

**IMPACT OF PRIMARY AGRICULTURE CO-OPERATIVE
SOCIETIES FINANCE ON MARGINAL AND SMALL
FARMER'S ECONOMY OF PANCHMAHAL DISTRICT OF
MIDDLE GUJARAT**

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CERTIFICATE

This is to declare that the whole of research work reported here in the thesis for partial fulfillment of the requirement for the degree of Master of Science (Agriculture) in subject of Agriculture Economics by the undersigned is a result of investigation done by me under direct guidance and supervision of Dr. R.H.Patel, Professor & Head, Department of Agricultural Economics, B.A.C.A, Anand Agricultural University, Anand- 388 110 and no part of work has been submitted for any other degree so far.

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C E R T I F I C A T E

This is to certify that the thesis entitled "**IMPACT OF PRIMARY AGRICULTURE CO-OPERATIVE SOCIETIES FINANCE ON MARGINAL AND SMALL FARMER'S ECONOMY OF PANCHMAHAL DISTRICT OF MIDDLE GUJARAT**" submitted by **Mr. PINAKIN SURESHKUMAR ASODIYA** in partial fulfillment of the requirements for the award of the degree of **MASTER OF SCIENCE(Agriculture)** in the subject of **AGRICULTURAL ECONOMICS** of the Anand Agricultural University is a record of bonafide research work carried out by him under my guidance and supervision and the thesis has not previously formed the basis for the award of any degree, diploma or other similar title.

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"IMPACT OF PACS FINANCE ON MARGINAL AND SMALL FARMERS ECONOMY OF PANCHMAHAL DISTRICT OF MIDDLE GUJARAT"

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ABSTRACT

Utilization of credit for which it is provided is an important element in agricultural development. The limited availability of credit and its lack have been acknowledged as the most limiting factor in the modernization of agriculture. The prosperity of agricultural sector mainly depends on the adoption of improved technology developed to increase the production. Modern agriculture on scientific lines is credit intensive in nature since the use of different types of agriculture inputs like fertilizers, machinery and other inputs required a large amount of credit. Thus credit plays a dynamic role in the development of Agriculture.

The co-operative credit structure has spread over the entire state and has been trying to cover as many farmers as possible for the preparation of providing agricultural finance to them. In tribal area of Panchmahal district, at the village level above 100 PACSs covering some villages or group of villages are working and providing crop production loans to their farmer members. Considering the above facts the present study entitled "Impact of PACSs Finance on Marginal and Small Farmer's Economy of Panchmahal District of Middle Gujarat" was conducted.

The multistage stratified random sampling technique was used to select the ultimate sampling units. Among different districts of Middle Gujarat, Panchmahal district constitute highest percentage of total short term loan disbursed by PACSs was purposively selected and among all the talukas of Panchmahal district, four talukas having highest percentage of total amount of loan disbursement by PACSs namely, Lunawada, Morva-Hadaf, Khanpur, and Santrampur were selected. Three villages from each selected taluka were selected randomly. Considering the size of population and resources, the study was confined to only Marginal and Small farmers and fourteen respondents comprising seven borrowers and seven non-borrowers were selected ensuring proportional representation to marginal and small farmers. Thus in all 168 respondents (84 borrowers and 84 non-borrowers) were selected for the study.

The study revealed that the food crops were dominated in the cropping pattern of both the categories i.e. borrower and non borrower of farms. The total cropped area for both the categories of farmers of borrower groups was higher as compared to non-borrower group. This may be due to availability of crop loan from primary agricultural credit society. Also the intensity of cropping was higher i.e. 246.77% and 243.83% for marginal and small borrower farms as compared to 191.38% and 208.27% for non-borrower farms. Probably this may be due to more investment in irrigation facilities enabled the borrower farmers to raise more crops in a year than non-borrower farmers. The study also showed the overall percentage

increase in employment was 8.21 and 9.29 on marginal and small farms, while borrower farmers have obtained and used bank credit for improving their irrigation system. Further more due to loan availability from PACSs to both the categories of farmers, there was an increase in value of assets for irrigation structure, farm building, farm implements, live stock and Land.

It was also referred from the study that the total cost of Paddy production per hectare was significantly higher by 21.90 % and 14.91 % on borrower farms as compared to non-borrower farms of marginal and small group, while the corresponding figures for maize production was 5.66 per cent and 1.92 per cent higher on marginal and small farms of borrower group as compared to non-borrower group. The net profit realized from paddy production on marginal and small borrower farms was Rs. 9797.83 and Rs. 9709.25 as compared to Rs. 8338.55 and 8715.83 of non-borrower marginal and small farms. Similarly the net profit realized from maize production was Rs. 2053.73 and Rs. 2082.67 in case of marginal and small borrower's farms as compared to Rs 1995.66 and Rs. 1996.28 for borrower farms, which was also higher. Thus it could be inferred that PACs played an appreciable role in providing finance which has resulted higher costs, higher yield and higher net profit to their borrowers.

It was also revealed from the study that overall 29.76% of the total borrower was defaulter and its percentage varied from 25.53% on marginal farms to 35.13% on small farms, while the overall 30.29% of total amount was recorded

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as overdue amount and its percentage varied from 28.95% on marginal farms to 30.78% on small farms. Further more the most important contributing factors for mounting up of defaulters and over dues of credit were low productivity/ income, followed by failure of crops and higher family expenditure. However the family expenses had increased after availing credit assistance in case of both the categories of farms in Panchmahal district. They were spending highest percentage of income on consumption needs, followed by medical needs, domestic & other social needs and educational needs. The study also indicated that the average amount of loan due for repayment during 2005 worked out to be Rs. 3405/- for marginal farms and Rs. 2490/- for small farms with an average of Rs. 2644.50. Further more the total amount of loans due for repayment exceeded the repaying capacity for all the categories of farmers showing that the majority farmers were under a fairly heavy debt burden.

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I. INTRODUCTION

Agriculture is a way of life in most developing agrarian economy like India. Rapid growth of agriculture is essential for ensuring food security and alleviation of poverty. Poverty alleviation is considered to be a socially desirable goal in any developing country. Capital is identified as one of the major constraints for the poor to take up productive investment to come out of poverty. Enabling the poor farmers to obtain easy and sustained access to financial services can potentially help in poverty alleviation. The National Agricultural policy document seeks to actualize the vast untapped growth potential of Indian Agriculture, strengthen rural infrastructure to support faster agricultural development, promote value addition, accelerate the growth of agro-business, create employment opportunities in rural areas, discourage migration to urban areas, secure a fair standard of living for the farmers & agricultural workers and face the challenges arising out of economic liberalization and globalization. In these emerging situations, agriculture sector requires higher credit due to introduction of modern technology to strengthen production base like land and water, support investment in farm machinery, current inputs and infra-structural development. This huge credit requirements cannot be financed by the farmers out of their owned funds. The gap widening between the owned and required capital calls for borrowing.

Credit is important in the lives of the rural poor in a developing economy. As the distribution of land in the countryside remains skewed, the majority of rural

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population is left with an adequate resource base for production faced with a weak social security system to fall back upon, this section of landless or near-land less rural population is forced to depend upon credit for their livelihood. Thus credit is the strategic input and integrated factor to stimulate the growth impulses of the rural sectors. Around the time of independence, hardly any financial institutes existed to serve the farmers and other rural people. They were solely depending on the moneylenders and other informal sources of credit for meeting their needs. The government of India encouraged the establishment of co-operative credit societies and thought that the co-operative sector will be able to meet the credit needs of the rural people.

Utilization of credit for which it is provided is an important element in agricultural development as the credit requirement of different sections of farmers have specific characteristics of content, scale, timing, mode of payment and back-up services. Therefore it is often said that if loan borrowed is not properly utilized, it will not only diminish the possibility of increasing farm production or productive efficiency of the farm but will also affect adversely on the repaying capacity of the borrower which further lead to the problem of over dues in the farm sector as well as inflationary pressure on the economy a whole.

Thus in order to sustain the technological progress in agriculture, availability of credit in adequate amount is necessary. It's profitable utilization in proper direction is urgent important for modern technological development in

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agriculture, which would help to know the profitability of the farms as well as to what extent it would change in the production, productivity, income and employment.

Realizing the need for supplying more funds into agriculture, Govt. and Non-govt. institutional agencies were developed to meet the challenges through the multi-agencies approach. Agricultural credit is disbursed through the multi agency network consisting of Commercial Banks (CBs), Regional Rural Banks (RRBs) and Cooperatives. With their wide network (Covering almost all the villages in the country), wider coverage and outreach extending to other remotest profitable country, the cooperative credit institutions both in the short and long term structures, have remained the primary institutional agency for dispensation of agricultural credit. Thus all the Government and Non-government agencies have played vital role in developing our agriculture and improving the rural economy but still, cooperatives are dominated in rural credit scene.

Despite the significant increase in overall agricultural credit, mounting overdue renders the recycling of funds impossible and thereby hampers the process of rural development, have been a cause of concern not only to the rural credit disbursing agencies but also to the policy makers, economist and the leaders engaged in discussing the methods to achieve the rural development. Balishter and Kumar (1994) found that financial of the total overdues, about 50 per cent were 'old' overdues for over three years and about 50 per cent were 'current' overdues

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for less than three years. Thus there is a serious problem of over dues which have not only been inhibiting credit expansion but also economic viability of lending institutions, specially the cooperatives and the RRB's. To improve the viability of the cooperative banks, the Reserve Bank of India, effective October, (1994) deregulated the interest rate structure for cooperatives as well as raising deposits for lending (subject to a minimum of 12 per cent) and for raising deposits.

To provide adequate and timely credit support for the banking system to farmer for their cultivation in the flexible hassle free and cost effective manner. i.e. to provide facility to repay by crediting the account as many times and as, when the sale proceeds are realized and with draw at the time of need.

The limited availability of credit and its lack have been acknowledged as the most limiting factor in the modernization of agriculture. The prosperity of agricultural sector mainly depends on the adoption of improved technology developed to increase the production. Modern agriculture on scientific lines is credit intensive in nature since the use of different types of agricultural inputs like fertilizers, machinery and other inputs require a large amount of credit. With the increasing awareness of the advantages of institutional credit, agriculturist in India is increasingly borrowing from credit institutions.

Keeping in view these considerations it needs to focus on impact of credit on agricultural development and its contribution in upliftment of rural agriculture.

Importance of the study:

Credit play a dynamic role in the development of Agriculture and farmer needs credit or outside finance because of basic characteristics like small units of production and uncertainty of rains. The mounting pressure of population on limited land resources has resulted in continuous declining in the per capita availability of land. These land holdings do not generate enough income even to meet the consumption needs of farmers. Majority of the farmers depend upon erratic and uneven rainfall behavior, so the vagaries of monsoon affect the agriculturist in varying degrees. It may result in totals failure of crops. In this situation farm needs outside finance. Further more new agricultural technology and intensive cultivation are largely responsible for a big spurt in the demand of capital.

The co-operative credit structure has spread over the entire state and has been trying to cover as many farmers as possible for the purpose of providing agricultural finance to them. In tribal area of Punchmahal district, at the village level about more than 100 PACSs covering single villages or group of villages are working and providing crop production loan to their farmer members. With their mammoth rural network, they are directly affecting agricultural production by catering to the multitude of rural credit needs. Thus it is pivot around which the subsistence economies of farmers sustain and grows. Therefore an attempt is made through a micro level study, to assess the impact of PACSs finance on marginal

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and small farmers' economy in Panchmahal district of Middle Gujarat with following Objectives.

