more.

The development of institutional credit is, thus, a basic condition for agricultural progress. The history of agricultural development in all advanced countries shows that an integrated system of institutional credit laid the foundation of agricultural prosperity. The objective of the institutional credit is to make a breakthrough in the vicious circle of poverty and debt, and to stimulate the farmer to boost agricultural productivity.

To sustain the growth in agriculture, credit plays a crucial role. The quantum of agricultural credit provided by the banking system (co-operative banks, commercial banks and regional rural banks) increased by many fold since its Nationalization and came into banking act of India. Crop loans constitute a major portion of disbursements for agriculture. Despite the great resilience of Indian agriculture to vagaries of weather, a bad monsoon definitely affects agriculture and in turn the credit for crop loans is influenced. Besides, due to the existence of a

number of financial institutions extending crop loans and their varied ways of purveying the same, the subject of crop loan has become very easy in recent days.
Besides crop cultivation, the farmer may be undertaking some activities allied to agriculture and even some non-farm sector activities. Working capital needs of these activities are required to be met from the banking system. The medium-term loans are provided for the purpose of purchasing cattle and farming implements. On the other hand, long-term credit is required for making permanent improvement in land. The purposes include digging and repairs of well, purchase of motors, agricultural machinery, construction of farm house and for plantations. These all types of loan are provided by banking system prevailing in the area of farmers' periphery.

It can be said that credit is an important input which ensures adequate working capital as well as infrastructural development. Adequate and timely credit provision significantly increases agricultural output which leads to an increase in the economic development of the cultivators and people attached to cultivation. Moreover, agricultural credit serves as an instrument for stimulating increase in output, income and employment.

The emphasis on agricultural credit continued to be on progressive institutionalization for providing timely and adequate credit to farmers for increasing agricultural output and productivity. It also aims at better access to institutional credit for small and marginal farmers and other weaken sections to enable them to adopt modern technology and improved agricultural practices. Agricultural credit has been distributed through a multi-staged network consisting of Commercial Banks, Regional Rural Banks and Credit Co-operatives.

Co-operative Movement in India was started primarily for dealing with the problem of rural credit. Credit Co-operatives play an important role in the Indian financial system especially at the village level. These are one of the important components of multi-agency system which plays a vital role in the development of the nation. These are the oldest and the most numerous of the all types of Co-operatives in India. The origin of Indian Co-operative Banking started with the enactment of Co-operative Societies Act, 1904. The objective of this Act was to establish Agricultural Co-operative Credit Societies “to encourage, thrift, self-help and co-operation among agriculturists, artisans and persons of limited means”.
The following are the objectives of credit co-operatives: i) To ensure timely and increased flow of credit to the farming sector ii) To reduce and gradually eliminate

the money lenders iii) To reduce regional disparities throughout the country iv) To provide longer credit support to various rural development programmes v) To provide cheap credit with or without any security.

Co-operative Banks are organized and managed on the principle of co-operation, self-help and mutual- help and function with the rule of "*one member, one vote*", function on "*no profit, no los**s***" basis. Co-operation as principle does not pursue the goal of profit maximization.

Keeping in view the importance of flow of credit to agriculture, in particular to the smaller borrowers who may not have the necessary assets as collateral, the banks have been advised to waive margin and security requirements for agricultural loans up to Rs.100, 000. The "No Due Certificate" for small loans to SF/MF, share croppers, etc. have been dispensed with and instead banks have been instructed to obtain self declaration from the borrowers.

District Central Co-operative Bank immensely helped in adoption of modern production technology and encouraging private investments on irrigation, farm machinery and development of yield attributing inputs. The District Central Co-operative Bank, Narsinghpur, was established on 26 November in the year of 1911 with the main objectives to provide the farm credit for different purposes to meet out the lack of capital in adoption of improved farm technology and for other development in agriculture such as development of irrigation facilities, land development, purchase of agriculture machineries and implements etc. To make the strategy for future development of bank and their objectives in respect of farmer's development, their contribution needs to be examined and estimated. Hence, attempts have been made to study in this direction. The specific objectives of study have been as follows:

Objectives:

1) To assess the proposed and actual coverage in terms of loan disbursement with the reason for shortage since last decade.
2) To analysis the farm credit issued by the bank for different purposes.
3) To analysis the repayment of loan in relation the purpose of loan and period of loan advanced.
4) To examine the economic effect on the farmers/borrowers on the basis of case studies.

Limitations of study:

There are certain limitations in study due to that:

1. The study covers only limited farmers that were taken credit for farming purpose through District Central Co-operative Bank, Narsinghpur Branch Kodia only. So that study considers only impact of District Central Co-operative Bank, Narsinghpur in respect of economic terms.
2. The objectives of the study are simple and may provide a basis to assess the utilization of credit that has been made available for different purposes in agriculture process.
3. The limitation of time available to the investigator is very short and the problems of accessibility of the total borrowers is a complex work, hence, in study it is necessary to select only limited borrowers, accordingly who have borrowed loans from Kodia branch of Narsinghpur, District Central Co-operative Bank.
4. The data have been collected of the recall of the memory of the farmers and only for limited time. Hence, it can not be generalized in general terms.
5. The conclusion of study arrived after the study may not have wider application because peculiarity resources at the disposal of the investigator of the wide variation in the socio economic structure of the region.

Chapter-II

REVIEW OF LITERATURE

After the problem has been decided for study, it becomes necessary to look into the previous work done on the subject or topic through the review of literature. Review of literature helps to avoid duplication of work alre ady done earlier. Review of literature also provides useful cause and effect relationship and helpful suggestions for the significant investigation. It is said that review of literature is the guide line of present work which have already been done. So, review of literature is helpful in interpretation of results obtained during the research on the basis of the objectives of the study. Hence, in this chapter an attempt has been made to assimilate the previous works within the framework of present study.

Muthayya and Prasad (1984) revealed that the procedural aspects like need to visit banks more often and complicated procedures were mentioned as the problem in getting loan sanctioned. Most of the beneficiaries generally felt difficulty in repayment because of economic reasons as either the scheme did not work-out to their advantage or they did not get the supportive services to manage the scheme efficiently.

Pany (1985) in a study based on Orissa found the state's credit supply to be inadequate. A credit gap was found to exist in case of short term credit but not in case of investment credit. However, distribution pattern of institutional sources was found to be in favour of small and marginal farmers.

Bhende (1986) analyzed rural financial markets in south India. In Andhra Pradesh, private moneylenders were found to be important sources of agricultural credit while in Maharashtra, it was cooperative institutions. Institutional credit was more concentrated in richer households having large farm and family size and headed by educated and older heads, while, households with more land, but less educated and having more irrigated area were depending on informal credit.

Beohar and Khare (1988) concluded that farmers, who obtained credit for the purchase of pump sets, repaid the loan in beginning but those who obtained credit for the purchase of fertilizer and digging of wells did not repay the loan in proper time. A large proportion of loans advanced for the purchase of bullocks and for land improvement remained overdue as compared ot other purposes. Farmers who

obtained loan for pump-set had the maximum capacity as compared to other.

Gadgil (1988) examined the empirical relationship between credit and agricultural development in India. Supply of credit in Punjab and Bihar, two states of India was not found to be lagging behind the growth in demand for credit. So, the basic problem is not one of expansion in amount of credit. Since agricultural development is basically related to the adoption of improved technology, it is clear that credit without a link with improved technology is not likely to be productive.

Prasad and Naidu (1988) analyzed the adequacy of cooperative credit as availability of short-term credit reflects on the quantum of output. An uncovered gap of 24 to 36 per cent was found to be existing between bulk-line costs (costs of inputs and imputed value of family labour) and scales of finance fixed by the institutions for various crops, former being on the higher side. The proportion of kind component in the crop loans was not only disproportionate but also inadequate.

Dantawala (1989) highlighted the achievements of financial institutions in agricultural credit with weaknesses i.e. leakages, misutilization, corruption so high burden of overdues. The stress should be on making the rural poor credit worthy.

Khusro (1989) reviewed the agricultural credit system in India and found it to be sound and well suited. The role of financial institutions in the growth of agricultural credit was highlighted and more autonomy was favored for these institutions for raising the flow of agricultural credit and thus agricultural production.

Poddar (1990) found that borrower spent as much as 4 per cent of the loan as non interest cost of borrowing which enhanced the effective rate of interest on borrowing. A method must be developed where in the bank might verify the records, credentials of prospective borrowers in a group, thereby helping to reduce non interest cost of borrowing to borrowers. He opined that Bijapur Grameen Bank has simplified the procedures to a large extent. It should further simplify the requirement so that, illiterate borrowers might comply with procedures without resorting to non official payments.

Anandkumar (1991) concluded that in the interest of rural poor, bankers and other policy makers must acknowledge the fact that if poor were adequately financed for productive purposes, a majority of them might cross the poverty line. Moreover, such a step would definitely reduce the private money lenders on rural areas. He

cautioned that if the banks continued to finance big farmers, it would not only increase their surplus but also help them to strengthen their economic hold in rural communities.

Suresh (1991) analyzed the impact of term loan on beneficiaries of ten lending Primary Agricultural Credit Societies (PACs) in Trichur district of Kerala. He opined that cooperative credit had no significant impact on income. The major reason for such low impact was inadequate contribution of credit in the total expenditure.

Modgil (1992) estimated the likely impact of Narsimham and Khusro Committee reports on future of institutional agricultural credit in India. He favoured higher rates of lending, if it was accompanied by quality of lending. Its positive impact on output and employment was stressed, besides improving the health of credit institutions.

Rao and Babu (1993) studied bank finances to agriculture and allied activities and found out that low rate of interest, easy and convenient installments for repayment, possibility of getting subsidies from government agencies were the main reasons for growth in institutional loans.

Varde Varsha (1993) brought out the remarkable growth in institutional agricultural credit both in terms of disbursements and outstanding over the years, but pointed out that agricultural institutions have become weak. It was stressed that credit should not expand quantitatively, but must become a commercial and economic proposition.

Desai (1994) considered institutional credit as important source of growth in second half of 1970's and 1980's. However, contribution of self-financed investments to agricultural growth was found to be more than credit. Positive response of institutional lenders, farmers, borrowers and input agencies consistent with technological change and resource endowments were responsible for agricultural development in the country.

Gadgil (1994) discussed the likely impact of financial sector reforms on the formal agricultural credit system in India. Movements of interest rates on agricultural loan over the period 1980-94 are studied. It was observed that the new rates on crop loans to farmers have not been high enough to enable Co-operative and Regional

rural banks (RRBs) to meet the financial transaction and risk costs, necessitating continued subsidization by the National Bank for Agriculture and Rural Development (NABARD) / Reserve Bank of India. The researcher then discussed the restructuring of RRBs and rural branches of Commercial banks and the future role of NABARD under the situation of total deregulation of interest rates.

Joy (1994) reported that the interest coverage ratio shows the debt servicing capacity of the banks. This ratio was low for all the banks except IRK and EKM. This ratio showed a decreasing trend from 109.99 to 98.12 per cent. This shows that the debt servicing capacity of the banks is decreasing. The performance recovery ratio reveals the collection efficiency of the banks. The decreasing trend (92.32 to 69.97 per cent) of this ratio shows the poor recovery performance of these banks.

Jhawar (1995) observed that the application received in branches had no relevance with the target allotted to the branch. Most of the banks are not satisfied with the scrutiny of application. The application rejection took place on the ground of viability, scope of activity, exceeding target in the branch. The repayment in the district was 70 per cent and in some cases the advance recovery was observed. Working capital included the repayment schedule right from the beginning.

Kathale (1995) studied the loan repayment pattern and found that the repayment was regular in 66 per cent of the cases while in 15.6 per cent cases the loan was not being repaid with the reason that subsidy was fixed with installment and working capital being treated as term loan.

Kaushik (1995) studied the impact of credit of Regional Rural Banks (RRB) on income generation and poverty alleviation of rural beneficiaries. The educational and skill status of more than 50 per cent of sample beneficiaries was found to be poor, the poverty alleviation had been found to be highest in the case of small businesses followed by animal husbandry, rural industry and agriculture.

Mishra (1995) has observed that modernization of agriculture necessitated huge capital investment. Hence, farm credit becomes *sine qua non* of agricultural development in the country. Reports of Frederic Nicholson and Edward Law Committee on Co-operative legislation confirmed and reiterated the need for the state to actively promote co-operatives. A decade later, a Maclagan Committee (1915) advocated that "there should be one Co-operative for every village and every village should be covered by a Co-operative". In 1928,

Royal commission observed that "if co-operation fails, there will fail the best hope of rural India".

Reddy and Reddy (1997) made a case study of borrowers knowledge on farm credit and follow up action of bank officials in Khajipet Mandalam in Cuddaph district of Andhra Pradesh. The result revealed that 54 per cent of borrowers opined that scale of finance provided by bank was sufficient but all the beneficiaries wanted technical guidance. 60 per cent of the borrowers were of the opinion that loan sanctioning procedure was easy and 82 per cent of the borrowers were of the opinion that interest charged was reasonable. The study revealed that bank personnel have visited short term loan beneficiaries once during the crop season. It was suggested that timely advance should be provided and bank authorities should change the procedure to suit local conditions and also for providing technical guidance to borrowers.

Sadakkadulla (1997) studied the regional disparities and credit planning, credit rating scale for bellow poverty line beneficiaries and effective poverty alleviation strategy involving institutional credit. He concluded that for targeting credit to the right people, the regional rural development maps for regions and credit rating scale for beneficiary to be developed. This measure would solve the twin problem of targeting to the right people in the appropriate region through slight modification in the existing system of credit planning as well as credit appraisal.

Shollapur (1997) attempted to trace out the gamut of end use of co-operative credit. He felt that determination of optimum size of credit was pre-requisite for ensuring proper end use. He suggested to determining optimum quantum of credit in consultation with PACs and farmer members. It should suit changing conditions of economy and prices. A flexible scale for irrigated and unirrigated areas, high yielding and other varieties should be adopted. Any delay in credit disbursement should be avoided and thrust was to be given for kind component disbursement with post sanction follow up.

Chidambaram and Shankarasubramaniam (1999) in his study identified nine socio-economic factors and established relationship with repayment of IRDP loans. As far as a reason given for default in repayment by beneficiaries is concerned, it is understandable that the income used for personal purpose is the main cause for

default in repayment. It is followed by willful default, less return from the assets, sold away assets and death of animals. Credit recovery camps and psychological counseling to the beneficiaries would help a lot in improving the repayment scenario.

Patel (1999) elaborated features and need for KCC in India and recommended that bankers committees both at the block level and state level should monitor not only the number of KCC holders on quarterly basis but also examine the amount sanctioned, disbursed and utilized which have direct impact on crop production in the country. Besides feedback, utility and effectiveness of KCC scheme might be looked into in order to modify it to fit the needs of users than introducing uniform scheme in the country.

Benson (2000) linked the availability of credit with rural poverty. The average income from the loan activity was found to be increasing at 76.2 per cent in a year. The net income of borrower also showed an increase of 9.4 per cent. Mean income of the borrower from loan activity was found to have increased during the post-loan period.

Kunjukunju (2000) assessed the impact of bank loans on the income of the 495 respondents in Kerala. A multi-stage sampling technique was designed to draw sample borrowers of bank. Primary data were collected from sample respondents through personal interview with the help of a schedule specifically designed for the purpose. The impact of loan on income, region-wise distribution of the mean income of the beneficiaries in the pre-loan and post-loan period was analyzed. It was concluded that the borrowers who obtained credit have improved their income in the post-loan period compared to that in the pre-loan period.

Singh *et al.* (2000) studied the loan portfolios in rural household in Kandi belt of Punjab. On an average, 54 per cent of cultivators were borrowers. The burden of loan was higher on small farms. Source-wise share of loans was 28 per cent from commercial banks, 68 per cent from cooperatives, 13 per cent from government departments and 52 per cent from informal sources of finance, respectively. The maximum amount borrowed (40%) was for crop production, followed by dairying, machinery and equipment etc.

Kumar and Simon (2001) focused on strengthening of rural credit delivery system through Kisan Credit Cards. The small farmers with low income were getting

benefited through the scheme, however, repayment was slow and misutilization of credit was emerging as a major problem.

Singh *et al.* (2001) reported that the success of credit oriented development projects depends on soundness of credit structure. The study of tribal farmers was based in Kanke block of Ranchi district. 92 per cent of tribal farmers were found to be linked with rural credit agencies. Commercial banks were the prominent institutional sources and in non-institutional sources relatives / friends were dominant. 85 per cent of credit share was of institutional sources, that too of term loans i.e. irrigation loan, milk production etc., while non-agriculture loans were mainly for health and education and provided by non-institutional sources.

Abate *et al.* (2002) studied the magnitude of institutional credit flow to agriculture sector in Karnataka and indicated significant growth in quantum of agricultural advances in the state despite the limited expansion of credit infrastructure.

Shete (2002) highlighted the performance of public sector banks in the post-reform period. It was found that reforms have bypassed the agriculture sector and banks have not achieved the targets of lending to this sector. It was suggested to rectify the distortions in the wake of decreased credit supply in rural areas.

Sidhu *et al.* (2002) found the cooperatives were dominant source in case of crop loans and for term-loans, commercial banks were the main suppliers of loan to the beneficiaries.

Bhukta (2003) revealed the financial sector reforms since 1969. The share of agriculture in the total bank credit was found to be declining after 1990s. In post reform era public investment in agriculture also showed a steadily declining trend. Thus agricultural production has also started declining from 3.4 per cent to 2.2 per cent in the post reform period. This will have an adverse impact on income, employment, price level and similar macro-economic variables.

Mohanty and Haque (2003) studied the availability of institutional credit in the country. It was found that per hectare credit was higher on small and marginal farms, the medium and large farms had more credit per borrower. Also the share of institutional credit in total credit has increased in all states overtime except in Andhra Pradesh, Orissa and Rajasthan. Here, share of non-institutional sources varied from

42 to 66 per cent of total credit. Overall, highest percentage was of bank credit (33.7) followed by cooperative credit (21.6), professional moneylenders (10.5) and relatives, friends (8.7).

Rao (2003) found that about 60 per cent of the credit requirements of farmers are now met by the institutional sources and only 40 per cent by informal sources like money lenders etc. Among the formal credit institutions, the commercial banks have emerged 23 as a major player (50%) followed by cooperatives (43%) and RRBs (7%) in agricultural credit.

Shandilya and Prasad (2003) have analyzed the performance of NABARD in agriculture credit. The apex agricultural bank is facing many challenges in the post-reform era. Inadequate availability of subsidized funds, borrowing at market determined interest rates, lending at subsidized rate, sagging demand for refinance etc. are serious problems of survival.

Singh and Nasir (2003) studied that agricultural credit increased in Bihar at an annual rate of 2.58 per cent at constant prices. Commercial banks and cooperatives were the main providers of agricultural credit. The credit flow was found to be adequate. Agricultural development and functional rural institutions had positive influence on the credit flow.

Ganai *et al.* (2004) from a survey of three districts in Kashmir valley noticed that either the cost of credit was too high or there were difficult procedures for obtaining the credit in the case of livestock.

Kanthimatinathan (2004) opined that without cheap credit it is not possible for small and marginal farmers to carry out their activities. Co-operative credit is the supervised credit subject to the financial and monetary discipline, which are the essentials of sound banking and vital to the health of the economy of the country as a whole. The Co-operative credit institutions occupy a place of pride in the overall credit delivery system for their role in agricultural and rural development. Initially they were concerned with the short-term loans only and later extended their services to investment loans also.

Ruston Ali Ahmed (2004) study conducted on impact of financing by Rajshahi Krishi Unnayan Bank on agricultural development of Bangladesh has revealed that variations in farm and off farm production, income from agro-based trade, intensity of

cropping, amount of cultivated area of uncommon crops, total and per capita consumption expenditure of the borrowers are found statistically significant higher than the non-borrowers. On the other hand, insignificant relations of working capital investment for farming and use of inputs with demand of bank credit are observed in case of small and large farms, but those are found significant in case of medium farmers credit delivery procedures and services of the sample bank do not satisfy the expectations of the borrowers. The study embodies that, the major problems associated with the bank financing are diversion of the borrowed fund, poor recovery of loans and high default rate, which are attributed to both the borrowers and the bankers.

