CHAPTER VI

SUMMARY, CONCLUSIONS AND
SUGGESTED MEASURES TO SOLVE
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This chapter deals with the summarization of the results related to various objectives of the study. It also highlights main conclusion as well as suggestion based on these results. The chapter has been narrated under following heads:

6.1 Introduction
6.2 Profile of the study area
6.3 Research methodology
6.4 Agricultural cooperative credit granted and distributed
6.5 Repayment of agricultural cooperative credit
6.6 Overdues of agricultural cooperative credit
6.7 Causes of overdues by sampled borrowers in selected PACSs branches

6.1 Introduction

The cultivators feel difficulty to carry out their farming operations without borrowing. If they borrow loans from the banks, they find it very difficult to repay the loan. It is the peculiar problem of Indian farmers. In India, the credit provided by the cooperatives is not only inadequate but also untimely. On the other hand, the Primary Agricultural
Cooperative Societies (PACSs) are confronted with the problem of overdues. The continuous increasing of overdues affected the PACSs ability to borrow from the higher financial agencies and recycling of fund. This in turn, affects the supply of credit to the members of PACSs concerned. The causes of overdues can be attributed to various factors such as ineffective supervision, crop failure, defective loan policy, government policy, indifferent attitude of the borrowers, disloyalty of the borrowers, natural calamities, lack of forward and backward linkages and infrastructural facilities and the like. The problem of overdues is common in almost all the states of India. The seriousness of the problem could be understood from the fact that almost all the entire cooperative credit structure has come to a standstill in certain part of country because of mounting of overdues. A fairly large percentage of the owned funds of PACSs are at present blocked up in different areas. As a result, many PACSs have run into a state of stagnation. The PACSs in Raipur district are also facing the same problem. The present study is undertaken to examine the certain specific objectives. The PACSs has a key role in disbursement of loans to the majority of tribal and non-tribal farming community of Chhattisgarh state. However, very meagre study has been carried out in the state to examine the problem of overdues of funds of Primary Agricultural
Cooperatives Societies. Keeping in the view the importance of PACSs in Chhattisgarh, the present study entitled "**Problem of Overdues in District Central Cooperative Bank, Raipur of Chhattisgarh State: An Economic Analysis (Period: 1991-92 to 2001-2002)**" has been carried out with the following objectives:

i. To find out the extent of agricultural cooperative credit granted and distributed in Raipur district during the period 1991-92 to 2001-02,

ii. To find out the repayment of agricultural cooperative credit in Raipur districts during the period 1991-92 to 2001-2002,

iii. To find out the extent of overdues in cooperative credit in Raipur district during the period 1991-92 to 2001-2002, and

iv. To find out the causes of overdues in Raipur district and also to suggest the measures to solve the problem.

### 6.2 Profile of the study area

- Raipur district lies between latitude 21°14' N and longitude 81°38' E latitude with 321.54 m above mean sea level. The total geographical area of the district is 1.3 million ha in the year 2001-02. The net-cropped area of the district was 40.77 percent, while area sown more
than once was 6.06 percent to the gross cropped area. The cropping intensity (CI) was 114.90 per cent in Raipur district during 2001-02.

- The selected blocks namely Dharsiwa and Arang contributed nearly 4.86 and 6.70 percent of the total geographical area of the district. Net-cropped areas of the Dharsiwa and Arang block were 6.38 and 11.32 percent area to the net cropped area of the district. From the total geographical area of the Dharsiwa, Arang and Raipur district, net-cropped area occupied 53.45, 68.90 and 40.77 per cent, respectively. It revealed that sampled blocks had more percentage of cropped area as compared to the district. Area sown more than once was also higher in the blocks as compared to district. It implied that much of the possibilities existed to enhance double cropped area by increasing the irrigation sources in the blocks as well as district. The cropping intensity (CI) was 121.87 and 123.83 per cent in Dharsiwa and Arang blocks, respectively. It revealed that the blocks had higher cropping intensity as compared to district.

- Canal is the main source of irrigation in Raipur district as well as Dharsiwa and Arang blocks. However, canal irrigation is highly protective in nature, which provides irrigation at the time of water stress condition exist
during *kharif* when dry spell come at monsoon period. The canal contributes about 62, 87 and 78 percent area in Dharsiwa, Arang block and Raipur district, respectively.