Objectives:

- (1) To study the impact of PACSs finance on investments and returns of Farmers.
- (2) To compare the cropping intensity on borrower and non-borrower Farms.
- (3) To study the effect of PACSs finance on consumption pattern of the borrowers and non-borrowers.
- (4) To examine the impact of institutional finance pattern on generation and distribution of employment.
- (5) To study the repayment and overdues performance of borrowers and its reasons.

II. REVIEW OF LITERATURE

2.1 UTILIZATION OF LOAN

Ramamoorthy *et al.* (1972) from their study on credit needs and availability to farmers' revealed that on an average 40 per cent of the farm expenses were met by credit. The total requirement of credit increase with increases in size of farms. But, the percentage of credit to total spending was largest for the smaller group and least for large group. The study also showed that the problem of providing adequate credit to small farmers deserve immediate attention because co-operative societies were helping on large farmers (82.04%).

Khandhar (1980) made an attempt to study Needs, acquisition and utilization of co-operative agriculture credit in Jamnagar district of Gujarat and concluded from it that out of total loan borrowed, 14.08 percent was utilized for non-productive purposes.

Satyasai (1988) revive research on Flow of Institutional Credit to Agriculture in Deltaic Regions of A.P and observed from their study that availability of short-term credit per crop hectare on the sample decreased with the increase in the farm size. It ranged from Rs.717 on large farms to Rs. 1540 on marginal farms. The credit requirement per crop hectare also showed inverse relation with the farm size. In the sample, the marginal farmers required about Rs. 3719 per crop hectare, which is about ten times higher than that of the large

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farmers. Highest credit requirement on lower farm size classes was due to lower surplus farm income on these farms. They also revealed that in the sample, as high as 90% of the total institutional credit is utilized for productive purpose. However, the proportion of productive utilization had shown positive relationship with the farm size. In the sample, about 18 per cent of the credit was diverted on marginal and large farms respectively. Utilization of short-term credit has shown a similar trend in the area.

An evaluation study on acceptance of farm credit by small farmers in rural setting of Orissa was under taken by Mohapatra and Mishra in 1995 and observed from their study that majority of the respondents i.e. 76.4 per cent had fully utilized loan amount for cultivation purposes (76.4 per cent) and most of the respondents preferred the medium term credit followed by short term and long term respectively, Furthermore the extent of utilization was less in the field of land improvement and irrigation works, because these were time taking and long-term projects.

Birari et. al. (2002) concluded from their study on Co-operative lift Irrigation Scheme for sustainable use of water in Ujaini dam in Madha tahsil of western Maharashtra that the small farmers were lending in acquiring per hectare credit (98,409), followed by small (39,006) and large (23,388) farmers. With regard to utilization of the credit, 19.68 per cent of institutional loans and 13.22 per cent of non-institutional loans were diverted from specific purposes to other

uses and the diversion of credit per hectare was highest in the case of small farmers (Rs. 19,221), followed by medium (Rs. 2,225) and large (Rs. 1,573) farmers.

2.2 INCOME, EMPLOYMENT, CONSUMPTION PATTERN, CROPPING INTENSITY, CROPPING PATTERN

The study by Singh and Singh (1978) was intended to Study the Pattern of Distribution of Institutional Credit Among Different Categories of Farmers in Jalhandar district of Punjab. Their analysis of per acre farm expenses on borrower and non borrower farms indicated that borrowers incurred about 2 times higher expenses than the non borrower on small farms and 1.5 times higher expenditure on medium and large farms. They also concluded that borrower farmers held higher value of farm assets, gross farm income and used more of fertilizers per acres.

Raghunath *et al.* (1987) focused on Impact of PACS finance on marginal and small farmers' Economy of Anantpur District of A.P and their analysis gave an indication that availability of short terms co-operative credit enabled the borrowers to invest more in terms of strategic inputs like manures and fertilizers which helped to increase the productivity and profitability of groundnut crop through efficient resource management. The lower level of returns on non-borrower farms can be attributed to poor application of manure and fertilizer. They also revealed that the efficiency variations between borrowers and non-borrowers

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clearly indicates that the marginal and small farmers were highly benefited by the short-term credit provided by Primary Agril. Co-operative Societies.

An attempt was made by Vaidya(1991) to examine the impact of bank finance on family income. His analysis indicated that bank loan enabled the borrowing families to increase their income by 23 per cent in case of agricultural and allied purposes while in case of non-agricultural purposes it was about 25 per cent. They also found that the bank finance enables borrower's family to increase their employment and assests structure in case of both types of purposes i.e. Agricultural and Non-agricultural.

Kadian and Kaushik (1992) concluded from their study on Impact of Institutional finance under IRDP on Rural Poor in Mahendergarh District of Haryana that needs for consumption, domestics social, medical and educational has increased from Rs. 3834.04 to 4964.99 after getting financial assistance on all the categories. They also studied categories wise income, employment, and family expenses per annum and observed that overall it was increased by 14.72%, 24.67% and 9.32% respectively, after getting financial assistance for all the categories.

Rao and Satyanarayana (1992) conducted a study to know profitability of crop loans of small and marginal farmers and concluded from their study that the large majority of small (93.75%) and marginal farmers (92.50%) had got profitability of crop loan. This might be probably due to increase in yield and

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income, timely sanction of loan, purposively utilization of loan and low rate of interest. Where as only 6.25% and 7.50 of small and marginal farmers had not got profitability from the crop loan received which might be due to the incidence of pest and diseases as well as not available in time.

Dixit *et al.* (1994) from their study on Impact of RRB Finance on Income and Employment of Weaker Sections- in Varanasi District found that Availability of finance has enabled the borrowers in increasing their level of income and employment. The total income generated before borrowing from all the activities for overall situation was Rs. 5329 of which 69.12 per cent was from agricultural and allied activities, which increased up to Rs. 6827 after borrowing. Furthermore increase in income and employment in non-agricultural business is relatively higher. Thus RRBs planning an important in increasing income of the beneficiaries.

The study was taken by Rajput and Verma (1995) to visualize Impact of farm Loans on farm Productivity- A Case study of SBI in Indore District of M.P. They concluded from the analysis that the intensity of cropping on borrower's farms for all-size groups was comparatively higher by about 18.50 per cent as compared to non-borrower's farms and it was higher by 16.97%, 19.03% and 19.18% on small, medium and large borrower farms respectively than non-borrower farms.

They also evaluated per hectare input, output and net income as well as benefit cost ratio farmers of small, medium and large and they were significantly higher on farmers of borrower as compared to farms of non-borrower, This may be due to higher use of modern farm inputs in the form of high yielding varieties, manure and fertilizers, irrigation and adoption of intensive farming by borrowers.

Singh *et al.* (1991) made a comparative study on out Impact of Bank Finance on Cropping Pattern and Income on Small Farms. They observed from their study that intensity of cropping was higher on borrower farmers than non-borrower farms and it was 176.41% and 153.38% on borrowed and non-borrowed respectively. This may be due to higher investment on irrigation facility, which ultimately leads to higher level of inputs resulted higher crop yields and generated substantial additional net income to the borrower farmers as compared to non-borrower farmers.

Singh and Tyagi (1995) from their study on “Co-operative Finance and Agriculture Development” found that the major investment was on local implements as compared to improved implements. They also observed that the investment on implements on the sample farms on two categories of implements viz., improved implements and local implements that the major portion of the investment was however on local implements only. It was observed that the borrower farmers invest more amount on the implements in comparison to non-borrower farmers. They also found that the absolute amount of gross returns per

farm on borrowers farms were very high than that on non-borrower farms on both to marginal and small farms and it was Rs. 11522.40 and Rs. 21075.05 on borrower farms, while it was Rs.45005.35 and Rs.9880.15 on non-borrower farms respectively. This might be due to the finance assistance by co-operative.

Satapathy and Tripathy (2001) attempted to revive research on An Economic Analysis of Borrower and Non-Borrower Rice Farmers in Cuttack District of Orissa. They concluded from their study that on borrower farms on an average, of the total amount borrowed about 73 per cent was spent on crop production and the remaining 27 per cent on family consumption. The marginal farmers had borrowed 19.68 per cent higher amount of loan than the small farmers and had spent more than 68 per cent of the total loan for crop production as compared to 74.67 per cent by the small farmers.

They also revealed that per hectare yield of rice was higher on borrower farms as compared to non-borrower farms in both the farm sizes. The marginal and small borrower farmers had obtained 21.54 per cent and 10.33 per cent higher rice yield than their counterparts. This might be due to the higher part of loan was utilized by the borrower.

2.3 OVERDUES

The study was taken by Kumar and Kahlon (1978) to visualize “Farmers Indebtness in Ludhiana District of Punjab”. From their analysis they concluded that small and medium farmers benefited much less from the institutional sources

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than the larger farmers in respect of the average amount advanced per farmer as well as per acre. The study further showed that on an average, the amount of overdues per small, medium and large farmer was Rs. 2,843, Rs. 2,423 and Rs. 4330 respectively. The classification of overdues according to the agencies showed that 42 per cent of the small and 59 per cent of both medium and large farmers were indebted to the institutional agencies was 47, 51, and 77 respectively.

Goyal and Pandey (1987) from their study on an analysis of factors affecting overdues of primary agricultural co-operative and service societies in Hissar district of Haryana found that the consumption expenditure to total expenditure has positive relationship with the amount of overdues. This indicates that the with the increase in the percentage of consumption expenditure to total expenditure by one, the amount of overdues would tend to increase by 61.68.

They also concluded that total amount of out standing loans as well as percentage of earning adults to total adults were found to be the most significant factors responsible for affecting the overdues of the primary agricultural co-operative societies.

The study conducted by Lakshminarayana *et al.* (1990) was intended to appraise the repayment capacity and overdues of crop loans in co-operatives and commercial bank of Kusimkata Samiti (A.P.). They concluded that the repayment capacity of farmers who borrowed from co-operatives comes to Rs. 3377, Rs 21623 and Rs 12500 per farm for small, large and pooled farms, respectively.

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Correspondingly under commercial bank, it is Rs. 10252, Rs. 22518, and Rs.16385 per farm. Thus it is obvious that irrespective of farm size all the borrowers under commercial bank enjoy better repayment capacity. They also observed that overdues per borrower ranges from Rs. 19.65 (2.16 per cent) to Rs. 346.49 (38.91 per cent) for the last 11 years in case of co-operatives, while it ranges from Rs. 81.93 (14.82%) to Rs. 245.58(46.93%) for the last 6 years in case of commercial banks. Further more, overdues increases with the increases in loan amount.

Pandey *et. al.* (1990) in their study on An analysis of repayment performance of farmers regarding agricultural loans in kurukshetra District of Haryana and observed that the total amount of outstanding institutional loan borrowed by sample farmers from co-operative credit and services the primary land development banks and commercial banks were Rs. 9644, Rs. 23,861 and Rs. 42,104 on small, medium and large farms with an average of Rs. 21691 for all the farms. Of these, institutional loans short term crop loan accounted for 52.04, 32.68, 26.80 and 33 per cent in case of the small, medium, large and overall average farms respectively. Furthermore the total amount of loans due for repayment exceeded the repaying capacity of all the categories of farmers except the large ones. It may, therefore, be concluded that the majority of the farmers were under a fairly heavy debt burden.