Shetty (2004) suggested that in order to increase the productivity of agriculture, better institutional credit delivery mechanisms were to be conceptualized, planned and executed urgently.

Sivaloganathan (2004) observed that adequate credit facilities were highly essential for agricultural growth because there was a vast gap in the vital sectors of the economy. The multi-agency approach has to be initiated as it facilitates access to resources and service. More over credit for agriculture serves as an important instrument for stimulating increase in output, income and employment.

Deshmukh (2005) said that the Cooperatives in India account for more than half of industrial finance advanced to agriculture and one-fifth of private capital formation. Advisory Committee on Rural credit was constituted by the RBI to accelerate the flow of credit to the agricultural sector. It had been proposed that co-operatives might waive security requirements for agricultural loans from Rs. 10,000 to Rs. 50,000.

Sahu and Rajasekhar (2005) have analyzed the banking sector reforms and credit flow to agriculture. The share of agricultural credit in total net bank credit was found to be declining especially after the reforms. The situation was reported to be grimmer in cooperatives. Maximum off farmers have improved their access to formal credit, while share of small farmers has declined. Credit flow to agriculture was more to be negatively associated with investment in government securities and positively with incidence of rural bank branches. Credit subsidy was adversely affecting the supply of agricultural credit. Reduction in lending cost was suggested as a measure

to reduce the burden of credit subsidy.

Subhayya and Selvakumar (2005) observed that the institutional finance to agriculture which has contributed 22.1 percent of GDP in 2002-03. He also found that the Government has estimated the credit flow from all lending institutions for the year 20003-04 at Rs. 80000 crores and has planned to enhance the level of flow to Rs. 105000 crores for the year 2004-05 which represents an increase of 30 percent over the previous year.

Subrahmanyam (2005) in his study observed that the government of India examined the flow of agricultural credit and related issues in consultation with RBI, NABARD and announced the farm credit package to ensure doubling the flow of agricultural credit in the next three years He also viewed that Cooperative rural credit delivery system has been farmer-friendly and has out reached to serve agriculture. Agricultural credit and agricultural development goes by hand in hand, hence the farmer should be provided adequate and cheap credit.

Dubey (2006) focused on the adoption of KCC in Uttar Pradesh among different regions and social classes. He found that since there was uneven development of different regions and social classes, the access to one of the most important innovation (KCC) was not even throughout the state. Only land and household size had positive relationship with probability of a person of being a KCC holder. He suggested that, if the waste land was made cultivable to weaker section of society then there might be considerable improvement with respect to even distribution of KCC in the state.

Mohan (2006) reviewed status and issues of agricultural credit in India and concluded that though overall flow of agricultural credit in India had increased over the years there were several gaps in the system like inadequate provision of the credit to small and marginal farmers, paucity of medium and long term lending and limited deposit mobilization and heavy dependence on borrowed funds by major agricultural credit borrowers.

Sidhu and Gill (2006) have discussed the issues related to agricultural credit and Indebtedness in India. The accessibility to institutional credit was found to be higher in the southern region and very poor in the north-eastern region. Also, it was highly related to level of agricultural development. The increase in institutional credit

was highest in the northern region while lowest in the central region.

Trivedi (2006) reviewed the status of KCC in Madhya Pradesh and concluded that only 40 per cent of total 65 lakhs farmers have been distributed KCCs in the state against target of covering all the farmers by March 31, 2004. Except bank of Rajasthan no private bank had issued any KCC to the farmers. Out of 4,17,314 cards issued, commercial banks issued 1,80,745 cards, RRBs issued 63,002 cards and co-operative banks issued 1,73,567 cards.

Dashawant (2007) reported that in the agriculture development, the dimensions like annual income (48.70% before and 58.30% after), asset acquisition (72.30% before and 22.30% after), consumption pattern (41.70% before and 13.90% after), cropping pattern (62.50% before and 64.60% after), employment generation (50.00% before and 55.60% after) and land productivity for groundnut (61.20% before and 51.40% after) and for cotton (61.20% before and 51.40% after) had positive and significant impact on the agriculture development of beneficiaries.

Mihir *et al.* (2007) reviewed the history of credit in 20th century in India and concluded that massive increase in natural resource generation was required, reforms of public sector banking aimed at strengthening the capacity to deliver high quantity credit was necessary. He recommended for strict vigilance including maximum permissible interest rate bands, strengthening of SHG-bank linkage programme and making PACs truly democratic member driven, professional organization based on concept of mutuality.

Kumar *et al.* (2007) have analyzed the performance of rural credit in India. The access and distribution of rural credit was found to be skewed in favour of better endowed regions. The study revealed that choice of a credit outlet was affected by a number of socio-demographic factors. The effect of education has indicated the need for capacity building of borrowers. Borrowers needed to be trained in procedural formalities, to increase their access to institutional credit. Reforms need to be initiated in case of margin money requirements and collaterals.

Kumar *et al*. (2007) reported that Government has taken several measures from time to time to increase the flow of institutional credit to the agriculture sector of the economy. Concerted efforts on the part of state have led to the expansion of the institutional network comprised of commercial banks, regional rural banks and

cooperatives both in terms of location and function. Inspite of all these initiates, the moneylenders continue to play a dominating role in the delivery of credit to rural households and the flow of credit to the agricultural sector remains a matter of concern. After a significant role in the share of institutional finance, the trend seems to have reversed after 1991. The flow of institutional credit was not able to fully contain the growth of non-institutional financing which had shown a growth rate of 14 per cent per ha and 10 per cent on per capita basis annually between 1991-92 and 2002-03.

Shah (2007) has studied the cooperative credit in Maharastra, with major share of crop loans. But these cooperatives have shown slower growth both in loan advances as well as membership. The reason was traced to financial sector reforms as loans meant for farm finance were diverted to investments thus adversely affected the credit flow.

Singh and Shakya (2007) concluded that the major problem faced by borrower farmers in the study area was not actual requirement amount of loan availed, on an average credit gap per farms about 26 per cent. The credit gap in case of marginal and small farms size groups came to 28.47 and 24.35 per cent respectively.

Loganthan (2008) analyzed KCC issued by co-operatives, RRBs and commercial banks in different years up to 2002-03. Kisan Credit Card Scheme was actively functioning in the initial years, after that there was some set back. The Central Government introduced KCCs to provide loan facilities to small and marginal farmers in India. The study revealed that under the scheme more than three crores of farmers were benefited and the scheme could be extended to other farmers in the coming year.

Thamilsaran (2009) studied the impact of institutional credit on employment, income, occupation and assets of the borrowers. He found that the employment generation increased by 44.61 per cent over a pre loan period, average income increased by Rs.577.84 per house. He recommended that there should be a mechanism to monitor proper utilization of credit in order to increase employment generation. Also retail trade in consumer durables might be encouraged in rural areas to improve their living conditions.

Kaur (2010) reported that the cooperative credit structure was strengthened by reorganizing and merging weak credit societies with strong societies. The participation of scheduled commercial banks was negligible in the agricultural loans. After the nationalization of commercial banks in 1969, these were mandated to increase their geographical and functional presence in the rural areas. To meet the challenges of institutional agricultural credit, an apex institution namely National Bank for Agricultural and Rural Development (NABARD) was created in 1982, another credit institution lending exclusively to weaker sections of the rural areas, the Regional Rural Banks, were set up in 1975. To increase the flow of agricultural credit, new approaches were also initiated like Service Area Approach, Micro-Finance and Kisan Credit Cards. There is now a very strong network of rural and semi-urban branches catering to the requirements of agriculture sector.

Devi and Govt (2012) reported that as agriculture forms the backbone of the Indian economy, The Government of India recognized the importance of free flow of credit to agriculture and allied sectors. Agricultural development, credit is an important input which ensures adequate working capital as well as infrastructural development. Deccan Ryots Commission (1875) and Famine Commission (1880) concluded in their reports that majority of land holdings were deeply and inextricably in debt. The Central Banking Enquiry Committee (1929) observed that institutional credit provided to the agriculturists covered only a smaller portion. Black (1955) has emphasized the importance of credit and observed that credit provision was the first and foremost input to be increased, which enabled the farmers to buy more labour saving equipment, better seeds and fertilizers etc. Ford Foundation (1959) had recommended adequate supply of farm credit in order to increase the farm productivity.

Mangal (2013) reported that in respect of agriculture sector, the number of borrowers and their purposes for borrowing the amount on different purpose has also calculated in present study. The data revealed that by and large, on an average per year for tractor purpose the loan was distributed as highest (63.23%) followed by tubewell purpose (13.89%), pumpset purpose (12.25%), cultivator and thresher purpose (4.70%), dairy purpose (1.48%) and other agriculture purpose (0.24%) respectively. The amount borrowed for the purpose of tractor seems to be highest in every year of the decade i.e. on an average Rs.380.83 lakhs per year. The

investment in tubewell and pumpset, these to purposes seems to be very crucial in view of increasing the irrigation facilities which ultimately resulted into development agriculture production; the amount borrowed for these purposes seems to be next important i.e. on an average Rs.83.68 lakhs and 73.77 lakhs per year. For the purpose of cultivator and thresher borrowed a sizeable amount of loan i.e. Rs.28.31 lakhs per year. It was further observed that the farmers in study area followed a mixed farming system, hence, for dairy purpose borrowed an amount of Rs.8.93 lakhs per year for their dairy enterprise maintenance as well as development followed by Rs.1.46 lakhs for other agricultural uses.

Verma (2014) reported that the corresponding overdues were found to on an average 9.09 per cent of loan advanced for overall purposes considered in study. These overdues shows that the borrowers of diesel pumpset, dairy development and loan through KCC were not able to repay the full amount of their regular installment due to lower additional saving in initial year of loan thus, overdues gather year after year. In this case it is suggested to the farmers who are defaulter of repayment schedule of their loan should be taken care for regular submission of their installment.

Chapter - III

RESEARCH MATHODOLOGY

Every research carried out on scientific line should have a research design to be applied as per the stated problems. For this, in present study a design has been drawn for classification of research method adopted. The present study is concern with farm credit which have financial and social problems often without being conscious of the fact that while doing so researcher are engaged in scientific research is thus, nothing but a scientific method which, obviously, means a systematic approach to a problem under consideration. Each time researcher do research and become wiser, our behaviour changes. The distortion of observed facts because of our biases makes us difficult to be truly statistical. Once researcher follows the statistical method they have to discard their biases.

A scientific research is a systematic method of discovering new facts or verifying old facts through sequences, interrelationship, causal application and through the natural laws which cover them. When the research is in social science it involves the analysis of human behaviour or trend of social phenomenon to formulate broad principles of scientific concepts. The research than becomes a careful or diligent scientific or scholarly enquiry and a special study or experimental aimed at the discovery, interpretation or application of new facts to formulate a theory or law.

In the process of research a basic concept regarding theory and its application in present investigation is must for perfect and accurate finding of cause and effect relationship, therefore, it is important to follow the methods prescribed for empirical research. Since the empirical research has the immediate social usefulness one must take the method follow-up by work of others and must learn through the trial and error method. Empirical research is based on inductive logic so in empirical research factual and material evidences and census data are used to develop the descriptions, measurements comparison and test the hypothesized relationship that are themselves part of speculative side of scientific work. Research methodology also involves to built ability to raise significant questions and to formulate fruitful hypotheses which demands appropriate technical methods which are helpful in selection of sample, method of enquiry and statistical tools used to

conserves knowledge and the dynamic approaches which are interrelated with objectives through the process of analysis and verification for which scientific reasoning and logic is employed thus achieving rationality in the conclusion drawn. The research methodology and design are the main feet for waking, thus making the research move ahead. This chapter involves various steps applied to the study of the problem. The material and methods are described in the following sub heads:

1. The study area.
2. Sampling procedure.
3. Nature, collection of data and method of enquiry.
4. Analytical procedure / tools.

3.1: The study area:-

The description about background information of study area is essential so that researchers can correlate the finding with the prevailing conditions under study. The present study has been conducted in Narshinghpur district of Madhya Pradesh, hence, the description of Narshinghpur has been presented as follows.

Location:

Narsinghpur district is situated in the central part of Madhya Pradesh. This district is lies between $22^0$55' and $23^0$15' North Latitude and $78^0$38' and $79^0$38' East Longitudes. It has an average elevation of 359.80 meter above mean sea level. The district has an area 5125.55 km^2. Narsinghpur district is part of the Jabalpur division. It is bonded on the North by Sagar and Damoh districts, on the East by Jabalpur district, on the South-Eastern by Seoni district, on the South by Chhindwara district, on the West by Hoshangabad district and on the North-West by Raisen district. Narsinghpur district holds a special importance due to its natural situation surrounded by Vindhyachal and Satpura ranges of mountains and river Narmada.

Climate:

The climate of Narsinghpur district is generally pleasant except in summer. Waves move slowly except during the South-West monsoon. The district usual minimum temperature rests around 25-26^{0}C and the maximum temperature about to 45-46^{0}C. The month of May is the hottest month of the year. The district's 90.00 per cent rainfall is observed during monsoon months i.e. June to September. The average rainfall in the district found to about 1116 mm. During December–January is the cold season. The average temperature during cold season is around 9^{0}C in the day time and 3.2^{0}C at the night time. The district is suffered from cold waves and heavy fog is also observed.

Soil and crops:

The district has rich black soil which is very fertile and heavy. This soil is very useful for farming system. Black domat soil, smooth soil, rocks soil and sandy soils are also prevailing in the area. The crops like soybean, tur, paddy, kharif pulses and wheat, gram, sugarcane, are the main kharif and rabi crops. Narsinghpur is a district which is well known for it fertile land. The district is famous for its rich agriculture production due to situated in the upper part of Narmada valley.

District Central Co-operative Bank, Narsinghpur:

District Central Co-operative Bank, Narsinghpur have much coverage to rural area for financing crops and related allied activities loan to all types of cultivators. This bank is one of the important financing agencies in the district since long and has sufficient supervising staff. This bank provides credit facilities in three categories viz. long term, medium term and short term. Hence, looking to the importance of this bank from last 3 decades in relation to agriculture and rural development which is the back bone of Indian economy, selected for present study. The District Central Co-operative Bank, Narsinghpur was purposively selected for this study because this district and this area is well known to researcher by which the data has been collected easily.

3.2 Sampling procedure:

In order to achieve the objectives of the study, the two stage random sample technique was used for data collection from the borrowers (farmers) as ultimate unit from selected bank. These stages were selection of branch of the bank and selection of ultimate borrower's respondents.

Selection of Branch:

There are 17 branches of District Central Co-operative Bank in the district Narsinghpur providing loan for agriculture purpose. These branches are Mahaila shakha Narshinghpur, Amanat Narsinghpur, Extension counter Narsinghpur, Kodia, Salichoka, Gotegaon, Amanat Kreli, Karakbel, Tendukheda, Sainkheda, Sehora, Barman, Chichli, Amanat Gadarwara, Krishi Gadarwara, Krishi Kareli, Krishi Kareli.. At first stage of sampling, out of 17 agriculture branches, Kodia branch was selected purposively because this branch of bank is one of the most credit suppliers to the farmers in the study area.

Selection of respondents:

A list of farmers frome 12 villages (bohani, kodiya, chirriya, khakariya, lilvani, ghat pipariya, sadoomar, nayagaon, sukri, baranjh, mahangwa, surna.) within radius of 15 km. from the branch office, who have taken the loans for different purposes, was collected from the Kodia Central Co-operative Bank. From this list, 10 farmers, who have secured loan for each purpose namely tractor, electric pumpset, tubewell, diesel pumpset, sprinkler and KCC was selected with the help of simple random sampling method. Thus, in all 60 borrowers as respondents was selected for present study.

Allocation of farmers :-

S.No.	Purpose of loan taken	No. of farmers selected
1.	Tractor	10
2.	Electric pumpset	10
3.	Tubewell	10
4.	Diesel pumpset	10
5.	Sprinkler	10
6.	KCC	10
7.	Total	60

3.3 Nature and collection of data :-

Depending upon the objectives of the study primary as well as secondary data were used. The primary data was collected from selected respondents using pre-tested questionnaire schedule. Each selected respondents was approached personally for recording relevant data. Secondary data was collected from bank records. The structural schedule was prepared with consultation to the members of advisory committee, qualified personnel and literature available regarding credit aspect from bank.

Period of the study:

The primary data were collected in the Agricultural year 2008-09 to 2012-13 from borrowers through survey method. The secondary data were collected from bank since 2004-05 to 2013-14.

3.4 Method of enquiry:

Survey method of enquiry was used for the purpose of study. It is assumed that selected number of borrower farmers would provide adequate information for the objective set-fourth for present study and secondary data for a decade is quit sufficient to show the impact of loan on farmers business.

3.5 Analytical procedure:-

The collected data were scrutinized for adequacy and reliability. The data were compiled into a tabular form and analyzed in order to find out the result as per the stated objectives.

The analysis of the data was done on per farm basis. Simple as well as other Mathematical and Economical Techniques were applied to analyze the collected data. Simple mathematical tools like frequencies, percentage, mean and average were use to represent the data in the tabular form.

i) Mean:

Mean was obtained by dividing the sum of the scores by the total number of cases involved. The formula for determining mean is

$$\text{Mean} = \frac{\sum_{i=1}^{n} X_i}{n} \quad [i = 1,2,3,.....n]$$

Where,

$\bar{x}$ = mean

ΣX_i = sum of scores

n = no. of cases

ii) Percentage:

The term 'percentage' means a fraction whose denomination is 100 and the numeration of the fraction is called percentage. For calculating percentage, frequency was multiplied by 100 and divided by total beneficiaries' farmers.

$$P = \frac{X}{N} X\ 100$$

Where,

P = Percentage

X = Frequency of beneficiaries' farmers

N = Total number of beneficiaries' farmers

Measure the economic effects on the borrowers:

The effects on economic status of the borrowers were measured by improvement and enhancement in the economic resources, production, income and assets as a result of the credit. The information on the economic status of these factors before and after the credit was elucidated in the study.

The improvement and enhancement in economic resources, production, income and assets as a result of the credit was measured by considering the following aspects and the information on the status before and after the credit was evaluated i.e. increase in net shown area, increase in irrigation availability and irrigated area, enhancement of cropping intensity, increasing in area under HYV of crops, increasing the double crop area, increasing the fixed and working assets, development of farm business and their income, increasing in farm income and change the cropping pattern towards profitable.

Some ratios were also being calculated from the primary data such as:

$$\text{Share of loans in total investment} = \frac{\text{Amount borrowed}}{\text{Amount invested}} X \quad 100$$

$$\text{Actual utilization of borrowed funds in total investment} = \frac{\text{Amount utilized}}{\text{Amount invested}} \times 100$$

$$\text{Rate of diversion of borrowed funds} = \frac{\text{Amount diverted}}{\text{Amount borrowed}} \times 100$$

Chapter- IV

RESULTS

The chapter of result is the most important one which represents the findings of research problems determined as per the stated objectives. It can be said that in this chapter findings of the study and their logical interpretations have been presented according to the objectives of the study. The data collected for the study have been tabulated, analyzed and interpreted to obtain results and describe in this chapter for easy understanding. The tabulation and analysis have been done in the light of the stated objectives. As per the objectives of study, the result is presented in following sub heads.

1. Proposed and actual coverage of loan.
2. Farm credit issued by the bank for different purposes.
3. Repayment of loan (recovery of loan).
4. Economic effect of loan on borrowers.

4.1 Proposed and actual coverage of loan:-

In recent years the District Central Co-operative Bank, Narsinghpur and their branches including Kodia branch have made considerable progress. The position of proposed demand fund was improved in a decade of study period. On the other hand, the quantum of loan coverage during the study period was also found to considerably increased. Loan disbursed during year to year shows the progress of the bank.

It is well known fact that the sole objectives of establishing the branch of Kodia under District Central Co-operative Bank, Narsinghpur was to provide all types of loan to the borrowers for agriculture development including production purpose and development of productive resources. The branch is financing to the borrowers successfully in the decade of study period and finances huge number of borrowers of its vicinity. The progress of bank in respect of financial achievement as disbursement of loan from last decade (2004-05 to 2013-14) was evaluated to assess the improvement in present branch in a decade as per stated objective of study. This short period was considered in study due to unavailability of secondary data

regarding financial achievement as proposed and actual disbursement of loan, and also for time lag of researcher.