- Area under major crop rice is 73.82, 76.80 and 83.07 percent in Dharsiwa and Arang block and Raipur district, respectively. Hence, the sampled blocks and district are dominated by mono cropped farming system, while remaining portion of area is in other minor crops like jowar, maize, kodo-kutki. Thus, the major cropping pattern followed by the farmers in selected blocks and district are rice-fallow, rice-*Lathyrus*, rice-wheat, rice-rape/seed/mustared and rice-chickpea.

- More than 80 per cent marginal and small farmers have less than 40 per cent land holdings in selected blocks and Raipur district and nearly 20 per cent farmers have more than 60 per cent land under medium and large categories. The largest number of holding fall under category of below 1.00 hectares, followed by small (1-2 ha), medium (2-4 ha) and large (above 4 ha). However, farmers in marginal category have a small proportion of land under cultivation. It is 19 percent each in Dharsiwa and Arang block, while 16 per cent in the Raipur district. Although, the total number of holdings above 4
hectares contributed 35.71, 36.99 and 37.34 per cent area in Dharsiwa and Arang block and Raipur district, respectively.

- **Total population of Dharsiwa, Arang block and Raipur district** was 2,96,125, 2,57,898 and 3,009,042, respectively. According to area, the living population comprised of 78.81, 77.27 and 69.54 per cent by the rural population in Dharsiwa, Arang block and Raipur district, respectively and remaining area by urban population was 21.19, 22.73 and 30.46 per cent, respectively in selected blocks and Raipur district.

- **Large part of population is living in rural area.** Scheduled castes population was 14 per cent in Raipur district whereas, 11 per cent population was scheduled tribes. The percentage of scheduled tribes was higher in blocks and found to be 30.08 and 18.95 per cent in Dharsiwa and Arang block, while scheduled castes population were 8.96, 2.80 and 11.02 per cent in Dharsiwa, Arang and Raipur district, respectively.

- **The literacy rates were** 54.33, 55.41 and 69.99 percent in Dharsiwa, Arang block and Raipur district, respectively. The population density was found to be 215, 230 and 411 person/sq.km. in respective blocks and district.
The number of cultivators were 55.23, 58.86 and 65.15 percent in Dharsiwa, Arang block and Raipur district, respectively. Agricultural labor force was 44.77, 41.14 and 34.85 percent in selected blocks and Raipur district.

6.3 Research methodology

The maximum amount of agricultural loan is disbursed through "Cooperative Banks" in Raipur than that of other districts of Chhattisgarh state. Therefore, the study is confined to Raipur district only. More than 92, 87.5 and 79.3 per cent short, medium and long term loans have been disbursed through "Cooperative Bank" during the year of 2001-2002 and remaining percentage of amount is disbursed by Commercial Banks and Regional Rural Bank. Hence, District Central Cooperative Bank, Raipur (DCCB) has been taken for the study.

Fifty six Primary Agricultural Cooperative Credit Societies (PACSs) branches are working under DCCB, Raipur. Among these branches, Mandir hasaud, Arang and Dharsiwa PACSs branches have maximum number of defaulters. Hence, these three PACSs branches have been selected for the study. This is first stage of sampling.
Totally, 16 sub-branches of Primary Agricultural Cooperative Societies are working under Mandir hasaud, Arang and Dharsiwa branches of PACSs. Among these 16 PACSs sub-branches 4, 7, and 5 are working under PACSs Arang, Mandir hasaud and Dharsiwa, respectively. Two sub-branches in each selected PACSs branches have been considered on the basis of maximum amount of overdues. It is second step of sampling.

In third stage of sampling, selection of borrowers is essential committed to non-repayment of loans brought into defaulters category. Hence, a list of defaulter borrowers of six sampled PACSs sub-branches was taken and grouped into small farmers (1-2 ha), medium farmers (2-4 ha) and large farmers (above 4 ha) categories. Overall 15 per cent of defaulter borrowers were considered irrespective to the farm size categories. The percentage proportion is dissimilar according to the farm size categories. It is due to more number of defaulters noticed into small farm size category. More defaulters have been selected from the small size farmers because it has maximum members. Hence, we have selected 106, 50 and 44 sampled borrowers out of total 910, 325 and 147 defaulters in small, medium and
large categories. These selected samples represent 12 per cent, 15 per cent and 30 per cent defaulters from sampled PACSs, respectively.