Shaheena and Rajitha (1991) examined Utilization pattern and repayment performance of the farmers of the Meenangadhi Service Co-op. Bank (MSCB) and

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found that out of the total borrowers, 64.29, 55.56 and 72.22 per cent of the marginal, small and large farmers have utilized the loans for specified purposes, whereas 85.70, 72.20 and 27.70 per cent of the marginal, small and large farmers have repaid the loans within the due date respectively. On an average, 47.57 per cent of the total loans advanced were dues and the percentage of defaulter was in the case of large farmers.

Sanjay Kumar (2005) made an attempt to identify the important socio-economic factors responsible for the non-repayment behavior of the borrower farmers in the tribal Area of Jharkhand and concluded from his study that characteristics like literacy, percentage of income from other sources, percentage of cash expenditure for production purpose to the total expense, number of visits to the officials, percentage of borrowing from different institutions to the total population credit, irrigation potentials and cropping intensity all these helped in differentiating the borrowers into the defaulters and non- defaulters. Similarly, the defaulters could be classified into willful and non-willful on the basis of factors like literacy, percentage of income other sources and the size of holdings.

Ramesh Prasad Adhikari (2005) revive research on study of the impact of farm credit on production and indebttness among farmers in Norang district of Nepal and found that there was positive impact of credit on production of paddy and wheat in all the sampled areas of Morang district . He also concluded that the marginal farmers were using only 59.65 per cent, small farmers were using 60.53

Review of Literature

per cent while both medium and large farmers were using 76.56 per cent of the total credit borrowed respectively. The remaining amount of credit was used for family expenditure. He further also concluded from the study that the marginal and small farmers should be encouraged to diversify their production by not only engaging in farm production but also in non farm income generating activities in order to generate extra income which could be used to purchase inputs as well as to meet the family expenditure and helps in reducing the burden of debt.

L.D. Hatai et. al.(2005) made an economic analysis of Agricultural credit an overdues in different regions of U.P. and found from the study that always the share of commercial banks in the total availability of credit per hectare is the highest followed by the regional rural banks, primary agricultural credit societies (PACs) and land development banks (LDB) for all the categories of farmers. the analysis further revealed that the amount of loan borrowed, and unproductive use of loan have been the important factors responsible for overdues in both zones in all farm sizes. It was felt that financial institutions should advance the loan after assessment of the credit requirements to ensure proper use of advanced loan. Efforts should be made to check the unproductive use of loan to tackle the problem of overdues in agriculture.

Baljit Singh et. al. (2005) examined the Credit Disbursement under different schemes and its impact on rural Alleviation in Hisar district of Haryana for the period of 1999-2000 and 2000-2003 and examined the credit disbursement

Review of Literature

pattern followed by different banks under various schemes/ programmes and its impact in rural poverty alleviation. For the purpose of study, and the data were collected for a sample size of 150 respondents for the period of 1999-00 to 2000-2003 and tabular analysis. And in all, 54.67 and 46.67 per cent beneficiaries remained below poverty line in Hisar-I and Hisar-II blocks, respectively. Among different schemes, the percentage of beneficiaries who comfortably managed to cross the poverty line were found to be highest in sheep and bullock cart/camel cart/ khachar rehra activity in Hisar-I and Hisar-II blocks, respectively.

O.P.Shukla and R.P.Singh (2005) studied the Impact of institutional credit on rural economy with reference to KKGB (Kanpur Kshetriya Gramin Bank) and overall it was observed that the selected beneficiaries, bank official and annual reports of KKGB. Overall the RRBs have satisfactory performance in terms of providing loans and in generating employment opportunities.

III. PANCHMAHAL DISTRICT PROFILE

DISTRICT PROFILE

Panchmahal district is a part of Eastern Hilly Region of the state and sub-divided into two sub-micro regions namely, Mahi plain and Forested scrub zone, on the basis of topography, climate, soils and natural vegetation. It lies between the parallels of latitude 22 17° and 23 20° and the meridians of Longitude 73 20° and 74 2°. The length of the district from north to south is about 128.7 km and from east to west about 68.1 km. It is bounded on the north by the Sabarkantha district, on the east by Dahod district, on the south by Anand districts. Out of the total geographical area (552049 sq km), of the district, cultivable land 47 percent and 22.50 percent land is under forest cover and its rank is 5th in terms of area among the district of the state. The region covers the western part of the district and includes Lunawada, Santrampur, Godhra, Kalol, Shehera, and Halol talukas. Geographically, the rocks found in this region are alluvium, blown sand, etc., Deccan trap, Erinpurru Granite, Gneiss Aravalli and associated rocks.

HISTORICAL GROUND OF DISTRICT

The district has consisted five Mahels viz Godhra, Kalol, Halol, Dahod and Jalod that's why it call Panchmahals. As per the history the Pavagadh was the headquarter of the Scindia's Suba in the regime, who administered the Mahals from 1761 A.D to 1853 and it called Pavagadh. Panch Mahal's Champaner, the

well known ancient town in this district, was the capital of kingdom during the Chalukya period and presently it was declared as World Heritage Place.

At the end of thirteen century (1297 A.D.) the Chohans, retreating from Khichivada before the Mugals under Ala-Ud-Din Khilji became ruler of the country and in 1573-1727 A.D Godhra became the district headquarter of the Moghul Emperors. In 1803 The Panchmahals was taken by British and in next year Pavagadh was restored to Scindia and remained in his hands till 1853.

As a measure of economy the Panchmahals District was amalgamated with the broach district in November, 1933. In 1945, Panchmahals was restored to its originals status of the Collectorate after establishment of the Gujarat state in the 1 May, 1960. At the time of reorganization and reconstruction of the district and talukas of the state, Panchmahals originally having 11 talukas and it has been divided into two district viz.Panchmahals and Dahod. The Boundaries of the Panchmahals have change from 2-10-1997. The district head quarter kept at Godhra and consists 11 talukas namely, Khanpur, Kadana, Santrampur, Lunawada, Shehera, Morwa (Hada), Godhra, Kalol, Ghoghamba, Halol and Jambughoda.

PAVAGADH HILL



The Pavagadh hill is a famous place of pilgrimage situated in the Halol taluka of the district. The gods send so large a hill that three quarter of it filled up the hollow and the rest standing out of the plains was called ‘Pavagadh’ the quarter hill. In old inscriptions, the name of the hill also appears as ‘Pavagadh’ or ‘fire-hill’. The first historical reference to the Pavagadh is in the writings of Chand Barot of the eleventh century, who mentioned Ram Gaur, the Tuar, as lord of Pava. Pavagadh is well-known as the strongest hill fortress of the ancient Gujarat, like so many hill forts in India.

GEOGRAPHICAL FEATURES

Climate Type

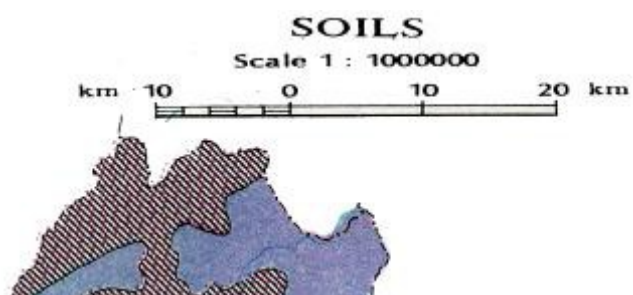
The climate of the district is characterized by a hot summer and dry in the non- rainy season. It also considered as a drought prone area. The winter seasons start from December to February followed by the hot season from March to May.

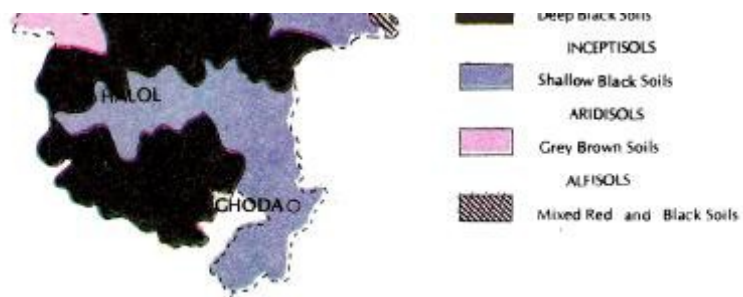
The south-west monsoon season is from June to September and the post monsoon season from October to November.

Soil Regimes

The soil pattern of the district shown in the fig. 1, that indicate the types of soil in the district are Deep black, shallow black, grey brown and mixed red. The soil texture in the district is Black salt or mixed red and Brown salt, the area under deep black and gray brown is small.

The district has undulating topography and hard rocky terrain (with altitude varying from 75 m to 300 m), with shallow medium black soil having low fertility. Soil depths vary from a few centimeters to 60 cm in most areas. The soil in the hilly areas is subjected to constant erosion due to lack of vegetation cover. The western parts comprising Kalol and parts of Halol, Godhra and Lunawada Taluka constitute a plain land. It is a part of the Mahi river basin. This part is mostly flat, punctuated at parts by isolated hills. The northern and eastern portion comprising mainly Lunawada, Santrampur and Jambughoda talukas are covered by hills and forests intercepted by plain cultivated lands and villages situated in the river valley.





SOIL REGIMES

Climatic Characteristics

The mean monthly maximum temperature is 42 °C in the month of May while mean of minimum temperature is 13.9 °C in the month of January. Summers are usually warm and humid while winters are cool. Monsoons usually start from June and last up to September.

Rain fall seasons

The mean annual precipitation varies between 800 mm to 1000 mm. More than 90 percent precipitation is received in the period ranging from June to September, by virtue of the southwest monsoon. Good winter rains are an exception, which occurs once in every 10 years. Hills and hillocks, undulating upland and flood plains and valleys constitute 30 to 50%, 16 to 30% and 15 to 22% of the land area respectively.

Demographic Information of the District

The demographic features of the district are discussed in this chapter that includes, the feature of the population, Status of rural and urban population.

The Table 3.1 and Table 3.2 presented the information on the features of the rural and urban population.

Table 3.1 : Status of rural urban population

Sr. No.	Item	Number
1	Number of Occupied Houses	372764
2	Total Number of Villages	1213
	Inhabited	1201
	Uninhabited	12
3	Villages with Population of 5000 and over	47
4	Number of Talukas	11

(Source : Panchmahals Census survey 2001)

Table 3.2 : The information on the population of the district

Sr. No.	Item	Numbers	% to total
1	Number of talukas	11	
2	Number of villages	1202	
3	Number of households	372764	
4	Population (Total)	2025277	100.00
	Males	1044937	51.00
	Females	980340	48.00
5	Rural Persons	1771915	87.49
	Males	912905	45.05
	Females	859010	42.44
6	Urban Persons	253362	12.51
	Males	132032	06.87
	Females	121330	05.64
7	Literacy rate		
	Literacy (Total)	1025835	50.65
	Literacy (Rural)	843375	41.64
	Literacy (Urban)	182460	09.00

(Source : Panchmahals Census survey 2001)

There are 11 talukas and 1202 number of villages in the district with 2025377 total populations, among them 51 percent of male and 49 percent of female, that's why the sex ratio is quite low 938. The density in the district is 389

District Profile

which show the community is widely scattered in the area as a tribal culture. As mentioned earlier Panchmahal is predominantly inhabited by tribal. The literacy rate of the district is 50.65 percent where 32.32 percent of the male and only 18.33 percent of females are literate in the district. The low literacy rate of the district is due to predominantly inhabited by tribal community. The difference in literacy rate of rural (41.64) and urban (09.00) area is large this due to 87.49 % of the inhabitants residing in villages and very few kind of urban area in the district.