Prior to the All India Rural Credit Survey Committee Report, the District Co-operative Central Bank Limited were mostly giving loans for requirement of crop production and discharge of prior debts and for redemption of past mortgages. There was a shift in the lending policy of the banks after the recommendations of the Committee. In accordance with the committee's recommendations, the District Central Co-operative Bank Limited giving first priority to applications in respect of loans for improvements, reclamation and development of land, purchase of agricultural machinery and equipments and other productive purposes.

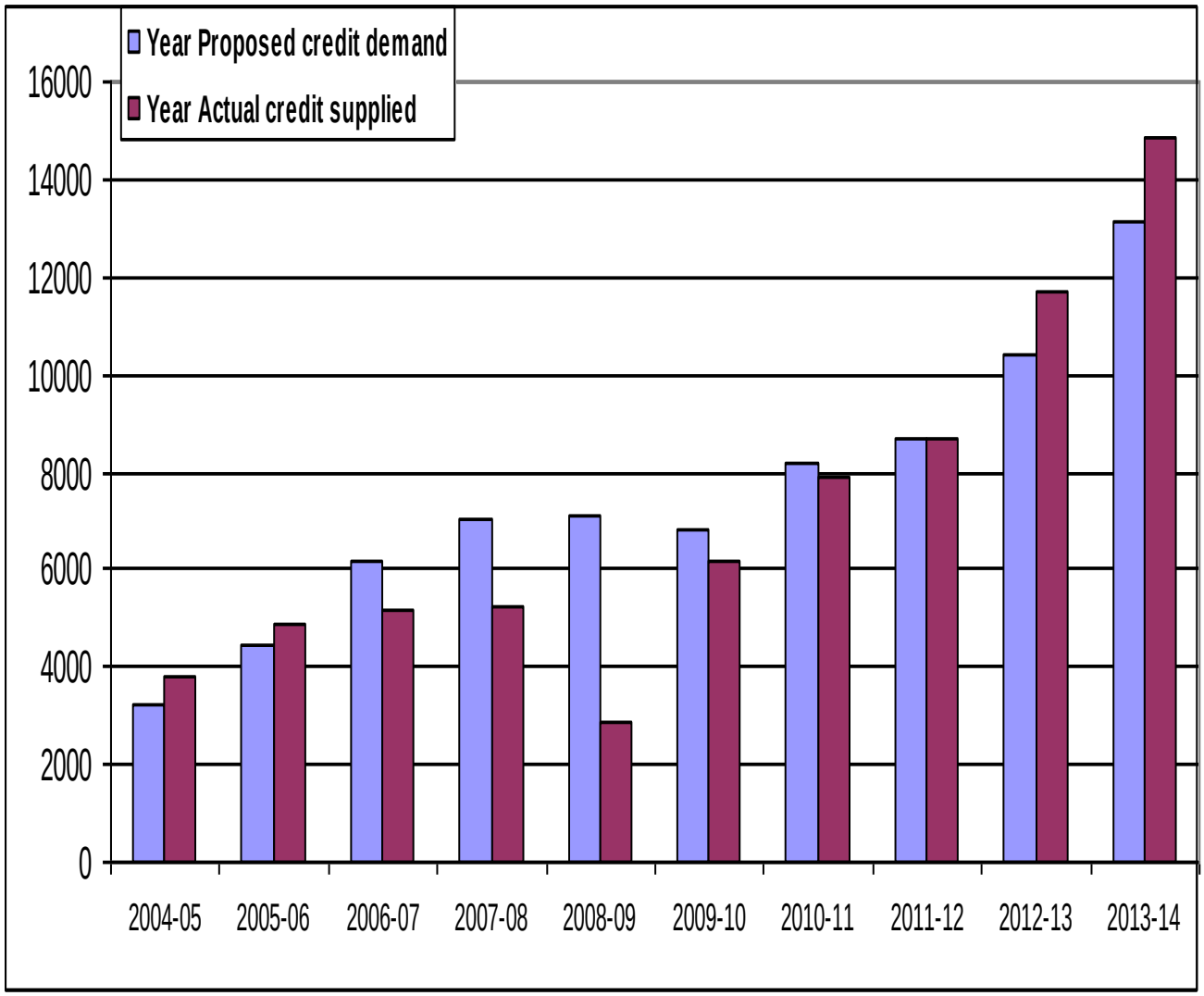
To assess the progress of District Central Co-operative Bank, Narsinghpur, branch Kodia, the proposed credit (actual demand) and the actual credit supply (made by the branch) is analyze. The detail information of proposed credit demand and actual credit supplied by the branch office during 2004-05 to 2013-14 is presented in table 4.1.

Table: 4.1 Proposed credit demand and actual credit supplied by District Central Co-operative Bank, Narsinghpur, branch Kodia.

Year	Proposed credit demand		Actual credit supplied		% supply over demand	Supply position
	Rs. Lakhs	% change over base year	Rs. Lakhs	% change over base year		
2004-05	3195.00	100.00	3797.42	100.00	118.86	18.86 (Surplus)
2005-06	4450.00	139.28	4870.38	128.25	109.45	9.45 (Surplus)
2006-07	6200.00	194.05	5154.38	135.73	83.14	-16.86 (Shortage)
2007-08	7000.00	219.09	5222.55	137.53	74.61	-25.39 (Shortage)
2008-09	7100.00	222.22	2876.71	75.75	40.52	-59.48 (Shortage)
2009-10	6800.00	212.83	6167.24	162.41	90.69	-9.31 (Shortage)
2010-11	8200.00	256.65	7897.25	207.96	96.31	-3.69 (Shortage)
2011-12	8700.00	272.30	8702.73	229.17	100.03	0.03 (Surplus)
2012-13	10400.00	325.51	11663.69	307.15	112.15	12.15 (Surplus)
2013-14	13100.00	410.02	14826.99	390.45	113.18	13.18 (Surplus)
Total	75145.00	--	71179.34	--	94.72	-5.28 (Shortage)
Average	7514.50	235.20	7117.93	187.44	94.72	-5.28 (Shortage)

Fig:1: Proposed credit demand and actual credit supplied by District Central Co-operative Bank, Narsinghpur, branch Kodia

(Rs.Lakhs)



After the ‘Green Revolution Model’ adopted for growth of agriculture, the demand for capital increased for variable and fixed expenses. District Central Co-operative Bank, is the important sector for rural financing tried its best in supply of credit as per demand of farmers. The analysis data in table 4.1 explain the position of loan demanded by borrowers in toto and actual supply made by bank in a decade of study. To realize optimum profit from production process right and judicial level of financial assistance is must. Due to shortage of capital with resource endowed borrowers they demanded higher credit from the bank. Despite many efforts, many times there is still shortage of credit supply at the borrowers’ level, due to certain reasons.

The data of loan disbursement pattern of District Central Co-operative Bank, Narsinghpur, branch Kodia, shows that on an average there was proposed credit demand accounted Rs.7514.50 lakhs per annum during a decade of study period. Against this proposed demand, the actual credit supply was found to shortage by on an average -5.28 per cent per annum. This shows that the actual credit supply in nutshell was accounted on an average Rs.7117.93 lakhs per annum (a decade average 2004-05 to 2013-14). This indicates that an achievement of disbursement of loan was found only 94.72 per cent over demanded on per annum basis. Thus, the bank could not meet the actual demand and was unable to reach the proposed target. The reason might be attributed due to bank policy and the borrowers not demanded the loan at the right time.

In study, the year of 2004-05 was considered as base year, treated 100.00 per cent of proposed credit demand and actual credit supply for making the comparative progress in on-going years. To analyze the progress in proposed credit demand and actual credit supply in year to year of study following result has been drawn:

The year wise breakup of data regarding proposed credit demand and actual credit supplied by District Central Co-operative Bank, Narsinghpur, branch Kodia shows that in the year of 2004-05 there was surplus (18.86%) in credit supply over proposed credit demand, determined fulfill of credit target.

The data show that remaining the base year, in the year of 2005-06 the actual credit supply was also found to be surplus by 9.45 per cent over the proposed

credit demand. This showed that the disbursement of loan was made 109.45 per cent over demand in the year.

In the same way the year of 2011-12 the actual credit supply was also found to be surplus by 0.03 per cent over the proposed credit demand. This showed that the disbursement of loan was made 100.03 per cent over demand in the year under reference.

Likely, in the year of 2012-13 the actual credit supply was also found to be surplus by 12.15 per cent over the proposed credit demand. This showed that the disbursement of loan was made 112.15 per cent over demand in the year.

Again in the year of 2013-14 the actual credit supply was also found to be surplus by 13.18 per cent over the proposed credit demand. This showed that the disbursement of loan was made 113.18 per cent over demand in the year.

It is concluded that the District Central Co-operative Bank, Narsinghpur, branch Kodia successfully meets the actual demand and was able to reach the proposed target successfully in these 5 years of a decade.

On the other hand, in the remaining years bank could not meet the actual demand and was unable to reach the proposed target.

In the year 2006-07 the actual credit supply was short by -16.86 per cent over the proposed credit demand. Likely in the year 2007-08 the actual credit supply was short by -25.39 per cent over the proposed credit demand. Same way in the year 2008—09 the actual credit supply was short by -59.48 per cent over the proposed credit demand. Again in the year 2009-10 the actual credit supply was short by -9.31 per cent over the proposed credit demand. On the other hand, in the year 2010-11 the actual credit supply was short by -3.69 per cent over the proposed credit demand.

Thus, it is concluded that in 5 years of the decade of study period bank could not meet the actual demand and was unable to reach the proposed target.

It is very interesting point that the progress of bank in a decade of study period can be determined that in comparison to base year the proposed credit demand and actual credit supply was found to increase in almost all the years, except the supply was lower than base year of study period in the year of 2008-09.

On the basis of above findings it may be concluded that with the adoption of improved high yielding package of practices over time, increase in expenditure in farming process and meager in savings on cultivating households have increased the demand for credit considerably.

It is discussion point that actual supply aspect of credit is most important in the holistic approach of credit expansion as the proposed demand aspect. Supply of credit comes at a cost i.e. lending cost, be it institutional source of credit. The shortage of actual credit supply may be as per the norms of banks rules and regulations. It may also suffers due to high susceptibility to risk, lack of tangible collateral, low volume of business but high number of borrowers, imperfect knowledge on the part of lender, lack of supervision of credit, difficulties in recovery of loan are some factors contributing in shortage of credit supply by lending agency.

4.2 Farm credit issued by the bank for different purposes:

It is well fact known that the cooperative credit institutions catering to the farming community were reorganized and strengthened to lend the agriculture sector on priority basis for all type of loan, by fixing the norms for priority sector lending. The one of the important objectives of Cooperative Credit Institutions that they should be encouraged to adopt new production technology by meeting their credit requirements, short-term as well as long-term, so that the agricultural production, especially the food grains production, could be increased. On their priority basis of agriculture development in rural area and to enhance the income and employment of farmers the bank are provided credit to borrowers for different purposes as per the norms of bank i.e. short term, medium term and long term.

Short-term loans are given for seasonal agricultural operations directed towards raising crops on land. The medium-term loans are given for the purpose of purchasing cattle and farming implements including irrigation pump and their system. Long-term credit is given for making permanent improvement in land. The purposes include digging of well/tubewell, purchase of motors, agricultural machinery including tractor etc. As per the norms and period of loan disbursement the farm credit issued by the bank for different purposes are presented in table 4.2.

Table: 4.2 Purpose wise loan amount as per period of norms supply by District Central Co-operative Bank, branch Kodia from 2004-05 to 2013-14.

(Rs. Lakhs)

Year	Purposes						
	Short term loan	Medium term loan	Long term loan	Other (Agril)	Total (Agril)	Non Agril	Grand total
2004-05	2122.00	226.48	55.38	361.77	2765.63	1031.79	3797.42
2005-06	2438.00	209.41	45.87	367.75	3061.03	1809.35	4870.38
2006-07	2953.00	85.43	36.37	500.02	3574.82	1579.56	5154.38
2007-08	3308.00	55.03	26.87	464.58	3854.48	1368.07	5222.55
2008-09	2351.00	26.32	0	400.39	2777.71	99.00	2876.71
2009-10	2109.00	23.49	0	7.86	2140.35	4026.89	6167.24
2010-11	2241.00	20.66	0	0.98	2262.64	5634.61	7897.25
2011-12	4115.00	17.80	0	0	4132.80	4569.93	8702.73
2012-13	7249.00	15.00	0	0	7264.00	4399.69	11663.69
2013-14	9003.00	233.09	0	41.26	9277.35	5549.64	14826.99
Total (Rs.)	37889.00	912.71	164.49	2144.61	41110.81	30068.53	71179.34
Average	3788.90 (53.23)	91.27 (1.28)	41.12 (0.58)	268.08 (3.77)	4111.08 (57.76)	3006.85 (42.24)	7117.93 (100.00)

Fig: 4.2 Purpose wise loan amount as per period of norms supply by bank, branch Kodia from 2004-05 to 2013-14.

(Rs. Lakhs)

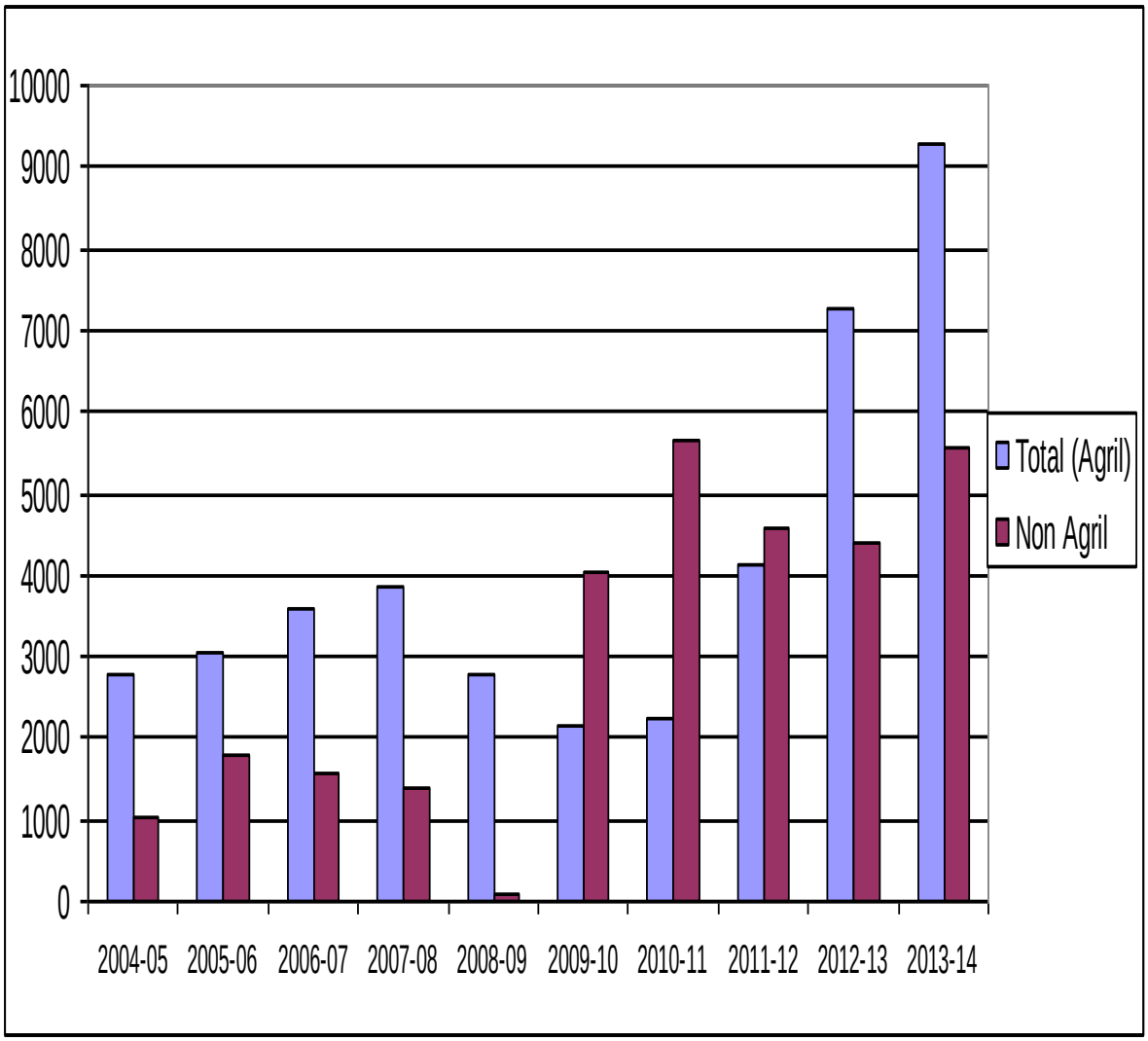


Table 4.2 portraits year wise loan distribution pattern of credit supplied among the borrowers for different purposes in agricultural and non agricultural sector. As for as total amount of loan supplied to borrowers during an average year (average of decade i.e. from 2004-05 to 2013-14), it is observed that 57.76 per cent of total loan has been supplied to agriculture sector followed by 42.24 per cent of total loan has been supplied to non agriculture sector. Hence, agriculture sector was given to priority for credit by the District Central Co-operative Bank, Narsinghpur, branch Kodia.

The breakup of total agricultural loan supplied for different purposes has also calculated in present study on average basis of decade figure. The data revealed that by and large, on an average of decade the highest amount was provided for short term loan including KCC (53.23% to total credit) average per annum followed by other agricultural purpose (3.77% to total credit) average per annum, for medium term loan (1.28% to total credit) average per annum and long term loan (0.58% to total credit) average per annum respectively.

Easily availability of agricultural credit for production process, KCC found to important tool for development of farming. In KCC scheme production purpose loan was provided as maximum as per the requirement of the farmers.

The results presented in table 4.2 also visualized the loan supplied according to different purpose to the borrowers by District Central Co-operative Bank, Narsinghpur, branch Kodia from 2004-05 to 2013-14.

The average of decade data (2004-05 to 2013-14) showed that on an average the bank supplied the amount of Rs.7117.93 lakhs per annum for different purposes in agriculture and non agriculture sector. The data also revealed that by and large, on an average of decade the highest amount Rs.4111.08 lakhs was provided for agriculture purposes. On the other hand, on an average of decade the amount Rs.3006.85 lakhs was provided for non agriculture purposes.

Among the agricultural purposes the short term loan including KCC was given to priority and Rs.3788.90 lakhs was supplied on an average per annum. The medium term loan was found to very nominal and Rs.91.27 lakhs was supplied on an average per annum. On the other hand, the long term loan was given least priority among the agricultural credit and only Rs.41.12 lakhs was supplied on an average

per annum.

Other agricultural purpose including allied activities was given some what reasonable priority and amount of Rs.268.08 lakhs was supplied on an average per annum.

i) Short term loan including kisan credit card (kcc):

Short term loan was supplied for production purposes to meet out the input requirement in crop production process. Recently this type of loan are also providing through Kisan Credit Card (KCC) scheme. It sought to address many of these issues concerning short-term credit needs of borrowers. It aimed at providing timely and adequate credit to the borrowers in a cost effective and flexible manner. In addition to credit for crop production, the scheme provides for credit for ancillary activities related to crop production, working capital needs for non-farm activities and allied activities with some provision for consumption needs. The bank District Central Co-operative Bank, Narsinghpur, branch Kodia taken initiative to supply credit against KCC during the decade of study period and the bank mainly provided loan in KCC scheme for higher number of borrowers.

Yearly breakup of loan supplied for short term credit including KCC (short type of credit only) denoted that the average funds made available to the borrowers in the year of 2004-05 accounted to Rs.2122.00 lakhs. Similarly, in the year of 2005-06 the bank supplied Rs.2438.00 lakhs for short term loan followed by Rs.2953.00 lakhs in the year of 2006-07, Rs.3308.00 lakhs in the year of 2007-08, Rs.2351.00 lakhs in the year of 2008-09, Rs.2109.00 lakhs in the year of 2009-10, Rs.2241.00 lakhs in the year of 2010-11, Rs.4115.00 lakhs in the year of 2011-12, Rs.7249.00 lakhs in the year of 2012-13 and Rs.9003.00 lakhs in the year of 2013-14 for short term purpose.

i) Medium term loan:

Medium term loan is more requisite for medium type of machinery, irrigation system and some short of agricultural management and development purpose. In the area of study due to shortage of irrigation facilities the borrowers borrowed fund for electric pumpset, diesel pumpset and sprinkler irrigation system and other purposes. The loan distribution pattern shows that only marginal amount of total credit provided to the borrowers made available for these purposes.