- The present study was based on primary and secondary both type of data. Primary data were collected through personal interview with the help of the pre-tested questioners from sampled defaulter borrowers on different aspects like type of family, family size, annual income from agriculture, income from non-agricultural sources, level of education of family members, expenditure on food and non-food items, investment on land, farm implement and equipments, cropping pattern, crop supplies, credit requirement and sanctioned and causes of non-repayment of loan overdues. The primary data is pertaining to the year of 2001-02.

- The time series secondary data for the period of 1990-91 to 2001-02 were collected on various parameters like amount granted, distributed, repayment and overdues in PACSs/DCCB to assess the performance of selected PACSs and DCCB, Raipur.

- To estimate the extent of agricultural loans granted, distributed, repayment of agricultural loans and extent of the amount of overdues in DCCB, Raipur and selected PACSs, simple mean, percentage, standard deviation
(S.D) and co-efficient of variation (C.V) during the period of 1990-91 to 2001-02 were calculated and interpreted.

- To estimate the overall performance of DCCB, Raipur and PACSs Mandir hasaud, Arang and Dharsiwa branches, a trend was estimated by applying the linear regression and compound growth rate model for amount granted, distributed, repayment and overdues during the years 1990-91 to 2001-02 period.

- The degree of correlation of overdues among the borrowers with 14 variables (chosen to have adverse or positive effect on non-repayment of loans causing overdues) was studied with mathematical method of measuring correlation i.e. Karl Pearson coefficient of correlation to know the magnitude of correlation but also its direction positive or negative.

- In order to understand the relative importance of various quantitative and qualitative factors contributing to non-repayment of loans causing accumulation of overdue in selected PACSs, the primary data are collected from 200 defaulter members of PACSs of different categories. The data are also collected from PACSs on 13 different aspects, which are classified into quantitative and qualitative factors/variables.
The multiple regression analysis is used to estimate relative contribution of quantitative and qualitative factors/variables. The step down regression analysis is conducted to understand the important and unimportant factors contributing the overdues. In first step of regression analysis all the thirteen independent variables are considered.

6.4 Agricultural cooperative credit granted and distributed

The overall amount granted to DCCB, Raipur increased by Rs. 4668.39 thousand in 1990-91 to Rs. 9160.55 thousand in 2001-02, showing about 96.23 per cent increase. But, the cooperative credit distributed to PACSs gradually increased from Rs. 4044.23 thousand in 1990-91 to Rs. 8649.68 thousand in 2001-02, which showed an increase of 113.88 per cent. However, credit gap decreased from Rs. 624.16 thousand to Rs. 510.87 thousand during the study period. In this way the credit gap declined by (-) 18.15 per cent during the study period.

The overall amount granted to the PACS Mandir hasaud had increased by Rs. 220.87 lakh in 1990-91 to Rs. 345.99 lakh in 2001-02, showing about 56.65 per cent increase during the study period. The amount
distributed to the farmers tremendously increased from Rs. 195.67 lakh in 1990-91 to Rs. 315.15 lakh in 2001-02, showing about 61.06 per cent increase. While, credit gap had increased by Rs. 25.20 lakh in 1990-91 to Rs. 30.84 lakh in 2001-02, which increased upto 22.38 per cent.

- The overall amount granted to the PACS Arang branch had tremendously increased from Rs. 421.30 lakh in 1990-91 to Rs. 621.16 lakh in 2001-02, showing about 47.44 per cent increase during the study period. While, the amount distributed increased from Rs. 360.22 lakh in 1990-91 to Rs. 535.12 lakh in 2001-02, which showed an increase of 48.55 per cent. The credit gap had increased from Rs. 61.04 lakh in 1990-91 to Rs. 86.04 lakh in 2001-02, showing about 40.86 per cent increase during the study period.