Table 3.3 : Cropping Pattern of District and area under principal crops

Sr.	Name of Crop	Area in (Ha.)	% against Gross cropped area
1	Gross Cropped area	279326	
2	Total irrigated area	102083	36.54
3	Cereals & Pulses		
A	Cereals		
a	Paddy Irrigated (Kharif)	31682	11.34
b	Paddy un-irrigated (Kharif)	38850	13.90
c	Wheat Irrigated	22180	07.94
d	Wheat Un-irrigated	915	00.33
e	Kharif Sorghum	882	00.32
f	Rabi Sorghum	450	00.16
g	Sorghum (Kharif)	5510	01.97
h	Maize (Rabi)	5506	01.97
i	Maize Kharif	115070	41.19
j	Minor Millets	550	00.20
k	Ragi	135	00.04
	Total Cereals	221730	79.38
B	Pulses		
a	Pigeon Pea	32687	11.70
b	Gram	10950	3.92
c	Other Pulses	390	00.14
	Total Pulses	44027	15.76
4	Total Food Crop	265757	95.14
5	Total Oil Seed Crops	3723	01.32
6	Other Crop		
7	Sugarcane	110	00.04
8	Cotton	9786	03.50
	Total	9896	03.54

(Source : District statistical information 2005-06)

The table 3.4 revealed that about 95.14 percent of cultivated area under food crops, only 4.86 percent area under the non food crops out of total gross cultivated area. Out of total food crops area, the 15.76 percent of the cultivated area grown under Pulses. That indicate the farmers highly depends on the food crops and due to traditional farming and less irrigation facility they area not able to take risk of the cultivating the commercial crop. The main *rabi* crop in the district is wheat cultivated under 21.72 percent of the total irrigated area. The major crops grown in the irrigated area are wheat, maize, and cotton, in the some area other non food crops also now grow in the district.

Table 3.4 : Categories wise workers in the district

District	R/U	P/M/F	Total workers	Cultivators No. (%)	Agri. Laborers No. (%)	Workers in HHI No. (%)	Other workers No. (%)
Panch -mahal	Total	Person	976726	53.7	23.9	1.3	21.1
	Total	Male	557951	57.4	14.8	1.3	26.6
	Total	Female	418775	48.9	36.1	1.3	13.7

(Source : Panchmahals Census survey 2001)

Table 3.5 : Area under Irrigated Crops

Sr. No.	Crop	Area (ha)	% to Irrigated Area
1	Wheat	22180	21.72
2	Maize	5506	05.39
3	Gram	10950	10.72
4	Rice (Kharif)	31682	31.04
5	Sugarcane	139	00.14
6	Spices	530	00.52
7	Other food crops	685	00.67
8	Cotton	9786	09.58
9	Fodder crops	6120	06.00
10	Other non-food crops	3723	03.65
11	Other important crops district	10782	10.56
12	Gross Area under Irrigation	102083	100.00

(Source: *Statistical annual report Panchmahal 2005-06*)

Animal Husbandry

In the district agricultural activities play an important role for their livelihood. The cow and buffalos are major milk producing animals in the district because of about 37.11 percent of animal is cross bride and 42.93 percent buffalos. The goat, sheep and other animals also present in the marginal size in the district. The annual milk production in the district is 335.78 thousand tones.

Table 3.6: Estimated productive animals

Sr. No.	Item	Number (000)
1	Cross bred cows	446.750 (37.11)
2	Indigenous cows	240.250 (19.96)
3	Buffalo	516.827 (42.93)

District Profile

4	Goat	450.361
5	Sheep	4.1
6	Poultry	4.950
7	Others	--

(Source : *Director of Agriculture, Godhra 2005-06*)

Table 3.7 : Production scenario of the animal husbandry

Sr. No.	Item	Production (000 tons)
1	Estimated Milk Production	335.78
2	Estimated Egg production (000) per annum	23.567
3	Estimated wool production	0.006
4	Estimated meat production	287.5
5	Estimated Silk production	--

(Source : *Director of Agriculture, Godhra 2005-06*)

Employment Status

The agriculture sector is major for the livelihood of the district. Out of total farmers 67 percent of the having below two hectare land and occupied only 31.71 percent of the area from the total area. The large part of cultivated land occupied by medium and semi-medium type of farmers about more that 60 percent.

Table 3.8: Operational Holdings and Ownership in district

Sr. No.	Landholding Size	Area (ha)	Percent to total	Number of Holdings	Percent to total
1	Marginal (<1 ha)	20886	11.31	40998	40.55
2	Small (1-2 ha)	39614	21.46	27343	27.04
3	Medium (2-4 ha)	62246	33.71	22478	22.23
4	Semi-medium (4-10 ha)	54305	29.41	9727	09.62
5	Large (>10 ha)	7584	4.11	556	00.50
6	Total	184635	100.00	101102	100.00

(Source : District Annual report 95-96)

Table 3.9: Sector wise Employment in District (Rural industry)

Sr. No.	Sector	Male	Female	Total
1	Dairying & Livestock rearing	177801	43459	221260
2	Poultry & Egg Production	249	89	338
3	Piggery	-	-	-
4	Fisheries	12547	2783	15330
5	Tanning activity & Leather	329	214	119

Table 3.10 : Key Banking Statistics – 31 March 2005

Sr. No.	Particular	Cooperatives		RRB	CBs	Total
		CCB	LDB			

District Profile

1	No. of Banks	1	1	1	9	12
2.	No. of Branches					
	a) Rural	15	1	29	41	86
	b) Semi-urban	7	6	6	26	45
	c) Urban					
	Total	22	7	35	67	131
3	Average number of villages cover by branch/ per society	55	172	15	9	9
4.	Total loan outstanding as on 31 March 2005	15316.13	750.98	6902.42	22149.60	45119.13
5	% of Agricultural advance to total advances	83.88	100.00	50.02	22.56	50.43
6.	% of overdues to loans out standing	77.30	85.39	17.73	8.24	34.42

Table revealed that the highest amount of loan disbursed by the CBs and followed by the Co-operative, and RRB. We can see there is total 12 number of bank working and percentage of Agriculture advance to total advances is higher in case of co-operative Bank followed by RRB and CBs.

Table 3.11 : Summary Sector wise NABARD Projection

(Rs. in Lakh)		
Sr. No.	Sector	Projection of NABARD (Bank Loan)
1	Minor Irrigation	575.640
2	Land Development	196.479
3	Farm Mechanization	1000.041
4	Plantation and horticulture including	116.142

District Profile

	medicinal and Aromatic plants	
5	Sericulture	0.000
6	Forestry & Waste land development including Jatropha, Bamboo cultivation	92.100
7	Dairy	1118.301
8	Poultry	174.000
9	Sheep/Goat Piggery	31.450
10	Fisheries	19.623
11	Storage Godown/ Market Yard	363.75
12	Renewable source of Energy & waste utilization	3.766
13	Other(Agriculture)	125.80
	Total term loan (Agriculture)	3817.092
14	Crop loan	14429.945
	Total Agri. Credit	18247.037
15	Non farm sector, including working capital	2317.250
16	Other priority sector	3172.500
	Grand Total (Total Priority Sector i.e Agriculture + Non Farm Sector + Other Priority Sector)	23736.787

Table concluded that total bank loan given to the farmer of Panchmahal district in 2005-2006 total estimated potential under priority sector advances would be Rs. 23736.787 lakhs comprising investment under agriculture and allied activities. As on 31 March 2005 all the banks together. The table clearly indicated the highest amount of disbursed by Bank for the agriculture purpose or Crop loan i.e 18247.037Lacs and from it 14429.945 disbursed for that Crop loan.

In February 2004, Government of India constituted a National Commission on Farmers to examine various issues confronting the Indian farmers and to suggest appropriate interventions for improving the economic viability and sustainability of diversified agriculture, including horticulture livestock, dairy and

fisheries and for doubling the farmers' income. The Commission was reconstituted in November 2004 and its terms of reference also modified to address the larger issues relating to working out a comprehensive medium-term strategy for food and nutrition security, enhancing productivity based on an agro-ecological and agro climatic approach, bringing about synergy between technology and public policy, attracting educated youth in farming, enhancing investment in Agri-research etc.. The reconstituted National Commission on Farmers is headed by Dr. M.S.Swaninathan and is expected to submit its final report within two years.

The Govt. of India in 2003-04 had initiated major steps towards introduction of futures trading in commodities, which included removal of prohibition on futures trading in all the commodity exchanges. The momentum gathered in 2003-04 continued in 2005-05. and manifested itself in increasing in volumes, participation, number of commodities traded and various new initiatives taken by the National Exchange.

By virtue of supporting conversion/ re-schedulement of farmers' dues at ground level under the scheme "Farmers in Distress" and "Farmers in Arrears", RRBs/DCCBs were experiencing resource crunch. NABARD, therefore formulated the policy for extending ST liquidity credit support to them by relaxing usual terms and conditions. This will have a positive impact on increasing the ground level of flow of credit.

Review of Ground Level Credit

Table 3.12 : The activity wise loans disbursed during past three years and target as per NABARD(2004-2005) for Panchmahal district

(Rs. in Lakh)

District Profile

Crop	Loans disbursed During						Target as per DCP	
	2002-03		2003-04		2004-05		2005-06	
	Ha.	Amnt.	Ha.	Amnt.	Ha.	Amnt.	Ha.	Amnt.
Paddy	48178	3998.76	21225	1487.8	16442	2259.83	25164	2649.1
Wheat	341	30.04	204	48.23	437	83.18	1938	228.17
Jowar	17	0.60	50	43.60	3	0.29	125	19.00
Bajara	675	41.42	420	46.49	362	40.60	720	41.75
Maize	15247	1006.33	5324	276.24	2069	282.49	1436	166.47
Cotton	2907	479.61	1084	137.36	1313	250.33	2957	393.42
Pulse	441	1.94	79	1.20	749	133.92	308	39.95
Tobacco	922	101.40	152	23.74	181	31.92	168	119.20
Sugarcane	87	26.03	229	4.42	51	15.14	77	12.20
Vegetable	624	34.31	142	2.87	115	21.86	177	17.65
Groundnut	77	5.95	250	21.58	372	21.72	765	82.70
Others	8449	422.47	1883	247.83	4950	723.74	10225	973.97
Total	77965	6148.86	31042	2341.3	27044	3865.02	44660	4743.58

As can be seen from the above that as on 31st March 2005, 41.45% area was under traditional cultivation of crop like Maize and Paddy as against during 2002-03 it means there is considerable shift in change of cropping pattern. Further mixed trend in area of cultivation has been observed in respect of other crops.