It may be noted from the Table 4.2 that the average funds made available for these purposes by bank District Central Co-operative Bank, Narsinghpur, branch Kodia was Rs.226.48 lakhs in the year of 2004-05 followed by Rs.209.41 lakhs in the year of 2005-06, Rs.85.43 lakhs in the year of 2006-07, Rs.55.03 lakhs in the year of 2007-08, Rs.26.32 lakhs in the year of 2008-09, Rs.23.49 lakhs in the year of 2009-10, Rs.20.66 lakhs in the year of 2010-11, Rs.17.80 lakhs in the year of 2011-12, Rs.15.00 lakhs in the year of 2012-13 and Rs.233.09 lakhs in the year of 2013-14 for medium term loan.

iii) Long term loan:

Tractor is an important farm implement for land development and field preparation. On the other hand, digging the tubewell is one of the important for irrigation purpose. These fixed assets are costly one and due to poor resource based borrowers they borrowing fund from institutional sources. District Central Co-operative Bank, Narsinghpur, branch Kodia provided the loan for long term purposes only in the year from 2004-05 to 2007-08 in study period. The remaining period from 2008-09 to 2013-14 the bank has been not provided the credit for these purposes. It may be noted from the table 4.2 that the total credit provided by the bank for long term loan was amounted Rs.55.38 lakhs in the year of 2004-05 followed by Rs.45.87 lakhs in the year of 2005-06, Rs.36.37 lakhs in the year of 2006-07 and Rs.26.87 lakhs in the year of 2007-08 for long term loan.

4.3 Repayment of loan (recovery of loan):

One of the important tests for evaluating the efficiency of any system of credit is the recovery of loans on due date. Now a day almost all the lending institutions are facing the problem of overdues and District Central Co-operative Bank are no exception to it. Recovery of loans advanced, therefore, is as important as lending. If the banks are not able to collect the installments due for payment in time they may not be able to meet the repayment schedules to their higher financing agencies. This will in turn, restrict their lending operations in view of the financial discipline imposed by DBARD and RBI.

Purpose wise recovery:

The purpose wise yearly loan overdue which have to recovered from borrowers by the bank are presented in table 4.3.

Table: 4.3 Purpose wise loan overdue and amount recovery have to made by branch Kodia from 2004-05 to 2013-14. (Rs. Lakhs)

Year	Purposes of overdue				
	Short term loan	Medium term loan	Long term loan	Other (Agril) and Non (Agril)	Total overdue
2004-05	3866.94	396.04	76.58	2473.09	6812.65
2005-06	5157.41	188.61	70.84	1952.07	7368.93
2006-07	5794.65	100.75	52.07	1778.61	7726.08
2007-08	7269.02	40.29	77.41	1135.1	8521.82
2008-09	8725.38	69.61	65.60	3901.98	12762.57
2009-10	8957.22	54.01	44.04	1868.03	10923.30
2010-11	10859.53	40.77	80.09	46.89	11027.28
2011-12	11062.95	14.43	65.78	754.06	11897.22
2012-13	10849.67	22.19	55.08	5678.4	16605.34
2013-14	14057.88	328.21	55.51	4353.73	18795.33
Total (Rs.)	86600.65	1254.91	643.00	23941.96	112440.52
Average	8660.07 (77.02)	125.49 (1.12)	64.30 (0.57)	2394.20 (21.29)	11244.05 (100.00)

The purpose wise analysis of overdues of loan is important from the point of view of control of overdues and efficient recovery process. The data in table 4.3 shows the overdues of loan year wise and purpose wise which recovery have to made by bank District Central Co-operative Bank, Narsinghpur, branch Kodia. The control of overdues can be exercised by the banks only by knowing its composition. This part of study proposes to analyze the overdues to facilitate the regulation and control of overdues by efficient recovery or repayment plant schedule. The structure of overdues was analyzed by taking the purpose wise and year wise classification of overdues.

The purpose-wise classification of overdues of loan which recovery have to made remain as per bank repayment plan shows the quantum of overdues in each purposes as per the bank norm. The important sector are short term loan including KCC had highest loan overdues on an average (10 years average) Rs.8660.07 lakhs i.e. 77.02 per cent of total loan overdues. The next important overdues sector was found to "other agriculture and non agriculture" purposes. This sector had loan overdues on an average (10 years average) Rs.2394.20 lakhs i.e. 21.29 per cent of

total loan overdues.

The medium term loan which are including the minor irrigation, farm mechanization, dairy/poultry, other diversified activities are the important sector for development of agriculture. Among this sector loan overdues was found on an average (10 years average) Rs.125.49 lakhs i.e. 1.12 per cent of total loan overdues.

The long term loan which are including the major irrigation development as digging of tubewell, improved farm mechanization like tractor are the important sector for long time development of agriculture. Among this sector loan overdues was found on an average (10 years average) Rs.64.30 lakhs i.e. 0.57 per cent of total loan overdues.

Study found that the recovery of loans is highest with borrowers of short term loan due to highest loan advanced by the bank to meet the requirement of yield attributing inputs at farm level. It is also revealed that the bank has not advance satisfactory loan to the borrowers of medium term and long term purposes that is reason for lower recovery. The study also focused that bank has made a sizeable loan for allied development agricultural and non agricultural activities; due to the sufficient advance loan the borrowers of this sector have sufficient recovery which have to made as per bank plan.

Year wise recovery:

The year wise loan recovery plan or repayment plan of the bank is also important tool for making the efficient credit scheme. To analyze the year wise performance of loan recovery (repayment plan) during 2004-05 to 2013-14 under agriculture and non agriculture sector of District Central Co-operative Bank, Narsinghpur, branch Kodia have been computed and presented in table 4.4.

Table: 4.4 Recovery of loan information of District Central Co-operative Bank, Narsinghpur, branch Kodia from 2004-05 to 2013-14. (Rs. Lakhs)

Year	Total overdues	Amount recovered	Balance overdues	% recovery
2004-05	**6812.65**	**4454.79**	**2357.86**	**65.39**
2005-06	**7368.93**	**4884.99**	**2483.94**	**66.29**
2006-07	**7726.08**	**5191.21**	**2534.87**	**67.19**
2007-08	**8521.82**	**2073.61**	**6448.21**	**24.33**
2008-09	**12762.57**	**7151.76**	**5610.81**	**56.04**
2009-10	**10923.30**	**7075.54**	**3847.76**	**64.77**

2010-11	**11027.28**	**7204.91**	**3822.37**	**65.34**
2011-12	**11897.22**	**7031.31**	**4865.91**	**59.10**
2012-13	**16605.34**	**11118.90**	**5486.44**	**66.97**
2013-14	**18795.33**	**11869.52**	**6925.81**	**63.15**
Total	**112440.52**	**68056.54**	**44383.98**	**--**
Average per year	**11244.05**	**6805.65**	**4438.40**	**59.86**

The table 4.4 revealed that on an average 59.86 per cent of recovery has been registered yearly during 2004-05 to 2013-14. This low recovery of loan seems to be very poor for borrowers and for financial institution too.

Overall percentage of yearly dues recovery during study period of a decade has been registered maximum 67.19 per cent in the year of 2006-07. It is also reveals that the minimum 24.33 per cent dues recovery percentage has been found in the year of 2007-08.

The table 4.4 also represents the comparative view of the amount overdues and recovery of loan by District Central Co-operative Bank, Narsinghpur, branch Kodia year wise, from 2004-05 to 2013-14. The data revealed that on an overall average Rs.11244.05 lakhs overdues or loan advanced have to be recovered per year from borrowers. In against this overdue on an overall average Rs.6805.65 lakhs have been paid by borrowers in a year during the study period. The remaining balance overdues or borrowers have to be made repayment of Rs.4438.40 lakhs per year.

In nutshell, it is concluded that the recovery of loan of the banks are found about to 60.00 per cent and above annually. But the low recovery is registered in the year of 2007-08 (recovery registered 24.33%) followed by in the year of 2008-09 (recovery registered 56.04%) and in the year of 2011-12 (recovery registered 59.10%) respectively.

On the basis of data regarding low percentage of yearly recovery of loan and sizeable overdues termed as failure in recovery. Failure recovery must be handled carefully since it has a significant effect on the banks' future workings. The presence of high percentage of overdues is a very critical factor as far as the banks' objectives are concerned. Hence, percentage of recovery in each and every year of loaning period should be high as possible for further loaning procedure.

The poor performance in the recovery of loans by the bank was might be due

to maximizing disbursement of loan by adopting target-oriented approach and succumbing to outside pressure for sanctioning loans either by ignoring the viability of the proposal or unrealistic assessment of incremental income. The principle of sound agricultural development banking requires that the period of loan recovery or repayment plan should normally be as per norms of bank to the active economic performance. The maximum repayment should be as per recovery plan of the bank because the period of loan in individual cases are fixed based on the case by case appraisal, i.e. subject to the repaying capacity of the borrowers.

4.4 Economic effect of loan on borrowers :-

In study it is found that the farmers obtain loans for various purposes i.e. agricultural as well as non-agricultural from District Central Co-operative Bank, Narsinghpur, branch Kodia. The study brings out the term wise loans obtained by sampled farmers in study area during the study period of 2004-05 to 2013-14. Thus, it is found that in all purposes of loan category on an average year Rs.7117.93 lakhs have been availed as credit by borrowers. Out of this total credit 53.23 per cent is the share of short-term loans accounting Rs.3788.90 lakhs per annum. Again out of total credit 1.28 per cent is the share of medium-term loans accounting Rs.91.27 lakhs per annum. On the other hand, out of total credit 0.58 per cent is the share of long-term loans accounting Rs.41.12 lakhs per annum.

Like any productive activity, agriculture needs financing for its various activities production processes, purchase of inputs, purchase of farm machinery, management of irrigation and improvement of land and production resources etc. It is pertinent to assess the economic effect of the credit on the development and enhancement of agriculture production, production pattern, income generation and employment opportunities, assets as the economic tools. Hence, to achieve this specific objective of study as economic effect of the borrowers in respect of increase in net shown area, increase in irrigation availability and irrigated area, enhancement of cropping intensity, increasing in area under HYV of crops, increasing the double crop area, increasing the fixed and working assets, development of farm business and their income, increasing in farm income and change the cropping pattern towards profitable. These economic effects of credit was computed on the basis of case study through primary data have been collected and analyzing these status before and after the credit. The results of this part of study are, thus, based on

primary data analysis.

Case study:

As per as the principle objective of the study are concerned, to probe into the operational aspects of District Central Co-operative Bank, Narsinghpur, branch Kodia, after examining its general economic performance from 2004-05 to 2013-14, it is pertinent to asses the effect of credit on borrowers economic development. For this purpose, 10 borrowers in each items of loan i.e. credit availed in short term loan including "KCC", medium term loan including "electric pumpset, diesel pumpset, sprinkler" and long term loan including "tractor, tubewell" was considered for case study.

The cases selected for deep examination of each category of borrowers (purpose wise) were independent of each other avoiding any overlapping in respect of loans received from the District Central Co-operative Bank, Narsinghpur, branch Kodia. The detail of purpose wise loan borrowed by sample borrowers (during the study period of 2004-05 to 2013-14) is presented in table 4.5.

Table: 4.5 Purpose wise loan borrowed by sample borrowers from District Central Co-operative Bank, Narsinghpur, branch Kodia.

(Rs. thousand)

Term Loan	Purpose of loan	No. of sample cases	Total loan advanced for the purpose	Average loan advanced per borrowers	Year of loan availed
Short Term	KCC	10	1500	150	2008-09 to 2013-14
Medium Term	Electric pumpset	10	1750	175	2008-09 to 2013-14
	Diesel pumpset	10	1600	160	
	Sprinkler	10	900	90	
Long Term	Tractor	10	5600	560	2004-05 to 2007-08
	Tubewell	10	2360	236	

It is found that the bank provided short term loan, medium term loan and long term loan for mainly fulfillment of yield attributing inputs, purchase of farm machinery, irrigation development and land management practices. Among these purposes of loan, it may be noted from the table 4.5 that the loans for purchase of tractor and

accessories were found to be highest Rs.560.00 thousand per borrower. Irrigation is must for higher yield and increasing the double cropped area. Under long term scheme beside the loan for tractor, bank provided for digging of tubewell. The loan obtained for tube well per borrowers was found to on an average Rs.236.00 thousand per borrowers. These loans are to be recovered with in 15 years of duration.

Under medium term loan for irrigation purpose, bank provided loan against electric pumpset, diesel pumpset and for sprinkler purposes. Data revealed that the borrowers obtained loan for electric pumpset on an average Rs.175.00 thousand per borrowers. The loan obtained for diesel pumpset on an average Rs.160.00 thousand per borrowers. On the other hand, the loan obtained for sprinkler on an average Rs.90.00 thousand per borrowers. These loans are to be recovered with in 5 years of duration.

Now a day KCC proved better mechanism for credit to all the purpose of production and distribution of products and management of farm. District Central Co-operative Bank, Narsinghpur, branch Kodia provided credit for KCC borrowers amounting on an average Rs.150.00 thousand per borrower. The maximum KCC borrowers obtained loan for crop production purposes which have to be recovered after sale of produce.

The detail impact of loan on economic aspects of production is described separately as purpose wise loan obtain and their impact as follows:

One of the important objectives of present study is to evaluate the impact of credit on monitory gain by borrowers per house hold. The impact of credit, purpose wise may be analyze to determine the change and development in economic behaviour and their result in gaining income i.e. economic base which is found with compare study of before and after credit. The empirical knowledge on these facts will be useful to government, extension workers, borrowers and lending agencies in developing the strategies for credit use in increasing farm production and productivity with enhancement of income and employment opportunities. The details of impact on incremental value generated through financing of different agricultural purposes are presented in different tables.

Case study of credit for kisan credit card (KCC):

The credit through KCC is aimed at providing timely and adequate credit to the farmers in a cost effective and flexible manner. In addition to credit for crop production, the scheme provides for credit for ancillary activities related to crop production, working capital needs for farm activities and allied activities. Among the total borrowers of KCC purpose finance by District Central Co-operative Bank, Narsinghpur, branch Kodia, 10 cases were sampled out for the detail study. The detail analysis of impact of credit on economic incremental progress to output for these borrowers is presented in table 4.6.

Table: 4.6 Impact analysis of KCC loan on borrowers' economy.

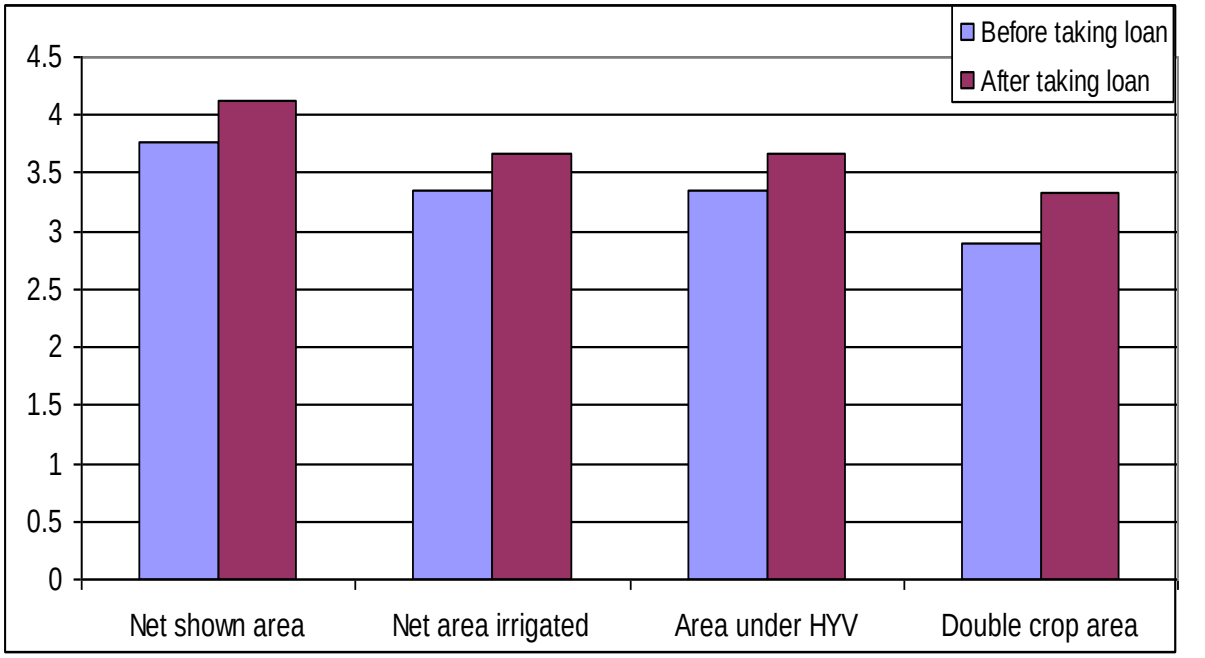
(Rs. Thousand and area ha.)

Economic trait	Average of 10 samples borrowers for KCC			
	Before taking loan	After taking loan	Changed after loan	%Additional over before
Net shown area	3.77	4.13	0.36	9.55
Net area irrigated	3.35	3.67	0.32	9.55
Cropping intensity (%)	181	183	2.00	1.10
Area under HYV	3.35	3.67	0.32	9.55
Double crop area	2.89	3.34	0.45	15.57
Fixed assets	86967	123070	36103	41.51
Working assets	40067	79000	38933	97.17
Farm business income	98000	116000	18000	18.37
Farm income	181365	211365	30000	16.54
Cropping pattern	Priority food grain	Priority cash and food crops	--	--

Fig: 4.3 Impact analysis of KCC loan on borrowers' economy.

Average of 10 samples borrowers for KCC

(area ha.)



(Rs. Thousand)

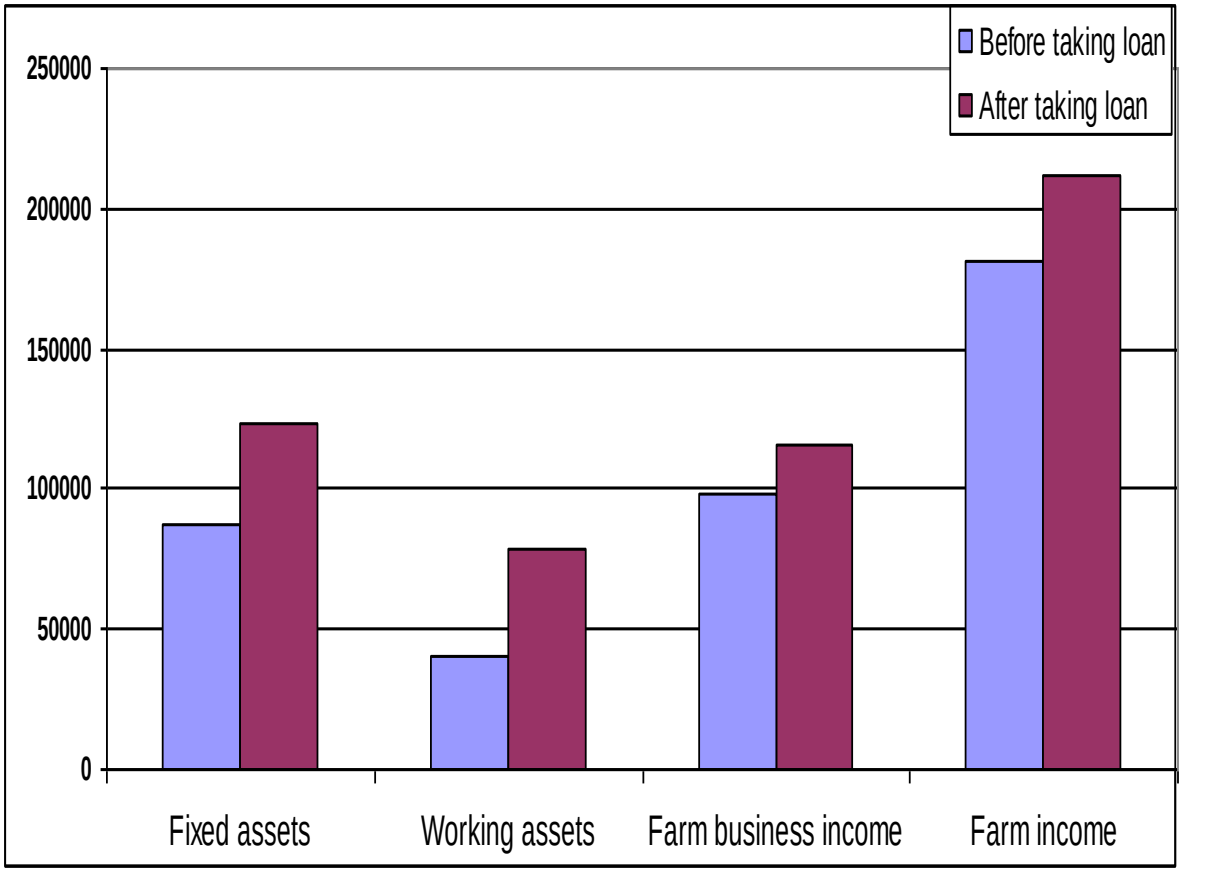


Table 4.6 reveals that with regards to impact or effect of KCC credit on enhancement of various factors of economic gain of borrowers' farms found to positive towards increased in different levels after the loan. This positive change in various economic gain of borrowers' farms may be determine the impact of KCC loan.