- The overall amount granted to PACS Dharsiwa had increased from Rs. 138.99 lakh in 1990-91 to Rs. 180.43 lakh in 2001-02 and this has increased by 29.82 per cent. The amount distributed had increased from Rs. 112.35 lakh in 1990-91 to Rs. 163.57 lakh in 2001-02, showing about 45.59 per cent increase during the study period. While, credit gap had decreased from Rs. 26.44 lakh in 1990-91 to Rs. 16.86 lakh in 2001-02, showing
about (-) 36.71 per cent decline. The per cent variation over the period was found to be 7.29, 10.53 and 24.20 per cent in amount granted, distributed and credit gap, respectively during the study period.

The overall linear growth rate of amount granted was 6.42 per cent, whereas, it was 7.94 per cent and 0.51 per cent for short and medium term loans, respectively. There was abrupt increase in the rate of growth under long term loan (18.50%) by DCCB, Raipur. However, on the overall basis, linear growth rate under PACS Mandir hasaud branch was 4.26 per cent, PACS Arang branch was 4.13 per cent and PACS Dharsiwa branch was 1.33 per cent during the period 1990 to 2001. It envisaged that before 90s, long term loan was given for the period of 20 years and amount was less that reduced up to 5 years periods.

The compound growth rate of amount granted to DCCB, Raipur was 7.08 per cent. The amount granted under long term was increased in faster rate than short and medium term loans. However, on overall basis, rate of growth under PACS Mandir hasaud branch was 4.34 per cent, PACS Arang branch 4.19 per cent and PACS Dharsiwa branch 1.33 per cent during the study period.
In DCCB, Raipur, the trend of amount distributed had increased from 1990 to 2001. The phenomenon was quite similar to short and long term loans, while trend was more or less stagnant in medium term loan in each year, but abruptly there was decline in the amount distributed during the study period.

The linear growth rate of amount distributed to DCCB, Raipur revealed that the overall linear growth rate was 9.74 per cent, whereas, it was 8.86 per cent and 12.81 per cent for short and medium term loans, respectively.

The compound growth rate of amount distributed to DCCB, Raipur indicate that the amount distributed had increased at the rate of 8.06 per cent irrespective of the types of loan during the period of study. The amount distributed under short term was increased at faster rate than medium and long term loans.

The trend of amount distributed by PACSs was very similar to the DCCB, Raipur. As regards to the comparative performance of different PACSs, Arang branch has showed better performance as compared to PACS Mandir hasaud and PACS Dharsiwa branch. It was noted that the amount distributed under long term was discouraged by PACSs and DCCB, Raipur, so it provides fluctuation over the period of study.
• On overall basis, linear growth rate of amount distributed under short term loan was comparatively more than medium and long term loans under PACS Mandir hasaud and PACS Arang branch. The picture of PACS Dharsiwa branch was different compared to other two-sampled PACSs branches and it was noticeable that the rate of growth under long term loan was comparatively more than short term loan. The growth rate of medium term loan was positive in PACS Mandir hasaud and Arang, while it was negative in PACS Dharsiwa.

• The overall linear growth rate of amount distributed by PACS Mandir hasaud branch was comparatively more than PACS Arang and PACS Dharsiwa branches. The short term loans have shown faster growth in all the sampled PACSs, while medium term loan has shown negative growth in PACS Dharsiwa.

6.5 Repayment of agricultural cooperative credit

• In DCCB, Raipur, the overall amount of loan repayment had increased from Rs. 2556.47 thousand in 1990-91 to Rs. 5943.55 thousand in 2001-02, showing about 106.99 per cent repayment increase. It indicates the increasing trend during the study period. The per cent variation over the period was found to be 25.36 per cent.
The overall linear growth rate was 9.43 per cent. However, it was 8.42, 12.91 and 18.95 per cent under short, medium and long term loans, respectively during the period. It is clear that good repayment has been made by District Central Cooperative Bank, Raipur during the period of study. The overall compound growth rate was 7.29 per cent. However, CGR under short term, medium term and long term loans was 9.72, (-) 0.28 and 26.15 per cent over the period of study. It indicates that the amount of loan repayment under medium term loan had decreased as compared to short and long term loans. It was due the fact that the to medium term loan had been discarded by the farmers.