Table 3.13: The activity wise loan disbursed during past three years and targets as per District Credit Plan 2005-06 of Panchmahal district are as under (Rs. in Lakh)

Activity	Loans disbursed During						Target as per DCP	
	2002-03		2003-04		2004-05		2005-06	
	PU	Amount	PU	Amount	PU	Amount	PU	Amount
Dug well	90	27.92	53	21.26	102	26.54	274	100.36
Borewell + pumpset	53	16.07	33	31.73	71	24.75	199	82.02
Pumpset	145	11.72	50	24.28	129	39.00	413	106.66
Pump house	-	-	-	-	--	--	-	-
Lift irrigation	31	11.72	22	13.99	16	11.63	103	41.84
Drip Irrigation	5	2.56	-	-	3	2.06	27	9.00
Sprinkler	19	55.90	-	-	14	5.35	4	0.80

District Profile

Irrigation								
Pipe line	-	-	-	-	-	-	-	-
Renovation of well	-	-	-	-	-	-	-	-
Misc.	161	66.43	83	23.28	77	47.22	12	3.00
Total		218.57		114.54		156.55		343.68

Table 3.13 revealed that in 2005-2006 the amount highest disburse for the Pump set installation(106.66 Lakhs) followed by the Dug well(100.36 Lakhs), Bore well, Lift irrigation, Drip irrigation and miscellaneous. All over 343.68 lakhs disbursed to Panchmhal district to improve the irrigation structure which is increasing the Bank year after year because irrigation is the big factor which will affect the economy of rural poor particular this district.

IV. METHODOLOGY

This chapter describes the methods and procedures used for collection and analysis of the data in the study to achieve the objectives of the study.

4.1 SAMPLING TECHNIQUE

The multistage stratified random sampling technique was followed to select the ultimate sampling units.

4.2 COVERAGE OF THE STUDY

4.2.1 Areas of the Study

The PACSs is working in almost all the districts of Middle Gujarat which comprising five districts namely, Anand, Kheda, Baroda, Dahod and Panchmahal. Among them Panchmahal district constitute for highest percentage of total short term loan disbursed by PACSs (as on 31st March 2005) was purposively selected for the present study.

Table 4.1 District wise disbursement of short term loan by PACSs in Middle Gujarat (Rs in Lacs)

District	Amount of short term loan (Rs.)	% to total area in Gujarat
Baroda	6430.17	21.74
Anand & Kheda	7529.85	25.46
Panchmahal & Dahod	15617.15	52.80
Grand Total	29577.17	100.00

Methodology

4.2.2 Selection of the Talukas:

The PACSs were working through 21 branches covering all the talukas of Panchmahal district. Among all the talukas of Panchmahal district four talukas having highest percentage of total amount of loan disbursement by PACSs namely, Lunawada, Morva-Hadaf, Khanpur, and Santrampur were selected for study.

**Table 4.2 : Taluka wise disbursement of short term loan in Panchmahal district
(Kharif, 2005) (Rs. in Lacs)**

Sr. No.	Name of Branch	Amount of loan	% of the total
1.	Lunawada*	166.35	14.60
2.	Morva-hadaf*	101.91	8.94
3.	Khanpur*	146.66	12.85
4.	Santrampur*	91.10	7.97
5.	Godhara	15.25	1.34
6.	Kanakpur	42.05	3.68
7.	Mahelol	0.00	0.00
8.	Tiba road	87.36	7.66
9.	Sant Road	32.19	2.82
10.	Sahera	35.12	3.08
11.	Mora (Me)	89.9	7.88
12.	Bakor	14.43	1.27
13.	Di-colony	41.58	3.65
14.	Gogmba	38.04	3.37
15.	Kalol	25.23	2.21
16.	Vejalpur	17.99	1.58
17.	Halol	25.23	2.21
18.	Shivrajpur	30.03	2.62
19.	Jambugoda	13.99	1.27
20	Kothamba	125.38	11.00
Total	-	1139.79	

(* indicate selected Branch of Panchmahal taluka)

4.2.3 Selection of Villages :

Methodology

All the villages of selected talukas were listed along with their total amount of short term loan disbursement by PACSs. And three villages were selected randomly. The details of same are given in Table 4.3.

Table 4.3 : Village wise disbursement of short term loan by PACSs.

(Rs. in Lacs)

Sr. No.	Name of taluka	Name of Selected villages	Amount of loan disbursement
1.	Lunawada	(a) Kothmba	82.44
		(b) Madiyadholi	25.60
		(c) Thanasavali	25.60
2.	Morva-hadaf	(a) Mora	36.87
		(b) Vandeli	26.30
		(c) Sagvada	14.38
3.	Khanpur	(a) Naroda	15.04
		(b) Barmoda	8.50
		(c) Dhuleta	5.59
4.	Santrampur	(a) Gothib	22.66
		(b) Santrampur	16.80
		(c) Gothrbarella	14.90

4.2.4 Selection of Respondents

A list of farmers borrowed loan from PACSs in each selected village was prepared and arranged in ascending order of their operational holdings. They are classified into four strata, viz. marginal (below 1 hectare), small (1 to 2 hectares), medium (2 to 4 hectares) and large (above 4 hectares) and only marginal and small farmers were considered for the study. Considering the size of population and resources, fourteen respondents comprising seven borrowers and seven non-borrowers were selected ensuring proportional representation to marginal and small

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farmers. Thus in all 168 respondents (84 borrowers and 84 non-borrowers) comprising small and marginal were selected for the present study.

Table 4.4 : Distribution of Respondents according to size of groups

Sr. No.	Name of the taluka	Name of the village	Borrower		Non-borrower		Total
			Marginal	Small	Marginal	Small	
1.	Lunawada	(a) Kothmba	3	4	4	3	14
		(b)Madiyadholi	3	4	4	3	14
		(c)Thanasavali	4	3	3	4	14
2.	Morvahadaf	(a) Mora	4	3	3	4	14
		(b) Vandeli	3	4	4	3	14
		(c) Sagvada	3	4	3	4	14
3.	Khanpur	(a) Naroda	3	4	4	3	14
		(b) Barmoda	4	3	4	3	14
		(c) Dhuleta	3	4	3	4	14
4.	Santrampur	(a) Gothib	4	3	4	3	14
		(b) Santrampur	4	3	3	4	14
		(c)Gothrbarella	3	4	4	3	14
	Total		41	43	43	41	168

Methodology

Period of Investigation and Data collection:

The study covered the agricultural year 2005-2006 and the data were collected by survey method, making personal visits of the sampled respondents, for getting desired information from the respondents, structured questionnaire (schedule) was prepared and modify suitability for the final use. It must be emphasized that the reliabilities of the conclusions drawn from this study depends upon the veracity of the data collected. The fact is that the respondent furnished the data mostly from their memory recall and not from any written records. But, care has been taken to cross check the accuracy with reference to internal consistency and external evidence.

Secondary data were collected from the state, district and PACs Banks records.

4.3 DEFINATIONS OR TERMINOLOGIES USED IN THE INTERVIEW SCHEDULE

- (i) Loan:** - It is the finance or credit in monetary form or loan is cash payment made to the seller by the PACSs.
- (ii) Overdues:** - Non repayment of loan in time is termed as overdues. Overdues of the banks was calculated keeping in view of conversion and replacement. While the overdues of farmers consisted of principal amount of loan and interest thereof.
- (iii) Demand:** - It means the amount of total installment to be recovered at the specific time i.e. on due date.

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- (iv) **Collection:** - Total means the amount of installment recovered against demand during the prescribed time limit.

4.4 METHOD OF ANALYSIS

The data collected referred to the personal and socio-economic characteristics of the sample farmers, the input used, production, employment & income were used for analysis of study.

4.4.1 Percentage and Ratio :

Simple comparisons were made on the basis of percentage and cumulative percentages were calculated wherever necessary. Ratios were calculated for the interpretation of data.

4.4.2 Cost Concepts and Estimation of Inputs

Costs are generated following certain cost concepts. These cost concepts and the items of costs included under each concept are given below.

Cost A:

- (i) Value of hired human labour
- (ii) Value of hired and owned bullock labour
- (iii) Tractor charges
- (iv) Value of seeds
- (v) Value of manures (farm produced and purchased) and cakes
- (vi) Value of fertilizers
- (vii) Value of insecticides and pesticides

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- (viii) Irrigation charges
- (ix) Depreciation on farm buildings
- (x) Interest on working capital
- (xi) Other paid out expenses, if any.

Cost A can be divided into two parts viz., Cost A_1 and Cost A_2 , if tenant if tenant farmers are there in the study. But in this study, Cost A was considered without dividing into Cost A_1 and Cost A_2 as there were no tenant farmers in the selected respondents.

Cost B:

Cost A plus rental value of owned land and interest on value of owned fixed capital (excluding land).

Cost C_1 :

Cost B plus imputed value of family labour.

Cost C_2 :

Cost C_1 plus 10 per cent of Cost C_1 as managerial charges.

The values of purchased inputs were recorded as reported by the farmers after verification.

Methodology

Estimation of owned inputs was made as described below:

- a) Family labour was valued at the wage rate of usual casual labour prevailing for different operations in the sample villages
- b) Owned bullock labour was valued at the prevailing marketing rate.
- c) Farmyard manure was valued at the market price.
- d) The cost of irrigation and tractor charges were evaluated according to the actual cost incurred by the farmers for getting such inputs and services.
- e) Interest on working capital was charged at the rate of 12 per cent per annum for the duration of the crop. The rationale behind the selection of this rate of interest is simply the fact that village service co-operatives provide short-term credit to the farmers at this rate.
- f) Depreciation on farm buildings was charged at the rate of 5 per cent on katcha and 2 per cent on pakka buildings.
- g) 1/6 of the gross income was considered as rental value of owned land.
- h) Interest on owned fixed capital was calculated at the rate of 10 percent per annum.

4.4.3 : Income measures :

The concept of income used in the present study are shown below.

(i) Farm Business Income

Value of gross output minus Cost A.

(ii) Family Labour Income

Value of gross output minus Cost B.

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(iii) Net Profit (Net Income)

Value of gross output minus Cost C_2 .

4.5 LIMITATION OF THE STUDY

- (i) The information was collected by the survey method and conclusions were based on these observations for the year 2006.
- (ii) Due to limited time and resources available with the investigator, the study was confined to only Panchmahal districts of Middle Gujarat. The study on such a small scale can not claim the representativeness of the state.
- (iii) The reliability and validity of the data collected through survey method is not always without doubt.
- (iv) The study was carried out in the selected talukas namely Lunawada, Morvahadaf, Khanpur and Santarampur of Middle Gujarat.

V. RESULTS AND DISCUSSION

This chapter deals with the analysis and interrelation of data in light of the objectives. The raw data were collected from selected farmer of Panchmahal district through interviewing schedule (Appendix-I). The facts and findings of the study have been presented as under.

5.1 GENERAL INFORMATION OF THE SELECTED SAMPLE FARMERS

The details about the borrowers can be seen from given in Table 5.1.

Table 5.1 : Number of the selected sample farmers according to the size of holdings

Sr. No.	Category	No. of selected farmers		Total
		Borrower	Non-borrower	
1.	Marginal (>1 ha.)	47.00	37.00	84.00
		(55.95)	(54.76)	(50.00)
2.	Small (1-2 ha)	46.00	38.00	84.00
		(44.05)	(45.34)	(50.00)
	Total	84.00	84.00	168.00
		(100.00)	(100.00)	(100.00)

(Figure in parentheses indicates percentage to the total)

The total numbers of the borrowers selected for the study were 84 from each category of farmer's i.e. small and marginal farmers from the study area. Further it was of the total borrower farmers observed that 55.95% and 44.05% of borrowers were belongs to marginal and small farmers while it was 54.76% and

45.34% for the non borrowers group. Thus total 168 borrowers were selected from the different groups of farmer.

5.2 OPERATIONAL SIZE

Details about operational size of holdings for borrower and non borrower groups can be seen from Table 5.2.

Table 5.2 : Operational size according to size group.