As regards to positive change in "net sown area" of KCC borrowers after the credit, it was found to be increased by 9.55 per cent over before the credit. This might be due to higher availability of inputs and other resources which affects to turned the fallow and uncultivated land under crops cultivation.

As regards to positive change in "net area irrigated" of KCC borrowers after the credit, it was found to increased by 9.55 per cent over before the credit. This might be due to higher availability of irrigation facilities which affects to turned the unirrigated land into irrigated land.

As regards to positive change in "cropping intensity" of KCC borrowers after the credit, it was found to increased by 1.10 per cent over before the credit. This was might be due to enhancement of net sown area, double cropped area and irrigation facilities.

As regards to positive change in "area under HYV" of KCC borrowers after the credit, it was found to be increased by 9.55 per cent over before the credit. The low adoption of high yielding varieties of crops might be due to low availability of funds with farmers, which fulfilled with credit through KCC.

As regards to positive change in "double cropped area" of KCC borrowers after the credit, it was found to be increased by 15.57 per cent over before the credit. This was might be due to higher availability of inputs, irrigation facilities and other resources which manage better for higher area under cultivation.

As regards to positive change in "fixed assets" of KCC borrowers after the credit, it was found to be no change after the credit. It is well known fact that the farmers taken loan through KCC as crop loan, hence they have not purchased any fixed assets through KCC loan.

As regards to positive change in "working assets" of KCC borrowers after the credit, it was found to be increased by 97.17 per cent over before the credit. This

was might be due to higher availability of funds for purchasing inputs and other resources which increase the working assets.

As regards to positive change in "farm business income" of KCC borrowers after the credit, it was found to be increased by 18.37 per cent over before the credit. The availability of loan increased the capacity of borrowers towards progressive farming which might be increased the higher farm business income.

As regards to positive change in "farm income" of KCC borrowers after the credit, it was found to be increased by 16.54 per cent over before the credit. The availability of loan motivated the borrowers towards higher adoption of improved production technology. Through higher adoption of technology borrowers were reaped high farm income.

The data also shows that due to availability of KCC loan the farmers change their cropping pattern. Before the KCC loan, higher number of borrowers was given priority for food grain production which change and priority was given for cash and food crops production.

Case study of credit for electric pumpset:

Among the total borrowers of electric pumpset finance by District Central Co-operative Bank, Narsinghpur, branch Kodia, 10 cases was sampled out for the detail impact study. The detail analysis of impact of credit for electric pumpset on economic incremental progress to output for these borrowers is presented in table 4.7.

Table: 4.7 Impact analysis of electric pumpset loan on borrowers' economy.
(Rs. Thousand and area ha.)

Economic trait	Average of 10 samples borrowers for electric pumpset			
	Before taking loan	After taking loan	Changed after loan	%Additional over before
Net shown area	5.46	6.35	0.89	16.30
Net area irrigated	3.81	5.72	1.91	50.13
Cropping intensity (%)	171	193	22.00	12.87
Area under HYV	3.81	5.72	1.91	50.13
Double crop area	3.93	5.84	1.91	48.60
Fixed assets	191009	219126	28117	14.72
Working assets	175529	263573	88044	50.16
Farm business income	50523	55883	5360	10.61
Farm income	191337	233480	42143	22.03
Cropping pattern	Priority unirrigated crops	Priority irrigated crops	--	--

Table 4.7 reveals that with regards to impact or effect of "electric pumpset" credit on enhancement of various factors of economic gain of borrowers' farms found to positive towards increased in different levels after the loan. This positive change in various economic gain of borrowers' farms may be determine the impact of loan against electric pumpset.

As regards to positive change in "net sown area" of borrowers for electric pumpset after the credit, it was found to be increased by 16.30 per cent over before the credit. This was might be due to higher availability of irrigation due to pumpset which affects to turn the fallow and uncultivated land under crops cultivation.

As regards to positive change in "net area irrigated" of electric pumpset borrowers after the credit, it was found to be increased by 50.13 per cent over before the credit. This was might be due to higher availability of irrigation facilities which affects to turn the unirrigated land into irrigated land.

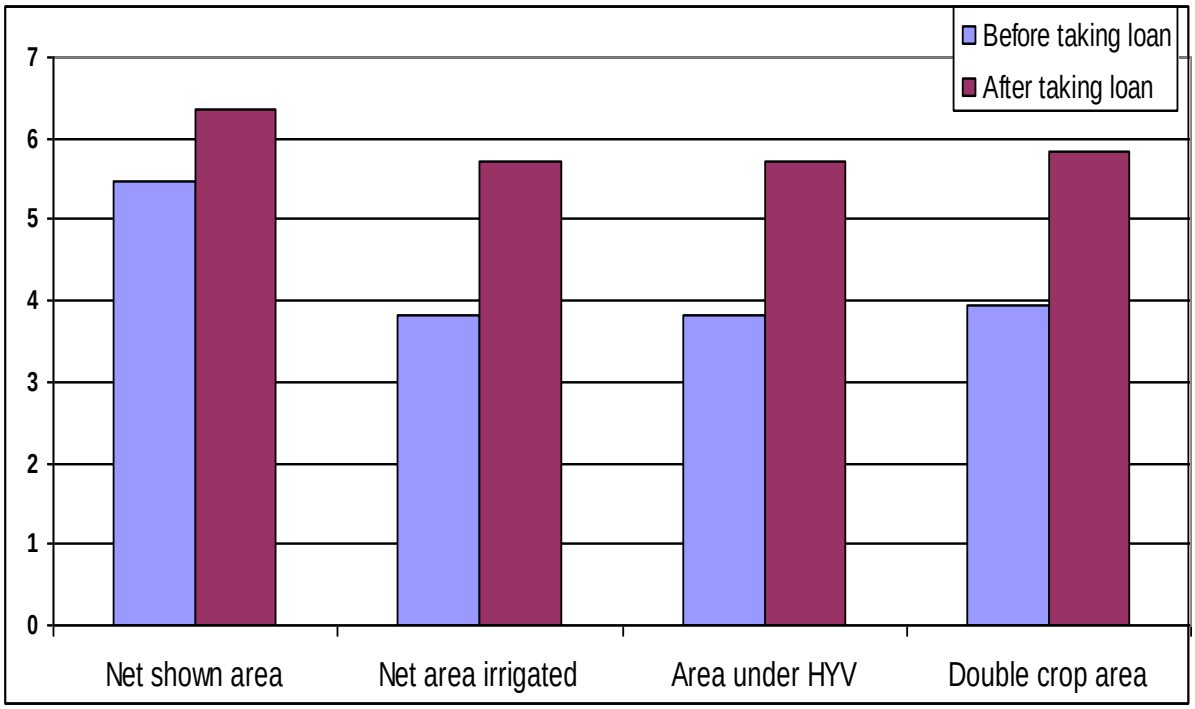
As regards to positive change in "cropping intensity" of electric pumpset borrowers after the credit, it was found to be increased by 12.87 per cent over before the credit. This was might be due to enhancement of net sown area and double cropped area with the availability of irrigation facilities.

As regards to positive change in "area under HYV" of electric pumpset borrowers after the credit, it was found to be increased by 50.13 per cent over before the credit. The HYV of the crops are found to more responsive with irrigation. Hence, in irrigated area mostly farmers used HYV of crops after pumpset.

Fig: 4.4 Impact analysis of electric pumpset loan on borrowers' economy.

Average of 10 samples borrowers for electric pumpset

(Rs. Thousand and area ha.)



As regards to positive change in "double cropped area" of electric pumpset borrowers after the credit, it was found to be increased by 48.60 per cent over before the credit. This was might be due to higher availability of irrigation facilities during rabi season which increase the double cropped area.

As regards to positive change in "fixed assets" of electric pumpset after the credit, it was found to be increased by 14.72 per cent over before the credit. The electric pumpset is fixed assets which cost was involved after the loan in available fixed assets before the loan.

As regards to positive change in "working assets" of electric pumpset borrowers after the credit, it was found to be increased by 50.16 per cent over before the credit. With the availability of irrigation farmers utilized higher yield attributing inputs which caused in increasing the working assets.

As regards to positive change in "farm business income" of electric pumpset borrowers after the credit, it was found to be increased by 10.61 per cent over before the credit. The availability of loan increased the capacity of borrowers towards progressive farming which might be increased the higher farm business income.

As regards to positive change in "farm income" of electric pumpset borrowers after the credit, it was found to be increased by 22.03 per cent over before the credit. The availability of irrigation facilities motivated the borrowers towards higher adoption of improved production technology. Through higher adoption of technology borrowers were reaped high farm income.

The data also shows that due to availability of electric pumpset loan the farmers change their cropping pattern. Before the loan for electric pumpset, higher number of borrowers was given priority for unirrigated crops which change and priority was given for irrigated crops in production process.

Case study of credit for diesel pumpset:

Among the total borrowers of diesel pumpset purpose finance by District Central Co-operative Bank, Narsinghpur, branch Kodia, 10 cases was sampled out for the detail study the impact of loan on economic gain perceived by borrowers. The detail analysis of impact of credit on economic incremental progress to output for these borrowers is presented in table 4.8.

Table: 4.8 Impact analysis of diesel pumpset loan on borrowers economy.
(Rs. Thousand and area ha.)

Economic trait	Average of 10 samples borrowers for diesel pumpset			
	Before taking loan	After taking loan	Changed after loan	%Additional over before
Net shown area	5.03	5.65	0.62	12.33
Net area irrigated	2.44	5.45	3.01	123.36
Cropping intensity (%)	165	199	34.00	20.61
Area under HYV	2.44	5.47	3.03	124.18
Double crop area	3.20	5.59	2.39	74.69
Fixed assets	149422	196011	46589	31.18
Working assets	130919	174410	43491	33.22
Farm business income	58609	81609	23000	39.24
Farm income	171721	212055	40334	23.49
Cropping pattern	Priority unirrigated crops	Priority irrigated crops	--	--

Table 4.8 reveals that with regards to impact or effect of diesel pumpset credit on enhancement of various factors of economic gain of borrowers' farms found to positive towards increased in different levels after the loan. This positive change in various economic gain of borrowers' farms may be determine the impact of diesel pumpset loan.

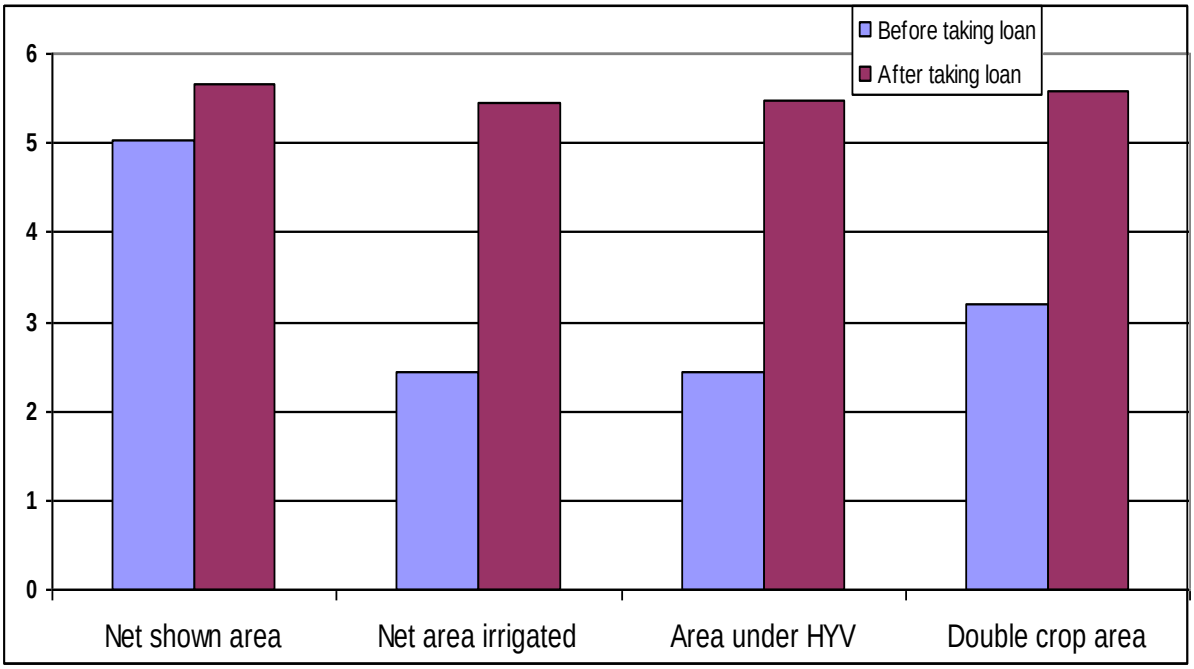
As regards to positive change in "net sown area" of diesel pumpset borrowers after the credit, it was found to be increased by 12.33 per cent over before the credit. This was might be due to higher availability of irrigation due to pumpset which affects to turn the fallow and uncultivated land under crops cultivation.

As regards to positive change in "net area irrigated" of diesel pumpset borrowers after the credit, it was found to be increased by 123.36 per cent over before the credit. This was might be due to higher availability of irrigation facilities which affects to turn the unirrigated land into irrigated land.

Fig: 4.5 Impact analysis of diesel pumpset loan on borrowers economy.

Average of 10 samples borrowers for diesel pumpset

(Rs. Thousand and area ha.)



As regards to positive change in "cropping intensity" of diesel pumpset borrowers after the credit, it was found to be increased by 20.61 per cent over before the credit. This was might be due to enhancement of net sown area and double cropped area with the availability of irrigation facilities.

As regards to positive change in "area under HYV" of diesel pumpset borrowers after the credit, it was found to be increased by 124.18 per cent over before the credit. The HYV of the crops are found to more responsive with irrigation. Hence, in irrigated area mostly farmers used HYV of crops after pumpset.

As regards to positive change in "double cropped area" of diesel pumpset borrowers after the credit, it was found to be increased by 74.69 per cent over before the credit. This was might be due to higher availability of irrigation facilities during rabi season which increase the double cropped area.

As regards to positive change in "fixed assets" of diesel pumpset after the credit, it was found to be increased by 31.18 per cent over before the credit. The diesel pumpset is fixed assets which cost was involved after the loan in available fixed assets before the loan.

As regards to positive change in "working assets" of diesel pumpset borrowers after the credit, it was found to be increased by 33.22 per cent over before the credit. With the availability of irrigation farmers utilized higher yield attributing inputs which caused in increasing the working assets.

As regards to positive change in "farm business income" of diesel pumpset borrowers after the credit, it was found to be increased by 39.24 per cent over before the credit. The availability of loan increased the facilities for irrigation capacity of borrowers which turn towards progressive farming which might be increased the higher farm business income.

As regards to positive change in "farm income" of diesel pumpset borrowers after the credit, it was found to be increased by 23.49 per cent over before the credit. The availability of irrigation facilities motivated the borrowers towards higher adoption of improved production technology. Through higher adoption of technology borrowers were reaped high farm income.

The data also shows that due to availability of diesel pumpset loan the

farmers change their cropping pattern. Before the loan for diesel pumpset, higher number of borrowers was given priority for unirrigated crops which change and priority was given for irrigated crops in production process.

Case study of credit for sprinkler:

Among the total borrowers finance taken for purchase of sprinkler through District Central Co-operative Bank, Narsinghpur, branch Kodia, 10 cases was sampled out for the detail study the impact of this loan on economic gain by borrowers. The detail analysis of impact of credit on economic incremental progress to output for these borrowers is presented in table 4.9.

Table: 4.9 Impact analysis of sprinkler loan on borrowers' economy.

(Rs. Thousand and area ha.)