- In PACS Mandir hasaud branch, the overall amount of loan repayment was Rs. 91.07 lakh in 1990-91, which had increased to Rs. 171.78 lakh in 2001-02, showing about 88.62 per cent increase. It indicates the increasing trend during the study period. The per cent variation over the period was 23.57 per cent. The overall linear growth rate of amount of loan repayment was 6.17 per cent. However, it was 8.41, (-) 2.60 and 2.40 per cent under short, medium and long term, respectively. The PACS had made the repayment promptly and significantly to DCCB, Raipur for every type of loans,
except medium term loan. The overall compound growth rate of repayment of loan was 6.27 per cent over the period of study. The compound growth rate of loan repayment under short, medium and long term loans was 9.99, (-) 2.66 and 2.61 per cent during the year 1990 to 2001.

- **In PACS Arang branch**, the overall amount of loan repayment was Rs. 181.31 lakh in 1990-91, which had increased to Rs. 215.01 lakh in 2000-01, showing about 18.59 per cent increase during the study period. It indicates the increasing trend during the study period. The per cent variation over the period was 30.32 per cent. The overall linear growth rate was 5.24 per cent. However, LGR for short, medium and long term loan was 4.86, 6.07 and 5.77 per cent, respectively. It shows that the PACS Arang had made the repayment of all type of loans promptly and significantly. The overall compound growth rate was 4.99 per cent over the period of study. The CGR under short, medium and long term was 4.53, 5.99 and 6.84 per cent, respectively during 1990 to 2001.

- **In PACS Dharsiwa branch**, the overall amount of loan repayment was Rs. 54.14 lakh in 1990-91, which had increased to Rs. 117.04 lakh in 2001-02, showing about
116.18 per cent increase. It indicates the increasing trend during the study period. The per cent variation over the period was found to be 24.37 per cent. The overall linear growth rate was 6.61 per cent. However, LGR for short, medium and long term loan was 7.90, 0.09 and 5.10 per cent, respectively. This PACS has made the repayment promptly and significantly. The overall CGR was 6.61 per cent over the period of study. The CGR for short, medium and long term loan was 8.60, 0.06 and 6.581 per cent during the year 1990 to 2001, respectively.

6.6 Overdues of agricultural cooperative credit

- In DCCB, Raipur, the accumulation of overall overdues was Rs. 1487.76 thousand in 1990 to Rs. 4232.16 thousand in 2001, showing about 125.71 per cent increase. The per cent variability over the period of study was 31.27 per cent. The overall LGR was 10.18 per cent irrespective to the types of loan. Under the long term loan, overdues was mounting in very fast rate and noticed to be 18.10 per cent. Whereas, it was 12.51 and 9.51 per cent under medium and short term loan, respectively. It could be concluded that LGR of overdues among the sampled PACSs was comparatively less than DCCB, Raipur. At gross root levels, PACSs had made
frequent contact for repayment of loans than DCCB, Raipur. The overall CGR of overdues was 9.24 per cent during the year 1990 to 2001, which was significant at 1 per cent probability level. However, overdues of short and long term loans were also found to be significant and noticed to be 11.42 and 24.40 per cent, respectively. Overdues of medium term loans were not reached much, but it had also been increased by 1.48 per cent and was found non-significant.

- **In PACS Mandir hasaud branch**, the accumulation of overall overdues was Rs. 104.60 lakh in 1990-91, which had increased to Rs. 143.36 lakh in 2001-02, showing about 37.06 per cent increase. The per cent variation over the period was 11.49 per cent. The overall LGR of overdues was 2.61 per cent during 1990 to 2001. While, LGR for short and medium term loan had increased significantly and found to be 1.49 and 4.60 per cent, respectively. LGR for long term loan was declined by (-) 8.50 per cent. Thus, it could be concluded that there was low amount of overdues under long term loan. The overall CGR of overdues was 2.45 per cent during 1990 to 2001, which was significant at 1 per cent probability level. However, CGR of overdues for short and long term loans were also found to be non-significant and noticed
(-) 4.65 and (-) 1.76 per cent, respectively. The CGR of overdues of medium term loan was 1.18 per cent, which was found non-significant.