Sr. No.	Categories of Farmers	Average size of holdings (In ha.)	
		Borrower	Non-borrower
1.	Marginal	0.62	0.58
2.	Small	1.46	1.45
	Overall	2.08	2.03

The above table indicates that the average operated area per farm by borrower group was 2.08 hectares and it varied from 0.62 hectares on marginal farms to 1.46 hectares on small farms. While the average operated area per farm in case of non-borrower groups was less as compared to borrower group i.e. 2.03 hectares.

5.3 EDUCATION STATUS

Literacy has a very high impact on poverty alleviation. The literacy level for the head of the family is presented in Table 5.3.

Table: 5.3 Literacy status of the head of family

Group	Category	Literate	Illiterate	Total
Borrower	Marginal	28.00 (66.67)	14.00 (33.33)	42.00 (100.00)
		26.00 (61.90)	16.00 (38.10)	42.00 (100.00)
Non-borrower	Marginal	23.00 (54.76)	19.00 (45.24)	42.00 (100.00)
		20.00 (47.62)	22.00 (52.38)	42.00 (100.00)
Overall	Marginal	51.00 (60.71)	33.00 (39.29)	84.00 (100.00)
		46.00 (54.76)	38.00 (45.24)	84.00 (100.00)

(Figure in parentheses indicate percentage to the total)

It can be observed from the above table that 66.67 per cent of marginal farmers & 61.90 per cent of small borrower farmers and 54.76 per cent of marginal & 47.62 per cent of small non borrower respondents were literate & remaining 33.33 per cent and 38.10 per cent of marginal and small borrowers were illiterate. Overall, proportion of illiterate respondents was more in case of small farmers as compared to marginal farmers.

5.4 CROPPING PATTERN

The distribution of cropped area under different important crops of sample farmers is given in the Table 5.4.

Table 5.4: Distribution of total cropped area under different crops.

(Per farm)

Sr. No	Crops	Borrower		Non-Borrower	
		Marginal	Small	Marginal	Small
(A)	Kharif				
1.	Paddy	0.41	1.35	0.32	1.35
2.	Maize	0.21	0.09	0.19	0.06
(B)	Rabi				
1.	Wheat	0.30	1.00	0.20	0.61
2.	Pea	0.12	0.50	0.10	0.07
3.	Cotton	0.13	0.20	0.05	0.10
(C)	Summer				
1.	Bajara	0.16	0.39	0.12	0.33
2.	Fodder crop	0.20	0.56	0.18	0.50
	Total	1.53	3.56	1.11	3.02

Table 5.4 reveals that the food crops dominate the cropping pattern on both the categories of farms. Further more total cropped area for both the categories of farmers of borrower groups was higher as compared to non-borrower group. This may be due to availability of crop loan from primary agricultural credit society.

5.5 INTENSITY OF CROPPING

Intensity of cropping for the borrower and non-borrower farmers has been worked out and presented in Table 5.5.

Table 5.5 : Intensity of Cropping for borrower and Non-borrower farmers.

Sample farmers	Net cultivated area per farm (NCA)	Gross crop area per farm (GCA)	% GCA to NCA
Borrower			
Marginal	0.62	1.53	246.77
Small	1.46	3.56	243.83
Non-borrower			
Marginal	0.58	1.11	191.38
Small	1.45	3.02	208.27

It is evident from the above Table 5.5 that the intensity of cropping was higher on both the categories of farms in case of borrower farmers than non-borrower farmers. It was 246.77% and 243.83% for marginal and small borrower farms as compared to 191.38% and 208.27% for non-borrower farms. Probably this may be due to more investment in irrigation facilities enabled the borrower farmers to raise more crops in a year than non-borrower farmers.

5.6 EMPLOYMENT

Today, unemployment is the greatest problem which our country faces seriously. Employment generation has got an important place as a social objectives in our planning. Use of PACSs credit has increased the total employment as well as caused an inter-activity shift in resource use. The overall as well as in different categories of farmers labour employment increased after borrowing. The details of same is given Table 5.6.

Table 5.6 : Per farm impact of finance on employment at two points of time
(Man days)

Category	Employment (Man-days)		Percent increase
	Before	After	
(A) Agricultural purpose			
Marginal	1580.00	1864.00	284.00 (15.24)
Small	1870.00	2195.00	325.00 (14.81)
(B) Non agricultural purpose			
Marginal	400.00	500.00	100.00 (20.00)
Small	490.00	550.00	60.00 (10.91)
(C) Over All			
Marginal	2170.00	2364.00	194.00 (8.21)
(A+B)			
Small	2490.00	2745.00	255.00 (9.29)
(A+B)			

(Figure in parentheses indicates percentage to the total)

It is evident from the Table 5.6 that cent per cent more of employment in both the group as well as in case of agricultural and non-agricultural purposes as

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compared to non- agricultural purposes in case of marginal farmers while the same was more for non-agricultural purposes in case of small farms. The overall percentage increase in employment was 8.21 and 9.29 on marginal and small farms.

5.7 IRRIGATED AREA

The extent and sources of irrigated area for the borrower and non-borrower farmers of both the categories are given Table 5.7.

Table 5.7 : Irrigated area and sources of irrigation in case of Borrower and Non-borrower farms (Area in hectares)

Sr. No	Particulars	Borrower		Non-borrower	
		Marginal	Small	Marginal	Small
1	Per farm cultivated area	0.62	1.44	0.51	1.41
2	Net irrigated area	0.62	1.44	0.45	1.25
3	Percentage area irrigated to cultivated area	100.00	100.00	88.24	88.65
4	Area irrigated by :				
(i)	Tubewell (Owned)	0.10 (16.13)	0.30 (20.83)	0.09 (17.65)	0.23 (16.31)
(ii)	Tubewell (Hired)	0.43 (69.35)	0.94 (65.28)	0.39 (76.47)	0.99 (70.21)
(iii)	Canal	0.09 (14.52)	0.20 (13.89)	0.03 (5.88)	0.03 (2.13)
(iv)	Total	0.62 (100.00)	1.44 (100.00)	0.51 (100.00)	1.41 (100.00)

(Figure in parentheses indicate percentage to the total)

The above table shows that 100 percent cultivated area was irrigated in case of both the categories of borrower farmers while in case of non-borrower farmers about 88.24 and 88.65 percent area was irrigated on marginal and small farms.

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Further it was also revealed that the hired Tube well was the main source of irrigation for both borrower and non borrower farmers. However, the proportion of area irrigated by owned tube well was about 16.13 percent and 20.83 percent of the total area in case of marginal and small borrower farmers. Thus above facts indicate that borrower farmers have obtained and used bank credit for improving their irrigation system.

5.8 STRUCTURE OF FARM ASSETS

The structure of farm assets including land, farm building, livestock, farm implements and irrigation facilities in case of borrower and non-borrower farmers at two points of time is given in Table 5.8.

Table 5.8 : Per farm assets structure at two points of time

(Rupees per farm)

Particulars	Marginal			Small			Overall		
	B	NB	% change	B	NB	% change	B	NB	% change
Farm Implements	980	820	16.33	1026	875	14.72	2006	1695	15.50
Farm Building	195	159	18.46	300	249	17.00	495	408	17.58
Irrigation Structure	1280	919	28.20	1508	1090	27.72	1809.39	1440.84	20.39
Land	1383	1280	7.45	1408	1307	7.13	2791	2588	7.23
Livestock	2020	1736	14.10	2123	1928	9.19	4143	3664	11.56
Total	5858	4914	16.11	6365	5449	14.39	11244.39	9795.84	12.88

(B = Borrower, NB= Non-borrower)

The above table shows that the value of fixed capital per farm came to about Rs.5858 and Rs.6365 in case of marginal and small borrower farmers and Rs. 4914 and Rs.5449 in case of marginal and small non- borrower farmers with

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an overall of Rs. 11244.39 and Rs. 9795.84 on borrow and non borrower farms(12.88% increased). The highest increase in value of assets recorded in case of the farm assets structure was about 20.39% for irrigation structure, followed by farm building(17.58%), farm implements(15.50%), live stock (11.56%), and Land (7.23%). Thus, the extent of increase in assets was mainly due to loan availability from PACs to both the categories of farmers.

5.9 BENEFIT COST ANALYSIS

The data regarding economics of production for major crops of Panchmahal district is presented below.

5.9.1 Cost structure of Paddy & Maize

The details regarding a comparative cost structure showing factor wise distribution of total cost for borrower and non borrower Paddy and Maize producers of Panchmahal district is presented in table 5.9(a) & (b).

Table 5.9(a) : Cost structure of Paddy production for the borrower and non-borrower farmers of Panchmahal district
(Rs. Per ha.)

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Sr. No.	Item	Marginal			Small		
		B	NB	% change	B	NB	% change
A	Operational cost	13112.96	10208.68	22.15	12494.12	10609.33	15.09
1	Hired labour	1850	1250.15	15.69	2095.08	1790.68	14.53
	Family labour	2020	1703.08	24.55	1308.80	1290.03	1.43
	Total	3910	2950.23	11.52	3503.88	3080.71	12.08
2	Bullock labour	260.45	230.45	27.87	190.36	172.82	9.21
3	Seed	2025.84	1461.29	21.38	1975.08	1481.30	25.00
4	Fertilizer and Mannure	4957.46	3897.58	21.30	4950.52	4083.11	17.52
5	Plant protection chemicals	432.12	340.08	25.06	480.85	400.30	16.75
6	Irrigation charges	989.80	741.77	5.82	932.80	890.45	4.54
8.	Interest of working capital	350.82	330.41	12.10	320.39	300.29	16.60
9	Misc. expenditure	226.47	253.87	22.91	240.24	200.35	18.28
B.	Fixed cost						
10	Rental value of own land	5163.47	4147.04	19.66	4999.65	4330.10	13.39
11	Depreciation on implements and farm building	980.47	684.03	30.23	950.48	800.56	15.77
Sub-total (B)		6143.94	4831.07	21.37	5950.13	5130.66	8.66
Total cost (A+B)		19256.9	15039.75	21.90	18544.25	15664.71	15.63

(B = Borrower, NB= Non-borrower)

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**Table 5.9(b): Cost structure of Maize production for the borrower and non
-borrower farmers of Panchmahal district (Rs. Per ha.)**

Sr. No.	Item	Marginal			Small		
		B	NB	% change	B	NB	% change
A	Operational cost	3893.28	3673.76	5.64	3780.72	3693.78	2.30
1	Hired labour	510	506	0.78	520	512	1.54
	Family labour	550	520	5.45	530	496	6.42
	Total	1060	1026				
2	Bullock labour	130	118	9.23	126	122	3.17
3	Seed	770	740	3.90	743	738	0.67
4	Fertilizer and Mannure	873	823	5.72	855	838	1.99
5	Plant protection chemicals	95.14	90.03	5.37	96.08	92.18	4.06
6	Irrigation charges	574	490	14.63	548	539	1.64
8.	Interest of working capital	332.08	329.09	0.90	333.08	330.21	0.86
9	Misc. expenditure	59.06	57.64	2.40	29.56	26.39	10.72
B.	Fixed cost						
10	Rental value of own land	1433.33	1350	5.81	1416.67	1408.33	0.59
11	Depreciation on implements and farm building	170	162	4.71	182	174	4.40
	Sub-total (B)	1603.33	1512	5.70	1598.67	1582.33	1.02
	Total cost (A+B)	5496.61	5185.76	5.66	5379.39	5276.11	1.92

(B = Borrower, NB= Non-borrower)

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It is evident from table 5.9(a) the total cost of Paddy production per hectare was as high as Rs.19256.90 and Rs.18544.25 in case of marginal and small borrower farmers as against Rs.15039.75 and Rs.15664.71 for marginal and small non-borrower farmers. Thus cost of paddy production was significantly higher by 21.90% and Rs. 15.63% on borrower farms as compared to non-borrower farms of marginal and small group. Similarly as can be observed from Table 5.9(b), the total cost of Maize production per hectare was Rs. 5496.61 and Rs. 5379.39 on marginal and small borrower farmers while the corresponding figures for non-borrower farmers was Rs. 5185.76 and Rs. 5276.11 respectively. Thus in case of maize crop also total cost was substantially higher on marginal and small farms of borrowed group as compared to non-borrower group

Thus close examination of Table 5.9(a) and 5.9(b) revealed that irrespective of farm size and type, expenditures on human labour, fertilizers and manures, seeds and plant protection chemicals were the major important components of operational cost. Similarly rental value of own land, interest on working capital and depreciation charges were the major component of fixed cost.