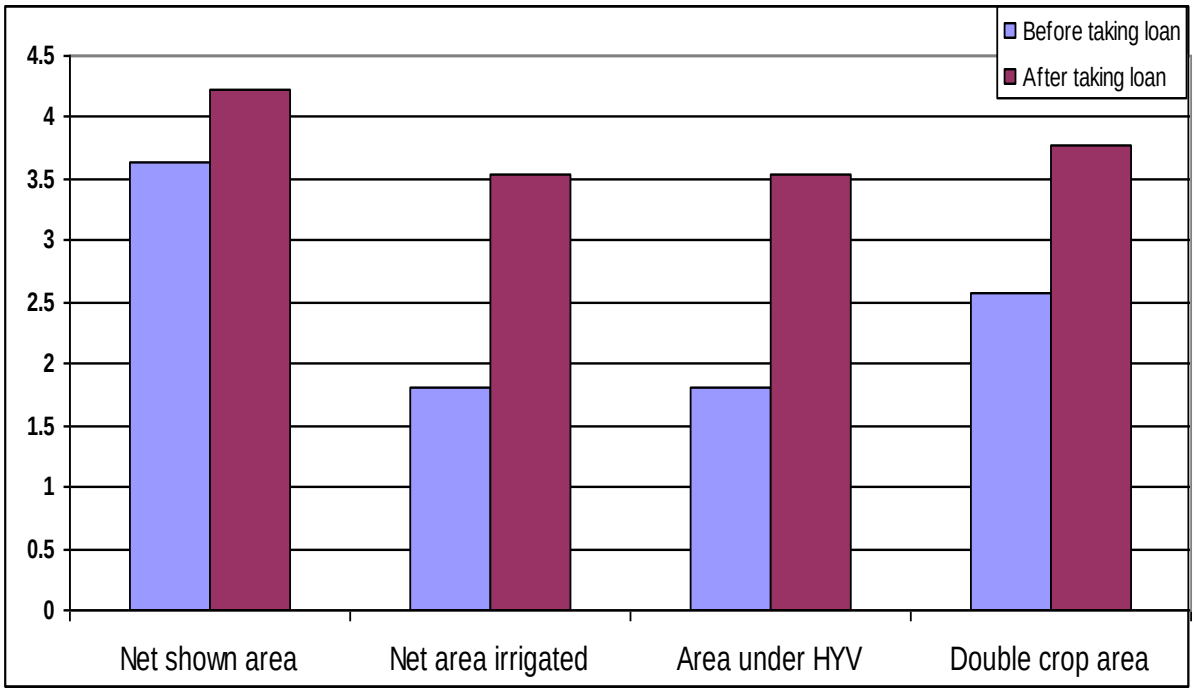
Economic trait	Average of 10 samples borrowers for sprinkler			
	Before taking loan	After taking loan	Changed after loan	%Additional over before
Net shown area	3.63	4.23	0.60	16.53
Net area irrigated	1.80	3.54	1.74	96.67
Cropping intensity (%)	173	188	15.00	8.67
Area under HYV	1.80	3.54	1.74	96.67
Double crop area	2.58	3.78	1.20	46.51
Fixed assets	169938	281977	112039	65.93
Working assets	114696	194112	79416	69.24
Farm business income	51586	81586	30000	58.16
Farm income	104556	124295	19739	18.88
Cropping pattern	Priority unirrigated crops	Priority irrigated crops	--	--

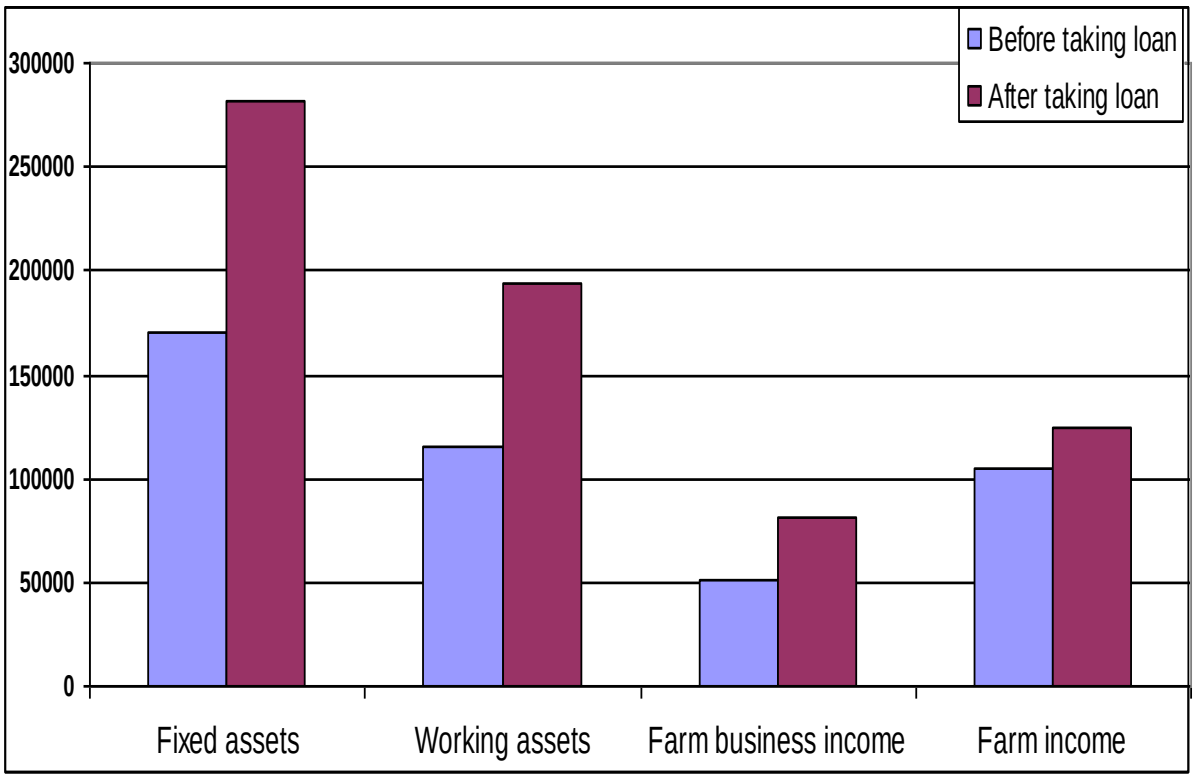
Table 4.9 reveals that with regards to impact or effect of sprinkler credit on enhancement of various factors of economic gain of borrowers' farms found to positive towards increased in different levels after the loan. This positive change in various economic gains of borrowers' farms may be determining the impact of loan for sprinkler purpose.

Fig: 4.6 Impact analysis of sprinkler loan on borrowers' economy.

Average of 10 samples borrowers for sprinkler

(Rs. Thousand and area ha.)





As regards to positive change in "net sown area" of sprinkler borrowers after the credit, it was found to be increased by 16.53 per cent over before the credit. Sprinkler irrigation system is a water saving device. The availability of this system after the loan, the farmers irrigated higher area with available limited irrigation water. This process brought higher area under net sown area.

As regards to positive change in "net area irrigated" of sprinkler borrowers after the credit, it was found to be increased by 96.67 per cent over before the credit. As it is discuss that sprinkler irrigation system is water saving device. The availability of this system after the loan, the farmers brought unirrigated area under irrigated area.

As regards to positive change in "cropping intensity" of sprinkler borrowers after the credit, it was found to be increased by 8.67 per cent over before the credit. This was might be due to enhancement of net sown area, double cropped area and irrigation facilities.

As regards to positive change in "area under HYV" of sprinkler borrowers after the credit, it was found to be increased by 96.67 per cent over before the credit. The HYV of the crops are found to more responsive with irrigation. Hence, in irrigated area mostly farmers used HYV of crops after installation of sprinkler system.

As regards to positive change in "double cropped area" of sprinkler borrowers after the credit, it was found to be increased by 46.51 per cent over before the credit. This was might be due to higher availability of irrigation facilities with water saving device.

As regards to positive change in "fixed assets" of sprinkler after the credit, it was found to be increased by 65.93 per cent over before the credit. It is well known fact that the farmers taken loan for purchase of machinery which is fixed assets.

As regards to positive change in "working assets" of sprinkler borrowers after the credit, it was found to be increased by 69.24 per cent over before the credit. The reason attributed for increase of working assets that with the saving of irrigation water farmers used higher yield attributing area under broad level which increase the working assets.

As regards to positive change in "farm business income" of sprinkler

borrowers after the credit, it was found to be increased by 58.16 per cent over before the credit. The availability of loan for water saving device brought higher area under cultivation of irrigated crops. This progressive farming increased the capacity of borrowers towards reaping of higher farm business income.

As regards to positive change in "farm income" of sprinkler borrowers after the credit, it was found to be increased by 18.88 per cent over before the credit. The availability of loan for water saving device brought higher area under cultivation of irrigated crops. This progressive farming increased the capacity of borrowers towards reaping of higher farm income.

The data also shows that due to availability of loan for sprinkler the farmers change their cropping pattern. Before the loan for sprinkler, higher number of borrowers was given priority for unirrigated crops which change and priority was given for irrigated crops in production process.

Case study of credit for tractor and accessories:

Among the total borrowers for tractor purpose, finance by District Central Co-operative Bank, Narsinghpur, branch Kodia, 10 cases was sampled out for the detail study of impact of credit on enhancement of economic gain perceived by borrowers. The detail analysis of impact of credit on economic incremental progress to output for these borrowers is presented in table 4.10.

Table: 4.10 Impact analysis of tractor and accessories loan on borrowers' economy. **(Rs. Thousand and area ha.)**

Economic trait	Average of 10 samples borrowers for tractor			
	Before taking loan	After taking loan	Changed after loan	%Additional over before
Net shown area	8.81	10.19	1.38	15.66
Net area irrigated	4.09	4.29	0.20	4.89
Cropping intensity (%)	174	176	2.00	1.15
Area under HYV	4.09	5.75	1.66	40.59
Double crop area	6.43	7.69	1.26	19.60
Fixed assets	137263	424693	287430	209.40
Working assets	128118	194973	66855	52.18
Farm business income	55063	58750	3687	6.70
Farm income	206321	256845	50524	24.49
Cropping pattern	Low value crops	High value crops	--	--

Table 4.10 reveals that with regards to impact or effect of tractor credit on enhancement of various factors of economic gain of borrowers' farms found to positive towards increased in different levels after the loan. This positive change in various economic gains of borrowers' farms may be determining the impact of tractor loan.

As regards to positive change in "net sown area" of tractor borrowers after the credit, it was found to be increased by 15.66 per cent over before the credit. This was might be due to higher management of land preparation under plough and caused in increase the fallow land under crops cultivation.

As regards to positive change in "net area irrigated" of tractor borrowers after the credit, it was found to be increased by 4.89 per cent over before the credit. This was might be due to higher availability of irrigation facilities near by the area which affects to turn the unirrigated land into irrigated land.

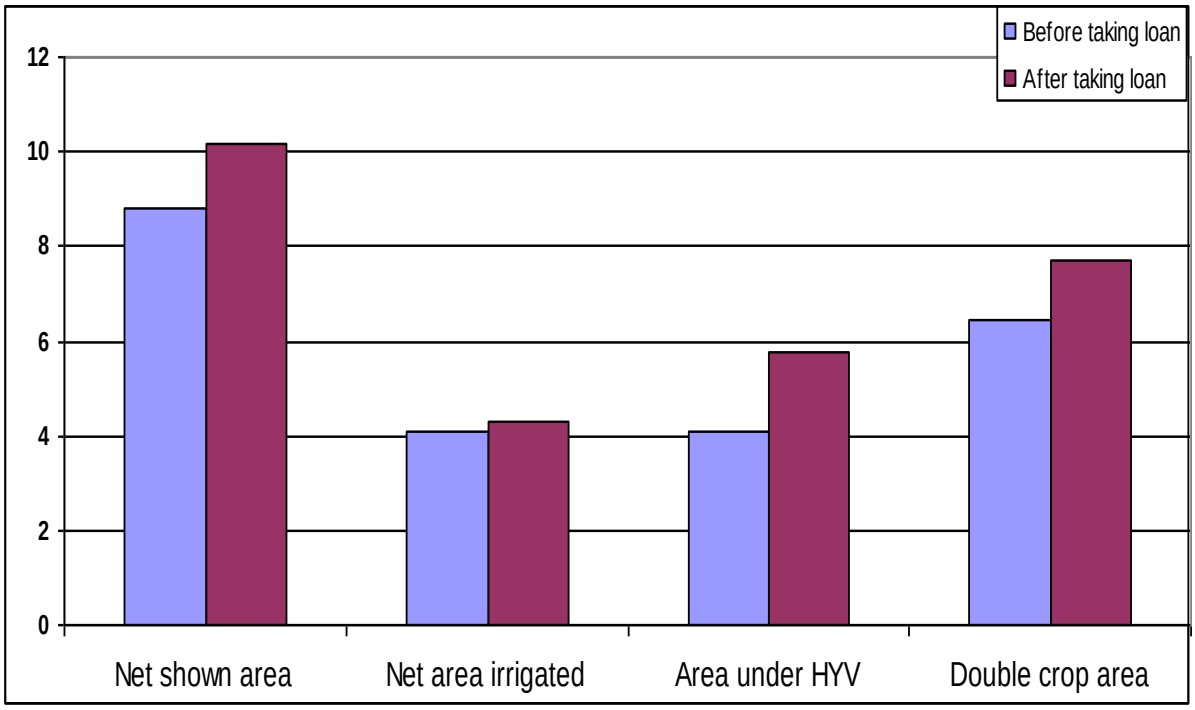
As regards to positive change in "cropping intensity" of tractor borrowers after the credit, it was found to be increased by 1.15 per cent over before the credit. The availability of tractor might be caused for bringing fallow and uncultivated land into cultivated. This process enhances the gross cropped area and resulted in increasing the cropping intensity.

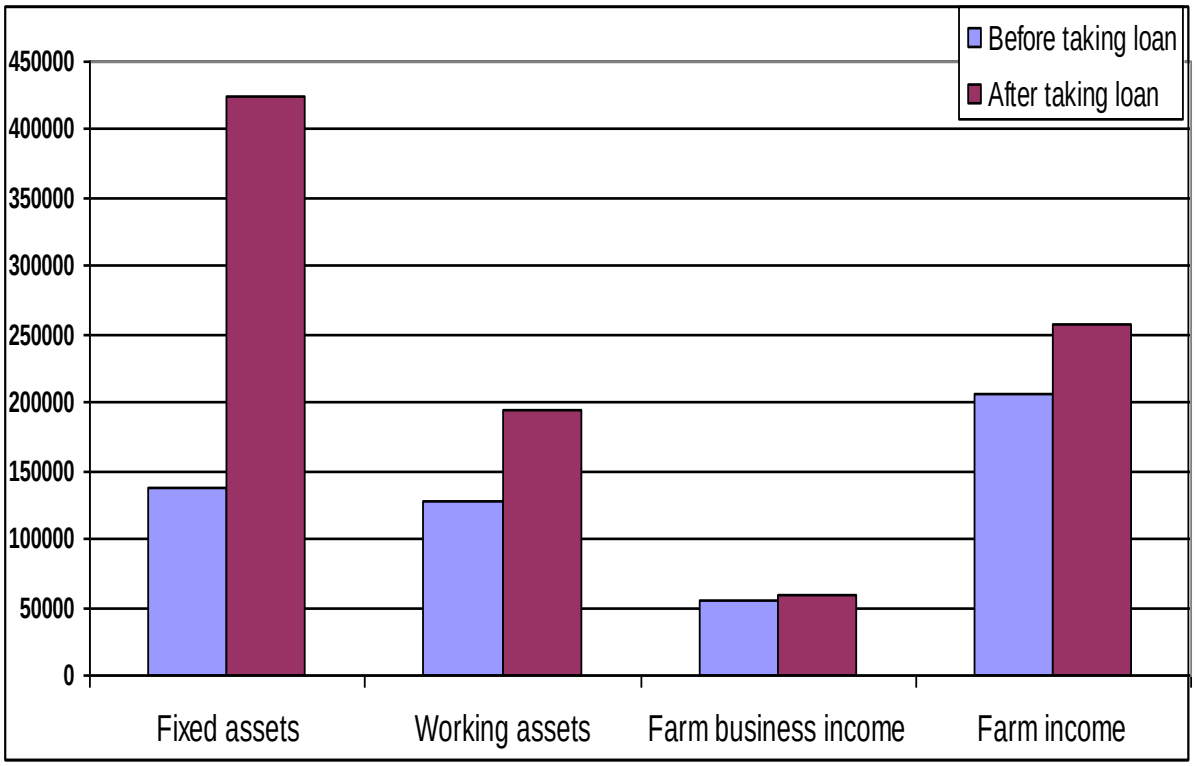
As regards to positive change in "area under HYV" of tractor borrowers after the credit, it was found to be increased by 40.59 per cent over before the credit. The better field preparation practices due to availability of tractor might be reason for area increasing under high yielding varieties of crops.

Fig: 4.7 Impact analysis of tractor and accessories loan on borrowers' economy.

Average of 10 samples borrowers for tractor

(Rs. Thousand and area ha.)





As regards to positive change in "double cropped area" of tractor borrowers after the credit, it was found to be increased by 19.60 per cent over before the credit. This was might be due to increasing the fallow land under cultivation with high level of soil management with tractor.

As regards to positive change in "fixed assets" of tractor after the credit, it was found to be increased by 209.40 per cent over before the credit. Tractor is high cost machinery which increases fixed assets of the borrowers after the loan.

As regards to positive change in "working assets" of tractor borrowers after the credit, it was found to be increased by 52.18 per cent over before the credit. Land development practices were followed by tractors which motivated towards improved agricultural practices and caused in enhancement of working assets.

As regards to positive change in "farm business income" of tractor borrowers after the credit, it was found to be increased by 6.70 per cent over before the credit. The availability of better land management practices and adoption of improved agricultural technology caused in enhancement of farm business income.

As regards to positive change in "farm income" of tractor borrowers after the credit, it was found to be increased by 24.49 per cent over before the credit. The availability of better land management practices and adoption of improved agricultural technology caused in enhancement of farm income.

The data also shows that due to availability of tractor loan the farmers change their cropping pattern. Before the loan for tractor, higher number of borrowers was given priority for low value crops which change and priority was given for high value crops production.

Case study of credit for tubewell:

Among the total borrowers of tubewell purpose finance by District Central Co-operative Bank, Narsinghpur, branch Kodia, 10 cases was sampled out for the detail study. The detail analysis of impact of credit on economic incremental progress to output for these borrowers is presented in table 4.11.

Table: 4.11 Impact analysis of tubewell and accessories loan on borrowers' economy.

(Rs. Thousand and area ha.)

Economic trait	Average of 10 samples borrowers for tubewell			
	Before taking loan	After taking loan	Changed after loan	%Additional over before
Net shown area	5.63	6.54	0.91	16.16
Net area irrigated	2.04	5.15	3.11	152.45
Cropping intensity (%)	163	190	27.00	16.56
Area under HYV	2.04	5.15	3.11	152.45
Double crop area	3.46	5.88	2.42	69.94
Fixed assets	98124	255814	157690	160.70
Working assets	136011	164410	28399	20.88
Farm business income	64892	95092	30200	46.54
Farm income	195782	265260	69478	35.49
Cropping pattern	Priority unirrigated crops	Priority irrigated crops	--	--

Table 4.11 reveals that with regards to impact or effect of loan for tubewell on enhancement of various factors of economic gain of borrowers' farms found to positive towards increased in different levels after the loan. This positive change in various economic gains of borrowers' farms may be determining the impact of tubewell loan.

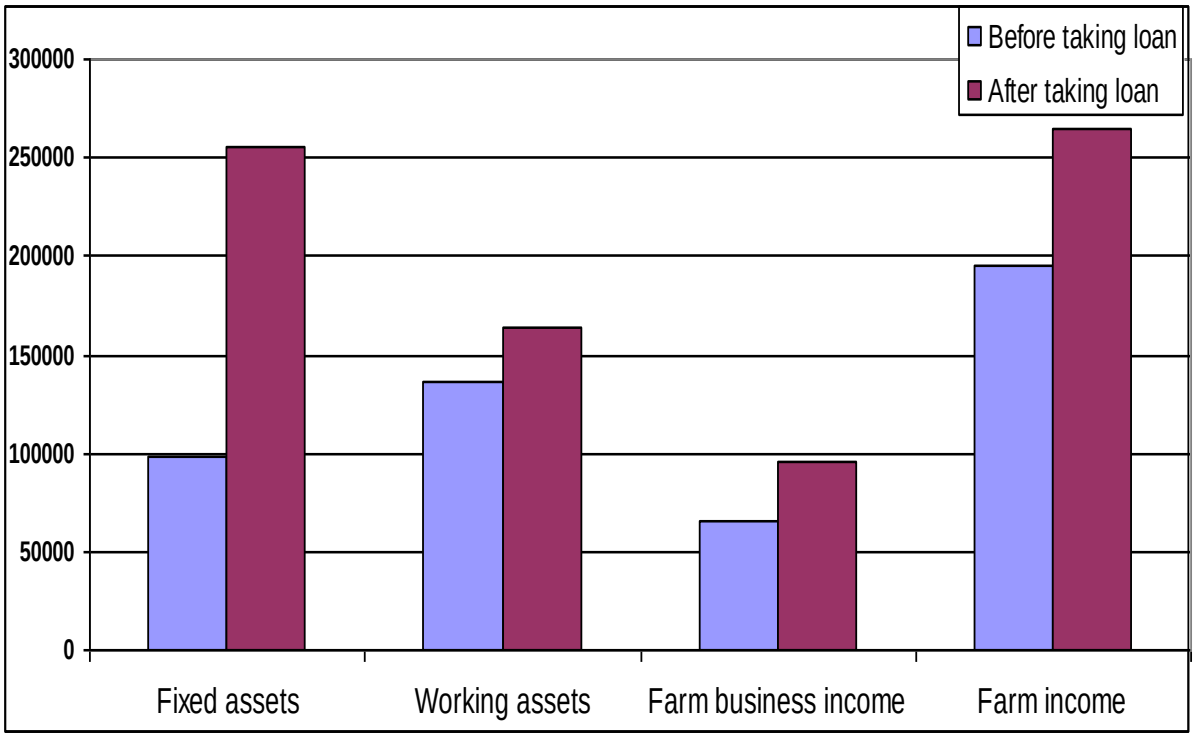
As regards to positive change in "net sown area" of tubewell borrowers after the credit, it was found to be increased by 16.16 per cent over before the credit. The tubewell provided sufficient water for irrigation which brought unirrigated area into irrigated and some fallow land also brought under cultivation which increases the net sown area.