- **In PACS Arang branch**, the accumulation of overall overdues was Rs. 178.91 lakh in 1990-91, which had increased to Rs. 320.11 lakh in 2001-02, showing about 37.06 per cent increase. The per cent variation over the period was 22.74 per cent. The overall LGR of overdues was 3.03 per cent. However, the LGR for short and medium term loans were found to be 3.72 and 1.15 per cent, respectively, while, LGR for long term loan (-) 0.38 per cent. The overall CGR of overdues was 1.77 per cent over the period of study. The CGR of overdues for short and medium term loan was 3.36 and 0.135 per cent, respectively. The CGR for long term loan was (-) 0.237 per cent during the year 1990 to 2001.

- **In PACS Dharsiwa branch**, the accumulation of overall overdues was Rs. 58.21 lakh in 1990-91, which had decreased to Rs. 46.53 lakh in 2001-02, showing about (-) 20.07 per cent decline. The per cent variation over the period was 23.97 per cent. The overall LGR of overdues was (-) 6.61 per cent. However, the LGR for short term loan was found to be (-) 4.68 per cent showing declining growth rate. The LGR for medium and long term loan
was found to be 29.49 per cent and 3.33 per cent, respectively. The overall CGR of overdues was (-) 4.38 per cent over the period of study. The CGR for short and medium term loan was (-) 4.65 and (-) 6.45 per cent, respectively. The long term loan was 3.21 per cent during 1990 to 2001.

6.7 Causes of overdues by sampled borrowers in selected PACSs branches

- Out of 200 sampled borrowers, 106, 50 and 44 belonged to small, medium and large category of farmers which represented 53, 25 and 22 per cent, respectively. The maximum percentage of sampled borrowers had nuclear family (58%) followed by joint family (42%). Large farmers had less percentage of nuclear family (47.73%) as compared to small (60.38%) and medium farmers (62%) and just reverse was observed in case of joint family. The average family size of large farmers was considerably more (9) as compared to small farmers (8).

- The education status of head of family was also higher under large farmers (40.91%) as compared to small farmers (14.15%). In large category of farmers, the backward class constituted 47.73 per cent as compared to general caste (22.73%), scheduled caste (18.18%) and scheduled tribe (11.36%). However, in small farmers, the
higher percentage (29.24%) was found in scheduled caste. The maximum number of family members was engaged in agricultural activities in small farmers (5.03 person family⁻¹) as compared to large farmers (3.07 person family⁻¹).

- The average size of farm amongst the sampled farmers was 1.69, 3.58 and 7.57 hectare in small, medium and large farmers, respectively. About 100 per cent area was allocated to rice crop in kharif under all the category of farmers. More than 62 per cent of total rice cultivation was rainfed in all the category of farmers. The cropping intensity of sampled farmers was 120.12, 126.26 and 130.65 per cent under small, medium and large farmers, respectively.

- Credit worthiness of large farmers was worth Rs. 592407 farm⁻¹, which was more than twice that of small farmers (Rs. 257617 farm⁻¹). Thus, it can be concluded that borrowers under large farm size of land holding groups had much better assets position as compared to small and medium farmers and thus, they have much capability to repay the loan.

- The production of rice was nearly 32.57 q in large farmers, whereas, it was 28.75 q in case of small farmers. The quantity of rice sold by large farmers was
20.20 q, while it was 13.10 q in case of small farmers. The maximum quantity was consumed by the small farmers (10.74 q) as compared to large farmers (8.53 q). Thus, it can be concluded that small farmers consumed more quantity and paid less quantity in the form of kind to the labours than that of medium and large farmers.

• The calculated value of 'F' ratio between large farmers and small farmers is 19.89, while its table value is 7.23 at 1 per cent level of probability. Thus, difference is significant hence our null hypothesis is found wrong and our proposed hypothesis is found correct. It means the problem of overdues of cooperative credit is higher among the large farmers as compared to small farmers.

• The calculated value of 'F' ratio between long term loan and short term loan is 10.54 while its table value is 7.23 at 1 per cent level of probability. Thus, difference is significant hence our null hypothesis is found wrong and our proposed hypothesis (alternative) is found correct. It means the problem of overdues of cooperative credit is higher among the long term loan as compared to short term loan.