5.10 RETURNS FROM MAJOR CROPS

The results about the estimation of different costs like cost-A, Cost-B, Cost-C1 and Cost-C2, yield, gross income and net profit realized from paddy and maize crops on marginal and small borrower and non-borrower farms are presented in Table 5.10(a) & 5.10(b).

Table: 5.10 (a) Economics of Paddy production

Sr. No.	Item	Marginal			Small		
		B	NB	% change	B	NB	% change
1	Estimates of different cost						
	Cost-A	12073.43	9189.63	23.89	12135.80	10074.86	16.98
	Cost-B	17236.90	13336.67	22.63	17135.45	14404.96	15.94
	Cost-C1	19256.90	15039.75	21.90	18544.25	15664.71	15.63
	Cost-C2	21182.59	16543.73	21.89	20398.68	17264.49	15.36
2	Yield	2028.00	1484.00	26.82	3045.00	2545.00	16.42
3	Gross Income	30980.42	24882.28	19.68	30107.93	25980.32	13.71
4	Net profit	9797.83	8338.55	14.89	9709.25	8715.83	10.23

(B = Borrower, NB= Non-borrower)

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Table: 5.10(b) Economics of Maize production

Sr. No.	Item	(Rs/ha.)					
		Marginal			Small		
		B	NB	% change	B	NB	% change
1	Estimates of different cost						
	Cost-A	3513.28	3315.76	5.62	3432.72	3371.78	1.76
	Cost-B	4946.61	4665.76	5.68	4849.39	4780.11	1.43
	Cost-C1	5496.61	5185.76	6.15	5379.39	5276.11	1.92
	Cost-C2	6046.27	5704.34	5.66	5917.33	5803.72	1.91
2	Yield	707.35	589.95	16.60	235.88	161.23	23.17
3	Gross Income	8100	7700	4.94	8000	7800	2.5
4	Net profit	2053.73	1995.66	2.83	2082.67	1996.28	4.15

(B = Borrower, NB= Non-borrower)

The data contained in above tables reveals that estimated Cost-C2 of Paddy production was higher by 21.90 per cent and 14.91 per cent in case of marginal and small farms of borrower group as compared to non-borrower group. The corresponding figures for maize production was substantially higher by 5.66 per cent and 1.92 per cent on marginal and small farms of borrower group compared to non-borrower group. So it could be inferred from this that PACSs played an appreciable role in providing finance which has resulted higher costs, higher yield and higher net profit to their borrowers. The net profit realized from paddy production on marginal and small borrower farms was Rs. 9797.83 and Rs. 9709.25 as compared to Rs. 8338.55 and 8715.83 of non-borrower marginal and small farms, which was higher by 14.89% and 10.23% on the respective farms.

Similarly the net profit realized from maize production was Rs. 2053.73 and Rs. 2082.67 in case of marginal and small borrower farms as compared to Rs 1995.66 and Rs. 1996.28 for borrower farms, which was higher by 2.83% and 4.15%.

Thus a significant difference between the profit realized by the borrower and non-borrower farmers was noticed. Thus finance given by PACSs to their members ultimately resulted in to higher gross income and net profit for the members.

5.11 OVERDUES

The amount of loan that is due to a particular date but has not been paid by that date is called 'overdue'. Overdues are otherwise known as arrears, defaults, or out of time repayment and borrowers against whom overdues stand are categorized as defaulters. The magnitude of overdue have been a major set-back, clogging the credit pipelines and preventing the recycling of credit. The details of same are presented in Table 5.11.

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Table 5.11(a): Proportion of overdues on different farm size groups

(Rs. in 000')

Particulars	Borrower		Total/ All farms
	Marginal	Small	
No. of overdue borrower	12.00	13.00	25.00
% of overdue borrower to total borrower	25.53	35.13	29.76
Loan advanced	273.66	573.30	846.96
Loan Collection	194.45	396.84	591.28
Amount of Overdues per borrowers	79.21	176.46	256.67
% of overdues to total loan amount	28.95	30.78	30.29

It is evident from the above table that overall 29.76% of the total borrower was defaulter and its percentage varied from 25.53% on marginal farms to 35.13% on small farms. Table also revealed that overall 30.29% of total amount was recorded as overdue amount and its percentage varied from 28.95% on marginal farms to 30.78% on small farms.

In order to study over dues in relation to size of holdings, the overdue amount per hectare are arrived and presented in Table 5.11(b).

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Table 5.11(b) : Overdues in relation to the size of holdings for the selected borrowers. (In Rs.)

Particulars	Borrower		Total
	Marginal	Small	
Total over dues	79210	176460	256670
Over dues per defaulter	6600	13570	20170
Over dues per ha.	2720	2660	5580

The results of above table indicated that amount of overdue per defaulter was Rs.6600 thousand and Rs. 13570 thousand for marginal farmers and per hectare over dues was Rs. 2720 and 2660 for marginal and small farms. The results are telling that small farmers used their loan amount for other purposes.

5.12 FACTORS INFLUENCING OVERDUES

Based on the answers of the sample farmers and the officials of the lending institution to the questions asked pertaining to the socio-economic factors associated with over dues, the perception of defaulters is worked out and presented in Table 5.12.

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Table 5.12 : Perception of the sample borrowers regarding reasons for over dues

Sr. No.	Reasons	Borrower		Total
		Marginal	Small	
1	Non-marketing of produce	1.00 (2.73)	2.00 (5.41)	3.00 (3.57)
2	Higher family expenditure	8.00 (17.02)	5.00 (13.51)	13.00 (15.48)
3	Repayment of old debt	3.00 (6.38)	4.00 (10.81)	7.00 (8.33)
4	Failure of crops	9.00 (19.15)	6.00 (16.22)	15.00 (17.86)
5	Social obligations	6.00 (12.77)	2.00 (5.41)	8.00 (9.52)
6	Willful defaulter	2.00 (4.26)	1.00 (2.70)	3.00 (3.57)
6	Low productivity/Income	10.00 (21.28)	7.00 (18.91)	17.00 (20.24)
7	High cost of Inputs	2.00 (4.26)	2.00 (5.41)	4.00 (4.76)
8	Malpractices	1.00 (2.73)	2.00 (5.41)	3.00 (3.57)
9	No intension to repay	3.00 (6.38)	3.00 (8.11)	6.00 (7.14)
10	Unemployment	1.00 (2.73)	2.00 (5.41)	3.00 (3.57)
11	Political interference	1.00 (2.73)	1.00 (2.70)	2.00 (2.38)
Total		47.00 (100.00)	37.00 (100.00)	84.00 (100.00)

(Figure in parentheses indicates percentage to the total)

Critical examination of Table 5.13 indicates that the perception over all as well as among different groups the most important contributing factors to the

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mounting up of defaulters and over dues of credit are low productivity/ income (20.24%), followed by failure of crops(17.86%) and higher family expenditure (15.48%). Next prime reason goes to the other perceptions viz, social obligation (9.52%) and repayment of old debt (8.33%).

5.13 Effect of PACSs finance on Consumption Pattern of Respondents

The consumption pattern of respondents before and after providing credit is given in Table 5.13.

Table 5.13 : Categories wise consumption pattern of respondents before and after loan (In Rs.)

Particular	Marginal		Small		All Categories	
	Before	After	Before	After	Before	After
Consumption	4383.80	5623.09	4793.40	5834.43	4588.60	5728.76
Needs	(68.92)	(70.54)	(68.39)	(67.26)	(68.64)	(68.83)
Medical	950.95	1038.57	1011.43	1253.81	981.19	1246.19
Needs	(14.95)	(13.03)	(14.43)	(14.45)	(14.68)	(14.97)
Educational	329.35	396.90	403.57	489.90	366.46	443.40
Needs	(5.18)	(4.98)	(5.76)	(5.65)	(5.48)	(5.33)
Domestic & Other Social	696.90	913.28	800.11	1096.43	748.51	1004.86
Needs	(10.95)	(11.45)	(11.42)	(12.64)	(11.20)	(12.07)
Total	6361.00	7971.84	7008.51	8674.57	6684.76	8323.21
	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)

(Figure in parentheses indicate percentage to the total)

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The above table clearly reveals that the family expenses had increased after availing credit assistance in case of both the categories of farms in Panchmahal district. Overall, it has increased from Rs. 6684.76 to Rs. 8323.21, while on marginal farms it has increased from Rs. 6361.00 to Rs. 7971.84 and the correspond figures for small farms are from Rs. 7008.51 to Rs. 8674.57 after availing loan facilities from PACSs. In absolute terms, under all the four heads of expenses had increased, but in relative terms the increase was observed under consumption and medical needs in both the categories of farms. Both the categories of farmers spending highest percentage of income on consumption needs, followed by medical needs, domestic & other social needs and educational needs.

5.14 REPAYMENT CAPACITY

The repayment capacity of a borrower is measure of his ability to ensure the return of funds acquired for purposes of investment and consumption. It is not sufficient just to analyze the productivity alone or additional returns that would accrue due to the borrowed funds. It should be based on an estimate of anticipated income from all sources of the borrower during the year. The annual cash expenses, returns, outstanding debts and repayment capacity of various categories of sample farmers is given in Table 5.14.

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Table 5.14 : Repayment capacity of borrowers (Rs. Per ha.)

Sr. No.	Particular	Borrower		Total
		Marginal	Small	
1	Net farm income	17698	16980	13339
2	Off farm Income	980	1500	1240
3	Total cash income	18378	18480	14579
4	Cash Operating expenses on farm	4298	4590	4015.5
5	Cash family expenses	10000	11400	9933
6	Total cash expenses	14293	15990	10694.5
7	Average amount of crop loan	5823	15494	10658.5
9	Total amount of loan taken	2,73,660	5,73,300	4,23,480
10	Amount due for repayment during the year 2005	79210	176460	127835
11	Repayment capacity	3405	2490	2644.5

It is evident from the Table 5.14 that the average amount of loan due for repayment during 2005 worked out to be Rs. 3405/- for marginal farms and Rs. 2490/- for small farms with an average of Rs. 2644.50. The repayment capacity of the sample farmers was worked out by subtracting the total farm operating expenses excluding the cost of inputs acquired by using the crop loans, other outstanding debts due for repayment and the family living expenses during the year from the total cash income of the households. The amount of loan due for repayment during the year were estimated by adding all the short term crop and domestic loans, The data contained in Table 5.14 clearly show that the total amount of loans due for repayment exceeded the repaying capacity for all the categories of farmers. It may therefore, be concluded that the majority farmers were under a fairly heavy debt burden.