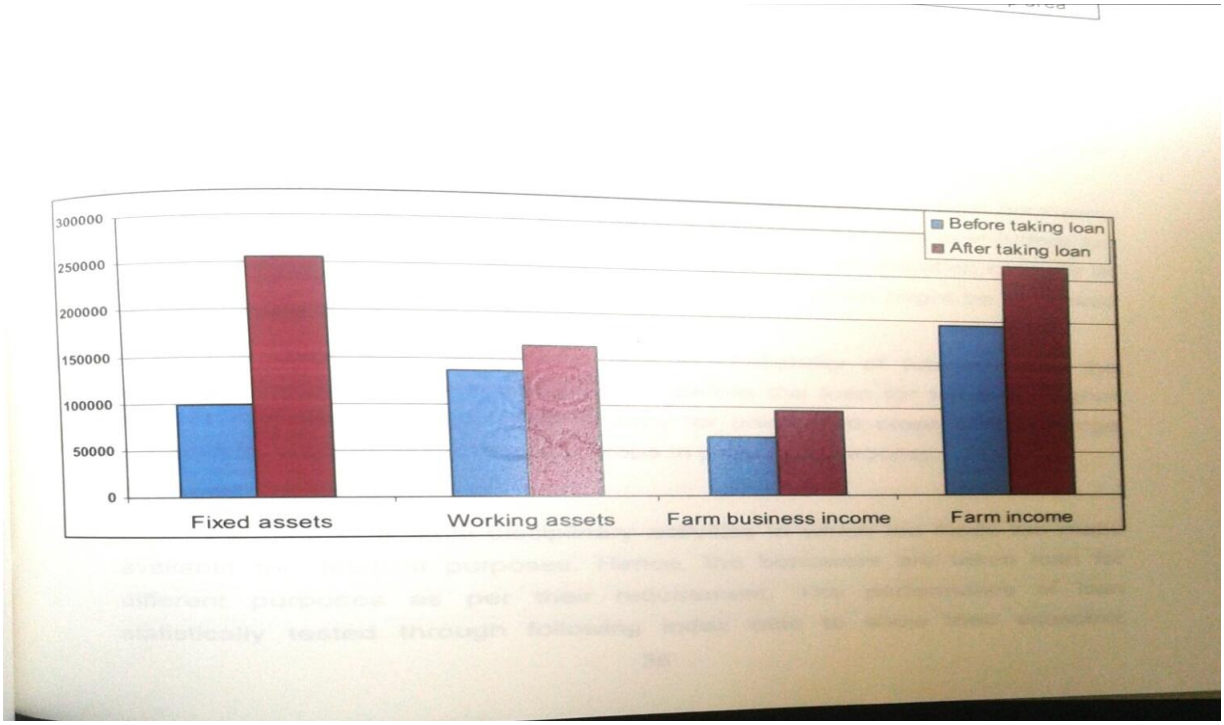
As regards to positive change in "net area irrigated" of tubewell borrowers after the credit, it was found to be increased by 152.45 per cent over before the credit. This was might be due to higher availability of irrigation facilities which affects to turn the unirrigated land into irrigated land.

Fig: 4.8 Impact analysis of tubewell and accessories loan on borrowers' economy.

Average of 10 samples borrowers for tubewell

(Rs. Thousand and area ha.)





As regards to positive change in "cropping intensity" of tubewell borrowers after the credit, it was found to be increased by 16.56 per cent over before the credit. This was might be due to enhancement of net sown area, double cropped area and irrigation facilities.

As regards to positive change in "area under HYV" of tubewell borrowers after the credit, it was found to be increased by 152.45 per cent over before the credit. With the availability of irrigation facilities farmers found to adopted higher use of high yielding varieties of crops.

As regards to positive change in "double cropped area" of tubewell borrowers after the credit, it was found to be increased by 69.94 per cent over before the credit. The tubewell provided sufficient water for irrigation which brought unirrigated area into irrigated and some fallow land also brought under cultivation which increases the double cropped area.

As regards to positive change in "fixed assets" of tubewell after the credit, it was found to be increased by 160.70 per cent over before the credit. Tubewell is a itself fixed assets which was installed after the loan and increase the fixed assets.

As regards to positive change in "working assets" of tubewell borrowers after the credit, it was found to be increased by 20.88 per cent over before the credit. This was might be due to higher availability of irrigation and use of yield attributing inputs.

As regards to positive change in "farm business income" of tubewell borrowers after the credit, it was found to be increased by 46.54 per cent over before the credit. The availability of loan increased the facilities for irrigation capacity of borrowers which turn towards progressive farming which might be increased the higher farm business income.

As regards to positive change in "farm income" of tubewell borrowers after the credit, it was found to be increased by 35.49 per cent over before the credit. The availability of loan increased the facilities for irrigation capacity of borrowers which turn towards progressive farming which might be increased the higher farm income.

The data also shows that due to availability of tubewell loan the farmers change their cropping pattern. Before the loan for tubewell, higher number of borrowers was given priority for unirrigated crops which change and priority was given for irrigated crops in production process.

Economic indicator:

Farming is a multi disciplinary activities in which the funds are make available for different purposes. Hence, the borrowers are taken loan for different purposes as per their requirement. The performance of loan statistically tested through following index ratio to show their economic progress or economic gain perceived by borrowers. Some of the ratios were calculated from the available primary data to show better performance of loan for different purposes. These ratios are determined as below:

Share of loan in total investment:

It is ratio (%) of amount borrowed for particular purpose and the actual total amount was invested (share of bank).

Actual utilization of borrowed funds in total investment:

It is ratio (%) of borrowed amount which is actually utilized in total investment.

The detail of study and findings would be helpful to the banker and financial agencies in future loaning system which will be given the direction guide line of total loan obtained by the borrowers for various purposes and their pattern of fund utilization and misutilization. The detail of economic indicator is present in table 4.12.

Table: 4.12 Purpose wise loan borrowed by sample borrowers and their economic indicator.

(Rs. thousand)

Purpose of loan	No. of sample cases	Average loan advanced per borrowers	Total investment by per borrower	Bank share of loans* %	Loan amount utilize for purpose taken
KCC	10	150	25.00	85.71	100.00
Electric pumpset	10	175	20.00	89.74	100.00
Diesel pumpset	10	160	15.00	91.43	100.00
Sprinkler	10	90	10.00	90.00	100.00
Tractor	10	560	300.00	65.12	100.00
Tubewell	10	236	40.00	85.51	100.00

Note * Share of loan in total investment

Study revealed the status of loans as amount obtained by sampled borrowers for different purposes. The data shows that the amount obtained as loan for different

purpose is varied and among the total requirement for particular purpose the share of bank was also found in variation. The share of bank's amount among in total investment was made by borrowers for different purposes shows that the minimum share of bank's among the total investment was found in case of tractor purpose found to be 65.12 per cent. On the other hand, the maximum share of bank's amount among the total investment was found in case of diesel pumpset 91.43 per cent. The study also shows the share of bank's amount among the total investment was found in case of sprinkler i.e. 90.00 per cent followed by for electric pumpset 89.74 per cent, for KCC 85.71 per cent and for tubewell 85.51 per cent respectively.

It is concluded from the data that the initial amount investment made by the borrowers as a whole for every purpose was higher than borrowed amount. The additional investment made by borrowers in every purpose of loan sanctioned by bank was the share of borrowers among the total investment.

The study also showed that the borrowers obtained the loan for purpose wise made the investment as whole for the purpose they have obtained loan. It may be said that there was no diversion of borrowed funds for other purposes. It is concluded that the ratio (%) of amount borrowed for particular purpose and the actual amount was invested found to 100.00 per cent. The data depicted that the purpose wise total investment made by borrowers and among them the major share comes from banking sources of finance and only a little amount contributed by borrowers themselves.

Chapter - V

DISCUSSIONS

The results presented in the preceding chapter are discussed in this chapter. The chapter discussion is necessary for better understanding the cause and effect relationship to determine the problems and their suggestions to overcome the problems. The discussions throw light on the possible causes for the results obtained are important in respect of borrowers, development authorities, planners and bank personnel for overall development of agriculture, farmers economy status and better utilization of credit with making efficient return of loan on borrowers side.

Indian agriculture, as is well known has been starved of capital investment, firstly, because of poverty or low levels of income of majority of the farming community. Secondly, because of Indian agriculture has traditionally been considered “a way of life” and not “a business proposition”. The main reason for the backwardness of Indian agriculture may be attributed to the neglect of credit provision to the agricultural sector of the economy. To improve the productivity of Indian agriculture and to free the cultivators from the vicious circle of poverty, a breakthrough has to be achieved by supplying adequate amount of investable credit to the cultivators in the country.

In the past major proportion of the credit demand of farmers was provided by non institutional source of finance and rest was being made by cooperative credit institution. Now a day institutional credit system and cooperative banks are the priority of farmers. They provide credit facilities in three categories viz., long term, medium term and short term. Making available credit and ensuring its productive use should therefore forms basic planks of any credit policy to foster progressive rural economy.

Among the institutional credit agencies, co-operatives have a long history of development, dating back to 1904, with the primary object of providing cheap credit to farmers and protecting them from exploitation by the private money lenders. But, it was revealed that the co-operative movement, for many half a century could not achieve more than 3.1 per cent involvement in the total rural credit supply. This was because of a number of shortcomings in the co-operative movement on rural credit

front. First, the coverage of co-operative credit in terms of primary co-operative societies and co-operative membership was too inadequate to fill up the gap of different types of credit requirement. Secondly, the management of cooperative societies at the village level was concentrated in the hands of some big farmers who enjoyed lion's share of credit from the societies. Finally, the co-operative credit was not at all supervised, so that it could be put to productive use. The rate of default was high. Thus, the basic weakness of the co-operative movement could be traced to human factors i.e., lack of serious participation by the members who were supposed to be alert and responsible both in the matter of taking loans, their productive use and timely repayment.

Keeping the importance of financing process, development and fulfillment of credit need of farmers by Co-operative Banks, the Central Co-operative Bank Kodia, Narsinghpur, (M.P.) was selected for present study. This bank is one of the leading agricultural financing banks providing the loan of the farmers for various agricultural uses was considered to analyze financial status and impact of loan on economic status of borrowers.

Since, the effort to increase the percentage of rural credit supply by co-operatives was not very encouraging, as it is evident from the surveys conducted by Reserve Bank of India. Taking the consideration of this survey, the present study also has been design to assess the proposed and actual coverage in terms of loan disbursement in the area. The study concluded that the District Central Co-operative Bank, Narsinghpur, branch Kodia successfully meets the actual demand of credit of borrowers and was able to reach the proposed target successfully in the years of 2004-05, 2005-06, 2011-12, 2012-13 and 2013-14.

On the other hand, in the remaining years of a decade study period, bank could not meet the actual demand and was unable to reach the proposed target. In the year 2006-07 the actual credit supply was shortage by -16.86 per cent over the proposed credit demand. Likely in the year 2007-08 the actual credit supply was shortage by -25.39 per cent over the proposed credit demand. Same way in the year 2008—09 the actual credit supply was shortage by -59.48 per cent over the proposed credit demand. Again in the year 2009-10 the actual credit supply was shortage by -9.31 per cent over the proposed credit demand. On the other hand, in the year 2010-11 the actual credit supply was shortage by -3.69 per cent over the

proposed credit demand. Thus, it is concluded that in 5 years of the decade of study period bank could not meet the actual demand and was unable to reach the proposed target. The above facts show the conformity of the survey.

The success of financing process of, District Central Co-operative Bank, Narsinghpur, branch Kodia may be determining by especially to cater to the needs of farmer's credit for different purposes. Here, the motto of District Central Co-operative Bank, Narsinghpur, branch Kodia was studied by analysis the farm credit issued by the bank for different purposes. On their priority basis of agriculture development in rural area and to enhance the income and employment of farmers the bank are provided credit to borrowers for different purposes as per the norms of bank i.e. short term, medium term and long term.

The study portrait year wise loan distribution pattern of credit supplied among the borrowers for different purposes in agricultural and non agricultural sector. As for as total amount of loan supplied to borrowers during an average year (average of decade i.e. from 2004-05 to 2013-14), it is observed that 57.76 per cent of total loan has been supplied to agriculture sector followed by 42.24 per cent of total loan has been supplied to non agriculture sector. Hence, agriculture sector was given to priority for credit by the District Central Co-operative Bank, Narsinghpur, branch Kodia.

The breakup of total agricultural loan supplied for different purposes has also calculated in present study on average basis of decade figure. The data revealed that by and large, on an average of decade the highest amount was provided for short term loan including KCC (53.23% to total credit) amounting Rs.3788.90 lakhs average per annum followed by other agricultural purpose (3.77% to total credit) amounting Rs.268.08 lakhs average per annum, for medium term loan (1.28% to total credit) amounting Rs.91.27 lakhs average per annum and long term loan (0.58% to total credit) amounting Rs.41.12 lakhs average per annum respectively.

Credit determines to repay the loan as per the term with interest with in the time log period. For smooth flow of credit, repayment of credit is essential. Repayment of credit is of crucial importance for any financing sector. For financing bank or credit institution, as repayment not only ensures recycling of public money but also builds up confidence amongst the credit institutions in their clientele and

amongst the credit users in their own ability to develop. In context of low recovery to demand, the study was taken with the objective the analysis of repayment of loan in relation to the purpose.

The purpose-wise classification of overdues of loan which recovery have to made remain as per bank repayment plan shows the quantum of overdues in each purposes as per the bank norm. The important sector are short term loan including KCC had highest loan overdues on an average (10 years average) Rs.8660.07 lakhs i.e. 77.02 per cent of total loan overdues. The next important overdues sector was found to "other agriculture and non agriculture" purposes. This sector had loan overdues on an average (10 years average) Rs.2394.20 lakhs i.e. 21.29 per cent of total loan overdues.

The medium term loan which are including the minor irrigation, farm mechanization, dairy/poultry, other diversified activities are the important sector for development of agriculture. Among this sector loan overdues was found on an average (10 years average) Rs.125.49 lakhs i.e. 1.12 per cent of total loan overdues.

The long term loan which are including the major irrigation development as digging of tubewell, improved farm mechanization like tractor are the important sector for long time development of agriculture. Among this sector loan overdues was found on an average (10 years average) Rs.64.30 lakhs i.e. 0.57 per cent of total loan overdues.

The study also represents the comparative view of the amount overdues and recovery of loan by District Central Co-operative Bank, Narsinghpur, branch Kodia year wise, from 2004-05 to 2013-14. The data revealed that on an overall average Rs.11244.05 lakhs overdues or loan advanced have to be recovered per year from borrowers. In against this overdue on an overall average Rs.6805.65 lakhs have been paid by borrowers in a year during the study period. The remaining balance overdues or borrowers have to be made repayment of Rs.4438.40 lakhs per year.

The credit provided by bank must be serving the borrowers more effectively. So, a impact study of bank would establish their individual roles in farm financing. Further, a impact study of purpose wise loan provided by bank would clearly establish for economic gain of borrowers. How bank is more successful in its job and

they are operating in nearby areas may be assessable with examine the economic effect on the borrowers.

As per as the principle objective of the study are concerned, to probe into the operational aspects of District Central Co-operative Bank, Narsinghpur, branch Kodia, after examining its general economic performance from 2004-05 to 2013-14, it is pertinent to asses the effect of credit on borrowers economic development. For this purpose, 10 borrowers in each items of loan i.e. credit availed in short term loan including "KCC", medium term loan including "electric pumpset, diesel pumpset, sprinkler" and long term loan including "tractor, tubewell" was considered for case study.

As regards to positive change in "farm income" of KCC borrowers after the credit, it was found to be increased by 16.54 per cent over before the credit. The availability of loan motivated the borrowers towards higher adoption of improved production technology. Through higher adoption of technology borrowers were reaped high farm income.

As regards to positive change in "farm income" of electric pumpset borrowers after the credit, it was found to be increased by 22.03 per cent over before the credit. The availability of irrigation facilities motivated the borrowers towards higher adoption of improved production technology. Through higher adoption of technology borrowers were reaped high farm income.

As regards to positive change in "farm income" of diesel pumpset borrowers after the credit, it was found to be increased by 23.49 per cent over before the credit. The availability of irrigation facilities motivated the borrowers towards higher adoption of improved production technology. Through higher adoption of technology borrowers were reaped high farm income.

As regards to positive change in "farm income" of sprinkler borrowers after the credit, it was found to be increased by 18.88 per cent over before the credit. The availability of loan for water saving device brought higher area under cultivation of irrigated crops. This progressive farming increased the capacity of borrowers towards reaping of higher farm income.

As regards to positive change in "farm income" of tractor borrowers after the credit, it was found to be increased by 24.49 per cent over before the credit. The

availability of better land management practices and adoption of improved agricultural technology caused in enhancement of farm income.

As regards to positive change in "farm income" of tubewell borrowers after the credit, it was found to be increased by 35.49 per cent over before the credit. The availability of loan increased the facilities for irrigation capacity of borrowers which turn towards progressive farming which might be increased the higher farm income.

Study revealed the status of loans as amount obtained by sampled borrowers for different purposes. The data show that the amount obtained as loan for different purpose varied and among the total requirement for particular purpose the share of bank was also found in variation. The share of bank's amount among in total investment was made by borrowers for different purposes shows that the minimum share of bank's among the total investment was found in case of tractor purpose found to be 65.12 per cent. On the other hand, the maximum share of bank's amount among the total investment was found in case of diesel pumpset 91.43 per cent. The study also shows the share of bank's amount among the total investment was found in case of sprinkler i.e. 90.00 per cent followed by for electric pumpset 89.74 per cent, for KCC 85.71 per cent and for tubewell 85.51 per cent respectively.

Chapter - VI

SUMMARY, CONCLUSION AND SUGGESTIONS FOR FURTHER WORK

6.1 Summary :-

Capital is the most crucial input in agricultural development. Agricultural sector, in most of the developing countries, more so in India which is primarily small farm agriculture characterized by low incomes, low levels of operating capital and low investment in depreciable assets.

When agriculture sector transforms from traditional towards commercialized, the demand for capital increases for variable and fixed expenses. The agriculture was largely the traditional and subsistence before 1965, and the savings of the farmers were not sufficient to meet even their small production requirements. The position of the small and marginal farmers was even more pathetic. The farming community of the country was badly caught in the clutches of moneylenders. Major proportion of the credit demand of farmers was provided by non-institutional sources of finance and rest was being met by the cooperative credit institutions. The participation of the commercial banks in the agricultural credit was negligible due to low rates of return. Whatever the small surpluses were generated by even medium and large farmers, were usurped by the moneylenders in the shape of interest payments. Under these circumstances, the possibility of adoption of new production technology was very less. So, in agricultural finance, many formal institutional arrangements were initiated to reduce uncertainty, to prevent the transactions from being too costly and thus to allow realization of the productivity gains to large scale. In agricultural credit policy of the country, the emphasis has remained on adequate availability of credit at lower rates of interest and at a time when it is required.

District Central Co-operative Bank immensely helped in adoption of modern production technology and encouraging private investments on irrigation, farm machinery and development of yield attributing inputs. The District Central Co-operative Bank, Narsinghpur, was established on 26 November in the year of 1911 with the main objectives to provide the farm credit for different purposes to meet out the lack of capital in adoption of improved farm technology and for other development in agriculture such as development of irrigation facilities, land

development, purchase of agriculture machineries and implements etc. To make the strategy for future development of bank and their objectives in respect of farmer's development, their contribution needs to be examined and estimated. Hence, attempts have been made to study in this direction. The specific objectives of study have been as follows:

Objectives:

5) To assess the proposed and actual coverage in terms of loan disbursement with the reason for shortage since last decade.

6) To analysis the farm credit issued by the bank for different purposes.

7) To analysis the repayment of loan in relation the purpose of loan and period of loan advanced.

8) To examine the economic effect on the farmers/borrowers on the basis of case studies.

The present study has been conducted in Narshinghpur district of Madhya Pradesh. In order to achieve the objectives of the study, the 2 stage random sample technique was used for data collection from the borrowers (farmers) and ultimate unit from selected bank. These stages were selection of branch of the bank and selection of ultimate borrower's respondents. There are 13 branches of District Central Co-operative Bank in the district Narsinghpur providing loan for agriculture purpose. These branches are Mahaila Sakha Narsinghpur, Extension Counter Narsinghpur, Kodia, Salichauka, Gotegao, Tendukheda, Sainkheda, Sihora, Barman, Cheechali, Krishi Gadarwara, Krishi Kareli and Krishi Narsinghpur. At first stage of sampling, out of 13 agriculture branches, Kodia branch was selected purposively because this branch of bank is one of the most credit suppliers to the farmers in the study area. A list of farmers within radius of 15 km. from the branch office, who have taken the loans for different purposes, was collected from the Kodia Central Co-operative Bank. From this list, 10 farmers, who have secured loan for each purpose namely tractor, electric pumpset, tubewell, diesel pumpset, sprinkler and KCC was selected with the help of simple random sampling method. Thus, in all 60 borrowers as respondents was selected for present study.

Allocation of farmers:-

S.No.	Purpose of loan taken	No. of farmers selected
1.	Tractor	10
2.	Electric pumpset	10
3.	Tubewell	10
4.	Diesel pumpset	10
5.	Sprinkler	10
6.	KCC	10
7.	Total	60

Depending upon the objectives of the study primary as well as secondary data were used. The primary data were collected from selected respondents using pre-tested questionnaire schedule. Each selected respondents was approached personally for recording relevant data. Secondary data were collected from bank records. The structural schedule was prepared with consultation to the members of advisory committee, qualified personnel and literature available regarding credit aspect from bank. The primary data were collected in the Agricultural year 2008-09 to 2012-13 from borrowers through survey method. The secondary data were collected from bank since 2004-05 to 2013-14. Survey method of enquiry was used for the purpose of study. It is assumed that selected number of borrower farmers would be provide adequate information for the objective set-fourth for present study and secondary data for a decade is quit sufficient to show the impact of loan on farmers business.

The collected data were scrutinized for adequacy and reliability. The data were compiled into a tabular form and analyzed in order to find out the result as per the stated objectives.

The analysis of the data was done on per farm basis. Simple as well as other Statistical and Mathematical Techniques were employed to analyze the collected data. Simple statistical tools like frequencies, percentage, mean and average were used to represent the data in the tabular form.

The improvement and enhancement in economic resources, production, income and assets as a result of the credit was measured by considering the following aspects and the information on the status before and after the credit was evaluated i.e. increase in net shown area, increase in irrigation availability and irrigated area, enhancement of cropping intensity, increasing in area under HYV of crops, increasing the double crop area, increasing the fixed and working assets, development of farm business and their income, increasing in farm income and change the cropping pattern towards profitable.

Some ratios were also being calculated from the primary data such as:

$$\text{Share of loans in total investment} = \frac{\text{Amount borrowed}}{\text{Amount invested}} \times 100$$

$$\text{Actual utilization of borrowed funds in total investment} = \frac{\text{Amount utilized}}{\text{Amount invested}} \times 100$$

$$\text{Rate of diversion of borrowed funds} = \frac{\text{Amount diverted}}{\text{Amount borrowed}} \times 100$$

6.2 Conclusions :-

With the discussions on the results of the study following conclusions have been derived.

5. Proposed and actual coverage of loan:

1. On an average there was proposed credit demand accounted Rs.7514.50 lakhs per annum during a decade of study period. Against this proposed demand, the actual credit supply was found to shortage by on an average -5.28 per cent per annum. This shows that the actual credit supply in nutshell was accounted on an average Rs.7117.93 lakhs per annum (a decade average 2004-05 to 2013-14). This indicates that an achievement of disbursement of loan was found only 94.72 per cent over demanded on per annum basis. Thus, the bank could not meet the actual demand and was unable to reach the proposed target. The reason might be attributed due to bank policy and the borrowers not demanded the loan at the right time.
2. It is concluded that the District Central Co-operative Bank, Narsinghpur, branch Kodia successfully meets the actual demand and was able to reach the proposed target successfully in these 5 years of a decade. On the other hand, in the remaining years bank could not meet the actual demand and was unable to reach the proposed target.
3. In the year 2006-07 the actual credit supply was short by -16.86 per cent of the proposed credit demand. Likely in the year 2007-08 the actual credit supply was short by -25.39 per cent over the proposed credit demand. Similarly in the year 2008—09 the actual credit supply was short by -59.48 per cent over the proposed credit demand. Again in the year 2009-10 the actual credit supply was short by -9.31 per cent over the proposed credit demand. On the other hand, in the year 2010-11 the actual credit supply was short by -3.69 per cent over the proposed

credit demand. Thus, it is concluded that in 5 years of the decade of study period bank could not meet the actual demand and was unable to reach the proposed target.

4. It is very interesting point that the progress of bank in a decade of study period can be determined that in comparison to base year the proposed credit demand and actual credit supply was found to increase in almost all the years, except the supply was lower than base year of study period in the year of 2008-09. On the basis of above findings it may be concluded that with the adoption of improved high yielding package of practices over time, increase in expenditure in farming process and meager in savings on cultivating households have increased the demand for credit considerably.
5. It is discussion point that actual supply aspect of credit is most important in the holistic approach of credit expansion as the proposed demand aspect. Supply of credit comes at a cost i.e. lending cost, be it institutional source of credit. The shortage of actual credit supply may be as per the norms of banks rules and regulations. It may also suffers due to high susceptibility to risk, lack of tangible collateral, low volume of business but highest number of borrowers, imperfect knowledge on the part of lender, lack of supervision of credit, difficulties in recovery of loan are some factors contributing in shortage of credit supply by lending agency.

B. Farm credit issued by the bank for different purposes:

1. As for as total amount of loan supplied to borrowers during an average year (average of decade i.e. from 2004-05 to 2013-14), it is observed that 57.76 per cent of total loan has been supplied to agriculture sector followed by 42.24 per cent of total loan has been supplied to non agriculture sector. Hence, agriculture sector was given priority for credit by the District Central Co-operative Bank, Narsinghpur, branch Kodia.
2. The data revealed that by and large, on an average of decade the highest amount was provided for short term loan including KCC (53.23% to total credit) average per annum followed by other agricultural purpose (3.77% to total credit) average per annum, for medium term loan (1.28% to total credit) average per

annum and long term loan (0.58% to total credit) average per annum respectively.

3. The average of decade data (2004-05 to 2013-14) showed that on an average the bank supplied the amount of Rs.7117.93 lakhs per annum for different purposes in agriculture and non agriculture sector. The data also revealed that by and large, on an average of decade the highest amount Rs.4111.08 lakhs was provided for agriculture purposes. On the other hand, on an average of decade the amount Rs.3006.85 lakhs was provided for non agriculture purposes.

4. Among the agricultural purposes the short term loan including KCC was given priority and Rs.3788.90 lakhs was supplied on an average per annum. The medium term loan was found to nominal and Rs.91.27 lakhs was supplied on an average per annum. On the other hand, the long term loan was given least priority among the agricultural credit and only Rs.41.12 lakhs was supplied on an average per annum. Other agricultural purpose including allied activities was given some reasonable priority and amount of Rs.268.08 lakhs was supplied on an average per annum.

5. Yearly breakup of loan supplied for short term credit including KCC (short type of credit only) denoted that the average funds made available to the borrowers in the year of 2004-05 accounted to Rs.2122.00 lakhs. Similarly, in the year of 2005-06 the bank supplied Rs.2438.00 lakhs for short term loan followed by Rs.2953.00 lakhs in the year of 2006-07, Rs.3308.00 lakhs in the year of 2007-08, Rs.2351.00 lakhs in the year of 2008-09, Rs.2109.00 lakhs in the year of 2009-10, Rs.2241.00 lakhs in the year of 2010-11, Rs.4115.00 lakhs in the year of 2011-12, Rs.7249.00 lakhs in the year of 2012-13 and Rs.9003.00 lakhs in the year of 2013-14 for short term purpose.

6. The average funds made available for medium term loan by bank District Central Co-operative Bank, Narsinghpur, branch Kodia was Rs.226.48 lakhs in the year of 2004-05 followed by Rs.209.41 lakhs in the year of 2005-06, Rs.85.43 lakhs in the year of 2006-07, Rs.55.03 lakhs in the year of 2007-08, Rs.26.32 lakhs in the year of 2008-09, Rs.23.49 lakhs in the year of 2009-10, Rs.20.66 lakhs in the year of 2010-11, Rs.17.80 lakhs in the year of 2011-12, Rs.15.00 lakhs in the

year of 2012-13 and Rs.233.09 lakhs in the year of 2013-14 for medium term loan.

7. District Central Co-operative Bank, Narsinghpur, branch Kodia provided the loan for long term purposes only in the year from 2004-05 to 2007-08 in study period. The remaining period from 2008-09 to 2013-14 the bank has not provided the credit for these purposes. It may be noted from the table 4.2 that the total credit provided by the bank for long term loan was amounted Rs.55.38 lakhs in the year of 2004-05 followed by Rs.45.87 lakhs in the year of 2005-06, Rs.36.37 lakhs in the year of 2006-07 and Rs.26.87 lakhs in the year of 2007-08 for long term loan.

6. Repayment of loan (recovery of loan):

1. The purpose-wise classification of overdues of loan which recovery have to made remain as per bank repayment plan shows the quantum of overdues in each purposes as per the bank norm. The important sector are short term loan including KCC had highest loan overdues on an average (10 years average) Rs.8660.07 lakhs i.e. 77.02 per cent of total loan overdues. The next important overdues sector was found to "other agriculture and non agriculture" purposes. This sector had loan overdues on an average (10 years average) Rs.2394.20 lakhs i.e. 21.29 per cent of total loan overdues.

2. The medium term loan which are including the minor irrigation, farm mechanization, dairy/poultry, other diversified activities are the important sector for development of agriculture. Among this sector loan overdues was found on an average (10 years average) Rs.125.49 lakhs i.e. 1.12 per cent of total loan overdues.

3. The long term loan which are including the major irrigation development as digging of tubewell, improved farm mechanization like tractor are the important sector for long time development of agriculture. Among this sector loan overdues was found on an average (10 years average) Rs.64.30 lacks i.e. 0.57 per cent of total loan over dues.

4. The data revealed that on an average 59.86 per cent of recovery has been registered yearly during 2004-05 to 2013-14. This low recovery of loan seems to be very poor for borrowers and for financial institution too. Overall percentage of yearly dues recovery during study period of a decade has been registered

maximum 67.19 per cent in the year of 2006-07. It is also revealed that the minimum 24.33 per cent dues recovery percentage has been found in the year of 2007-08.

5. The data revealed that on an overall average Rs.11244.05 lakhs over dues or loan advanced have to be recovered per year from borrowers. In against this overdue on an overall average Rs.6805.65 lakes have been paid by borrowers in a year during the study period. The remaining balance over dues or borrowers have to be made repayment of Rs.4438.40 lakhs per year.

6. In nutshell, it is concluded that the recovery of loan of the banks are found about to 60.00 per cent and above annually. But the low recovery is registered in the year of 2007-08 (recovery registered 24.33%) followed by in the year of 2008-09 (recovery registered 56.04%) and in the year of 2011-12 (recovery registered 59.10%) respectively.

7. Economic effect of loan on borrowers:

1. The loans for purchase of tractor and accessories were found to be highest Rs.560.00 thousand per borrower. Irrigation is must for higher yield and increasing the double cropped area. Under long term scheme beside the loan for tractor, bank provided for digging of tube well. The loan obtained for tube well per borrowers was found to on an average Rs.236.00 thousand per borrowers. These loans are to be recovered with in 15 years of duration.

2. Under medium term loan for irrigation purpose, bank provided loan against electric pumpset, diesel pumpset and for sprinkler purposes. Data revealed that the borrowers obtained loan for electric pumpset on an average Rs.175.00 thousand per borrowers. The loan obtained for diesel pumpset on an average Rs.160.00 thousand per borrowers. On the other hand, the loan obtained for sprinkler on an average Rs.90.00 thousand per borrowers. These loans are to be recovered with in 5 years of duration.

3. Now a day KCC proved better mechanism for credit to all the purpose of production and distribution of products and management of farm. District Central Co-operative Bank, Narsinghpur, branch Kodia provided credit for KCC borrowers amounting on an average Rs.150.00 thousand per borrower. The

maximum KCC borrowers obtained loan for crop production purposes which have to be recovered after sale of produce.

Case study of credit for KCC:

1. As regards to positive change in "cropping intensity" of KCC borrowers after the credit, it was found to be increased by 1.10 per cent over before the credit. This might be due to enhancement of net sown area, double cropped area and irrigation facilities.
2. As regards to positive change in "fixed assets" of KCC borrowers after the credit, it was found to be no change after the credit. It is well known fact that the farmers taken loan through KCC as crop loan, hence they have not purchased any fixed assets through KCC loan.
3. As regards to positive change in "farm business income" of KCC borrowers after the credit, it was found to be increased by 18.37 per cent over before the credit. The availability of loan increased the capacity of borrowers towards progressive farming which might be increased the higher farm business income.
4. As regards to positive change in "farm income" of KCC borrowers after the credit, it was found to have be increased by 16.54 per cent over before the credit. The availability of loan motivated the borrowers towards higher adoption of improved production technology. Through higher adoption of technology borrowers were reaped high farm income.

Case study of credit for electric pumpset:

1. As regards to positive change in "cropping intensity" of electric pumpset borrowers after the credit, it was found to be increased by 12.87 per cent over before the credit. This was might be due to enhancement of net sown area and double cropped area with the availability of irrigation facilities.
2. As regards to positive change in "fixed assets" of electric pumpset after the credit, it was found to be increased by 14.72 per cent over before the credit. The electric pumpset is fixed assets which cost was involved after the loan in available fixed assets before the loan.
3. As regards to positive change in "farm business income" of electric pumpset borrowers after the credit, it was found to be increased by 10.61 per cent over

before the credit. The availability of loan increased the capacity of borrowers towards progressive farming which might be increased the higher farm business income.

4. As regards to positive change in "farm income" of electric pumpset borrowers after the credit, it was found to be increased by 22.03 per cent over before the credit. The availability of irrigation facilities motivated the borrowers towards higher adoption of improved production technology. Through higher adoption of technology borrowers were reaped high farm income.

Case study of credit for diesel pumpset:

1. As regards to positive change in "cropping intensity" of diesel pumpset borrowers after the credit, it was found to be increased by 20.61 per cent over before the credit. This might be due to enhancement of net sown area and double cropped area with the availability of irrigation facilities.
2. As regards to positive change in "fixed assets" of diesel pumpset after the credit, it was found to be increased by 31.18 per cent over before the credit. The diesel pumpset is fixed assets which cost was involved after the loan in available fixed assets before the loan.
3. As regards to positive change in "farm business income" of diesel pumpset borrowers after the credit, it was found to be increased by 39.24 per cent over before the credit. The availability of loan increased the facilities for irrigation capacity of borrowers which turn towards progressive farming which might be increased the higher farm business income.
4. As regards to positive change in "farm income" of diesel pumpset borrowers after the credit, it was found to be increased by 23.49 per cent over before the credit. The availability of irrigation facilities motivated the borrowers towards higher adoption of improved production technology. Through higher adoption of technology borrowers were reaped high farm income.

Case study of credit for sprinkler :-

1. As regards to positive change in "cropping intensity" of sprinkler borrowers after the credit, it was found to be increased by 8.67 per cent over before the credit.

This was might be due to enhancement of net sown area, double cropped area and irrigation facilities.

2. As regards to positive change in "fixed assets" of sprinkler after the credit, it was found to be increased by 65.93 per cent over before the credit. It is well known fact that the farmers taken loan for purchase of machinery which is fixed assets.
3. As regards to positive change in "farm business income" of sprinkler borrowers after the credit, it was found to be increased by 58.16 per cent over before the credit. The availability of loan for water saving device brought higher area under cultivation of irrigated crops. This progressive farming increased the capacity of borrowers towards reaping of higher farm business income.
4. As regards to positive change in "farm income" of sprinkler borrowers after the credit, it was found to be increased by 18.88 per cent over before the credit. The availability of loan for water saving device brought higher area under cultivation of irrigated crops. This progressive farming increased the capacity of borrowers towards reaping of higher farm income.

Case study of credit for tractor and accessories:

1. As regards to positive change in "cropping intensity" of tractor borrowers after the credit, it was found to be increased by 1.15 per cent over before the credit. The availability of tractor might be caused for bringing fallow and uncultivated land into cultivated. This process enhances the gross cropped area and resulted in increasing the cropping intensity.
2. As regards to positive change in "fixed assets" of tractor after the credit, it was found to be increased by 209.40 per cent over before the credit. Tractor is high cost machinery which increases fixed assets of the borrowers after the loan.
3. As regards to positive change in "farm business income" of tractor borrowers after the credit, it was found to be increased by 6.70 per cent over before the credit. The availability of better land management practices and adoption of improved agricultural technology caused in enhancement of farm business income.
4. As regards to positive change in "farm income" of tractor borrowers after the credit, it was found to be increased by 24.49 per cent over before the credit. The

availability of better land management practices and adoption of improved agricultural technology caused in enhancement of farm income.

Case study of credit for tubewell :-

1. As regards to positive change in "cropping intensity" of tubewell borrowers after the credit, it was found to be increased by 16.56 per cent over before the credit. This was might be due to enhancement of net sown area, double cropped area and irrigation facilities.
2. As regards to positive change in "fixed assets" of tubewell after the credit, it was found to be increased by 160.70 per cent over before the credit. Tubewell is a itself fixed assets which was installed after the loan and increase the fixed assets.
3. As regards to positive change in "farm business income" of tubewell borrowers after the credit, it was found to be increased by 46.54 per cent over before the credit. The availability of loan increased the facilities for irrigation capacity of borrowers which turn towards progressive farming which might be increased the higher farm business income.
4. As regards to positive change in "farm income" of tubewell borrowers after the credit, it was found to be increased by 35.49 per cent over before the credit. The availability of loan increased the facilities for irrigation capacity of borrowers which turn towards progressive farming which might be increased the higher farm income.

Economic indicator :

1. The share of bank's amount among in total investment was made by borrowers for different purposes shows that the minimum share of bank's among the total investment was found in case of tractor purpose found to be 65.12 per cent. On the other hand, the maximum share of bank's amount among the total investment was found in case of diesel pumpset 91.43 per cent. The study also shows the share of bank's amount among the total investment was found in case of sprinkler i.e. 90.00 per cent followed by for electric pumpset 89.74 per cent, for KCC 85.71 per cent and for tubewell 85.51 per cent respectively.

6.3 Suggestions :-

Some suggestions have been made in this study for the improvement in

respect of credit utilization and for increasing their utility to the borrowers.

1. It is well known fact that because of the inter relationship existing between agricultural development and general economic development, there is urgent need for increased agricultural production. The production can be increased with area expansion under cultivation, use of judicious level of yield attributing inputs and with the adoption of improved production technology and management. The study showed that there is improvement in this economic gain with the use of credit for different purposes. Hence, it is suggested that the bank agencies should provide timely, adequate and sufficient credit as per the requirements of farmers.
2. For stimulating the tempo of agricultural production it is imperative that the farmers must be provided with essential prerequisites like fertilizers, improved seeds, irrigation facilities, modern implements, marketing facilities etc. It is obvious that without adequate and timely credit they will not be able to make use of these essential inputs. The use of greater and better quality of inputs would mean greater demand for rural credit. It is found in study that in 5 years of the decade of study period bank could not meet the actual demand and was unable to reach the proposed target. Hence, it is suggested that the bank authority should be make plan on priority basis to fulfill the requirement of credit to get the optimum profit for borrowers.
3. The credit needs of the farmers are not assessed at micro level which results in improper scale of finance and consequently overdues. The bank authorities are also partially responsible for mounting overdues by lack of supervision, ineffective, leadership, lack of personal contact and improper scale of finance. This overdue may be reduced if finance advance may be made as per credit need for the farmers for different purposes. Hence, it is suggested that the bank personnel should be aware and they should be assessed credit need at micro level for general farmers in the area.
4. It is also suggested that the hard core overdues should be segregated and a special cell is necessary in the bank for monitoring the action and follow-up in this regard. It is also suggested that the defaulters can be categorized into wilful and non-wilful. The overdues of wilful defaulters should be collected immediately by

implementing the steps of recovery. The non-wilful defaulters can be given extension of time, if necessary.

5. There should be proper and reasonable leadership to the bank and the directors should maintain personal contact with the beneficiaries in the concerned area and take moral responsibility to persuade them to repay the loan amount. For this purpose there can be effective supervision in the utilization of loan amount by allotting a definite number of loanees within a specified area under each supervisor.

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