VI. SUMMARY AND CONCLUSION

Credit is the strategic input and integrated factor to stimulate the growth impulses of the rural sectors. Therefore one of the important objectives for the nationalization of banks in 1969 was to ensure credit delivery to the rural sector. Utilization of credit for which it is provided is an important element in agricultural development. Therefore it is often said that if loan borrowed is not properly utilized, it will not only diminish the possibility of increasing farm production or productive efficiency of the farm but will also affect adversely on the repaying capacity of the borrower which further lead to the problem of over dues in the farm sector as well as inflationary pressure on the economy a whole.

The limited availability of credit and its lack have been acknowledged as the most limiting factor in the modernization of agriculture. The prosperity of agricultural sector mainly depends on the adoption of improved technology developed to increase the production. Modern agriculture on scientific lines is credit intensive in nature since the use of different types of agriculture inputs like fertilizers, machinery and other inputs required a large amount of credit. Thus credit play a dynamic role in the development of Agricultural. The mounting pressure of population on limited land resources has resulted in continued declining in the per capita availability of land. So these land holding do not generate enough income even to meet the consumption needs of farmers. Majority of the farmer depend upon erratic and uneven rainfall behavior, so the vagaries of

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monsoon affect the agriculturist in varying degrees. It may result in totals failure of crops.

The co-operative credit structure has spread over the entire state and has been trying to cover as many farmer as possible for the preparation of providing agricultural finance to them. In tribal area of Panchmahal district, at the village level above 100 PACSs covering some villages or group of villages are working and providing crop production loans to their farmer members Considering the above facts the present study entitled **"IMPACT OF PRIMARY AGRICULTURE CO-OPERATIVE SOCIETIES FINANCE ON MARGINAL AND SMALL FARMER'S ECONOMY OF PANCHMAHAL DISTRICT OF MIDDLE GUJARAT"** was conducted.

Methodology :

The multistage stratified random sampling technique was followed to select the ultimate sampling units. Among different districts of Middle Gujarat, Panchmahal district constitute highest percentage of total short term loan disbursed by PACSs was purposively selected for the present study. Among all the talukas of Panchmahal district four talukas having highest percentage of total amount of loan disbursement by PACSs namely, Lunawada, Morva-Hadaf, Khanpur, and Santrampur were selected and three villages from each taluka were selected randomly for study. Considering the size of population and resources, the study was confined to only Marginal and Small farmers and fourteen respondents

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comprising seven borrowers and seven non-borrowers were selected ensuring proportional representation to marginal and small farmers for the present study.

Major Findings :

The important findings of the study are summarized as under

1. The total numbers of the borrowers selected for the study were 84 from each category of farmer's i.e. small and marginal farmers and it was observed that of the total borrower farmers 55.95% and 44.05% of borrowers were belongs to marginal and small farmers while it was 54.76% and 45.34% for the non borrowers group.
2. The average operated area per farm by borrower and non borrower group was 2.08 hectares and 2.03 hectares respectively.
3. About 66.67 per cent of marginal farmers & 61.90 per cent of small borrower farmers and 54.76 per cent of marginal & 47.62 per cent of small non borrower respondents were literate.
4. The food crops dominate in the cropping pattern of both the categories of farms and total cropped area for both the categories of farmers of borrower groups was higher as compared to non-borrower group which may be due to availability of crop loan from primary agricultural credit society.
5. The intensity of cropping was higher on both the categories of farms in case of borrower farmers than non-borrower farmers and probably this may be

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due to more investment in irrigation facilities by the borrower farmers to raise more crops in a year.

6. Employment in both the group as well as in case of agricultural and non-agricultural purposes increased as compared to non-agricultural purposes. The overall percentage increase in employment was 8.21 and 9.29 on marginal and small farms considering both the purposes.
7. About 100 percent cultivated area was irrigated in case of both the categories of borrower farmers while in case of non-borrower farmers about 88.24 and 88.65 percent area was irrigated on marginal and small farms. Thus borrower farmers have obtained and used bank credit for improving their irrigation system.
8. The value of fixed capital per farm came recorded to about Rs.5858 and Rs.6365 in case of marginal and small borrower farmers and Rs. 4914 and Rs.5449 in case of marginal and small non-borrower farmers with an overall of Rs. 11244.39 and Rs. 9795.84 on borrow and non borrower farms(12.88% increased). The highest increase in value of assets recorded in case of the farm assets structure was about 20.39% for irrigation structure, followed by farm building(17.58%), farm implements(15.50%), live stock (11.56%), and Land (7.23%). Thus, the extent of increase in assets was mainly due to loan availability from PACs to both the categories of farmers.

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9. The total cost of Paddy production per hectare was significantly higher by 21.90 % and 14.91 % on borrower farms as compared to non-borrower farms of marginal and small group i.e Rs.19256.90 and Rs.18544.25 in case of marginal and small borrower farmers as against Rs.15039.75 and Rs.15664.71. The corresponding figures for maize production was 5.66 per cent and 1.92 per cent higher on marginal and small farms of borrower group compared to non-borrower group.
10. The net profit realized from paddy production on marginal and small borrower farms was Rs. 9797.83 and Rs. 9709.25 as compared to Rs. 8338.55 and 8715.83 of non-borrower marginal and small farms, which was higher by 14.89% and 10.23% on the respective farms. Similarly the net profit realized from maize production was Rs. 2053.73 and Rs. 2082.67 in case of marginal and small borrower's farms as compared to Rs 1995.66 and Rs. 1996.28 for borrower farms, which was higher by 2.83% and 4.15%. Thus it could be inferred from this that PACs played an appreciable role in providing finance which has resulted higher costs, higher yield and higher net profit to their borrowers.
11. The overall 29.76% of the total borrower was defaulter and its percentage varied from 25.53% on marginal farms to 35.13% on small farms. Further more overall 30.29% of total amount was recorded as overdue amount and

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its percentage varied from 28.95% on marginal farms to 30.78% on small farms.

12. The amount of overdue per defaulter was Rs.6600 thousand and Rs. 13570 thousand for marginal farmers and per hectare over dues was Rs. 2720 and 2660 for marginal and small farms indicating that small farmers are using their loan amount for other purposes.
13. The most important contributing factors for mounting up of defaulters and over dues of credit are low productivity/ income (20.24%), followed by failure of crops (17.86%) and higher family expenditure (15.48%).
14. The family expenses had increased after availing credit assistance in case of both the categories of farms in Panchmahal district. Further Both the categories of farmers spending highest percentage of income on consumption needs, followed by medical needs, domestic & other social needs and educational needs.
15. The average amount of loan due for repayment during 2005 worked out to be Rs. 3405/- for marginal farms and Rs. 2490/- for small farms with an average of Rs. 2644.50. Further more the total amount of loans due for repayment exceeded the repaying capacity for all the categories of farmers showing that the majority farmers were under a fairly heavy debt burden.

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SUGGESTION :

- (1) Linkage between extension agencies, marketing agencies and credit institutions for the productive use and effective supervision of credit should be established.
- (2) Follow up and supervisions of the credit must be done by the PACSs authority for proper utilization of the credit
- (3) Credit needs for the marginal and small farmers should be assessed by the PACSs and accordingly loan should be released to reduce the over dues.
- (4) Group finance, group guarantee training to the borrowers about proper utilization and recycling of funds, recovery campaign etc. should be initiated by the PACSs to reduce the over dues.
- (5) The borrowers should be properly educated about their responsibility in prompt repayment and recycling of funds of the institution.

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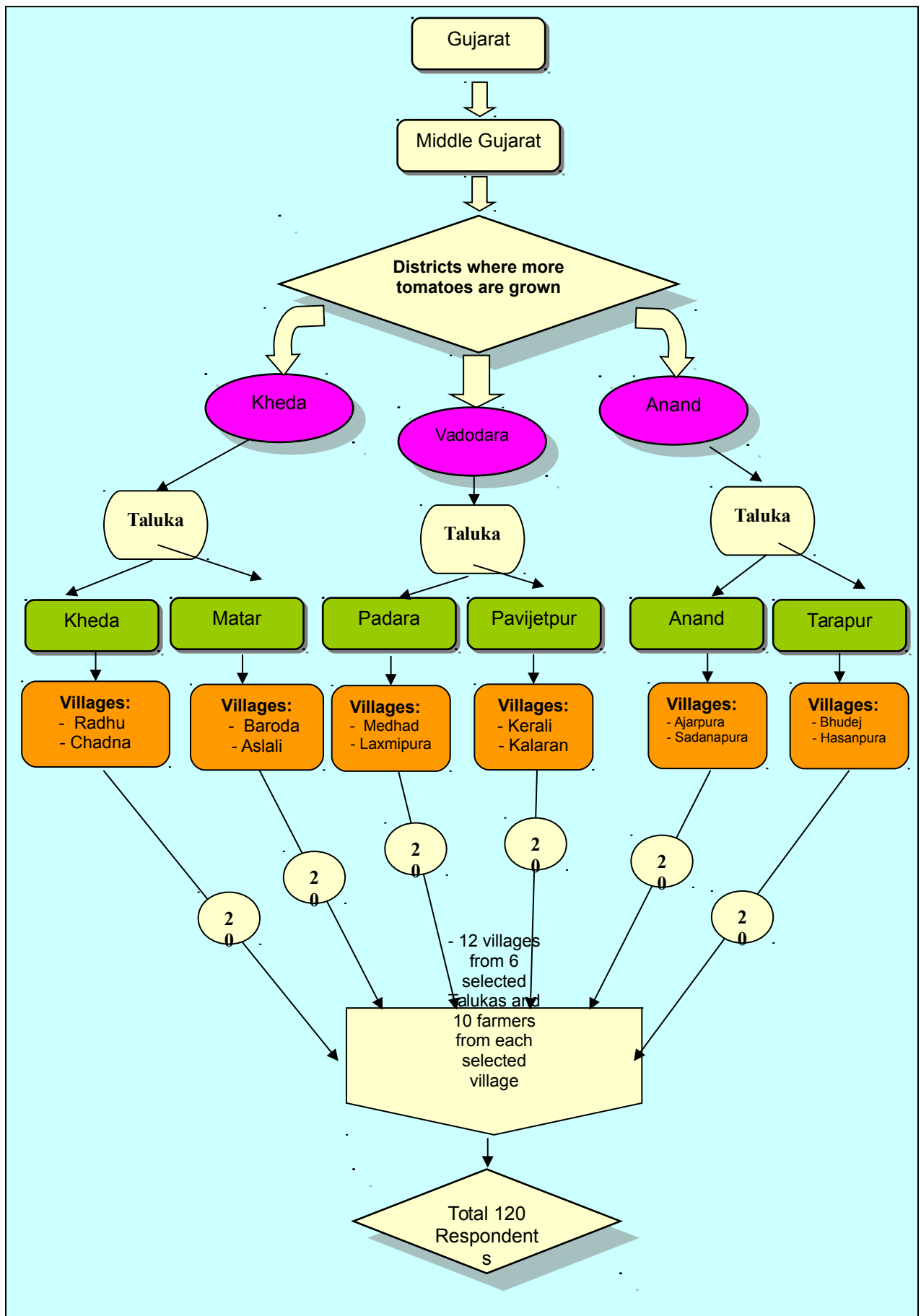


Fig. 3.3 : Sampling Design of the Study