• The maximum amount of loan demanded was Rs.178678.29 by the large farmers as compared to small farmers (Rs.15148.67). The maximum credit gap was
noticed in case of small farmers (26.24%) as compared to medium (20.62%) and large farmers (21.73%). Hence, it is concluded that maximum amount of credit gap of Rs. 3975.03 (26.24%) was found in short term loan as compared to long term loan.

- The total income from all the sources was more in case of large farmers (Rs. 154785.32) than that of small farmers (Rs. 40953.44). More than 80 per cent income was received from crop production in all size of land holding groups. The remaining percentage was contributed by livestock, remittance received, off-farm income and others. The consumption expenditure made by large farmers was Rs. 19330.84 Rs. annum^{-1} than that of small farmers Rs. 16081.57 Rs. annum^{-1} and percentage on consumption expenditure was 12.49 and 39.27 per cent by large and small farmers, respectively out of total income. The large farmers expended Rs.10947.45 ha^{-1} on production of rice and other crops as compared to small farmers (Rs. 8972.65 ha^{-1}). It was due to approximately double crop taken by the large farmers. The repaying capacity of small and large farmers was Rs. 9708.09 farm^{-1} and Rs. 46582.28 farm^{-1}, respectively.
Among large farmers, the nuclear family had utilized 66.67 per cent of borrowed money for production purposes as compared to joint family (56.52%), while it was opposite in case of small farmers. The nuclear and joint families had utilized 45 per cent of borrowed money for production purposes. The small farmers diverted 54.76 per cent of borrowed money for consumption purposes as compared to medium (34.48%) and large farmers (43.48%) in joint family. However, the 45.31 per cent diversion was observed in small farmers as compared to 41.18 per cent in large farmers in nuclear family. The maximum amount of loan diversion was observed by literate farmers (66.67%) in large farmers as compared to small farmers (59.22%). It was noticed that the 54.14 per cent of primary pass medium farmers had diverted loans for consumption purposes.

The overdues of loan was positively correlated with total income, food and non-food expenditure and holding size, unirrigated area, cropping intensity, caste, amount of loan borrowed and amount of loan repaid. These variables were found to be significant. Whereas, correlation between total income to overdues showed negative significance. However, family size, dependency ratio, type of family, education level of head of family
and natural calamities were found to have adverse effect on overdues of loans. The findings of the empirical results indicates that total income, expenditure on food and non-food items, farm size, un irrigated area, cropping intensity, caste, amount of loan borrowed and amount of loan repaid were found to have direct relationship to the mounting of overdues. The similar results have also been noticed under small, medium and large category of borrowers.

In case of overall category of borrowers, all thirteen independents variables were taken for first step of multiple regression analysis. The multiple correlation coefficient (R) value was decreased from 0.8742 in first step to 0.8312 in second step and found to be significant. The coefficients of multiple determination (R²) for first and second step regression analysis were 0.79386 and 0.71533, respectively. It means contribution of explained variable to overdues was 79.39 and 71.53 per cent for step first and step second regression model. It has been found that four independent variables viz., Total income (X₃=0.344), land holding size (X₇=0.677), amount of loan borrowed (X₁₂=0.991) and amount of loan repaid (X₁₃=0.413) contributed significantly to increase the overdues in first
step of regression analysis. In second step of multiple regression analysis, the coefficient value was found to be total income \((X_3=0.333)\), land holding size \((X_7=0.619)\), amount of loan borrowed \((X_{12}=0.846)\) and amount of loan repaid \((X_{13}=0.422)\). The family size \([X_1=(-) 0.617]\) and caste \([X_{11}=(-) 0.246]\) was negatively influenced to the overdues in the first step and family size \([X_1= (-) 0.592]\) and caste \([X_{11}=(-) 0.235]\) in the second step of multiple regression analysis. It can be observed from the empirical results that low cropping intensity caused to non-repayment of loans. The uncertainty is involved in natural calamities, which affect at any time to the economic conditions of the farmers. The situations like drought/flood/infestation of disease/pest, untimely monsoon also badly affect the economy of the farmers causing non-repayment of loan, which indirectly affect to mounting of overdues.

- In case of small category of borrowers, all thirteen independents variables were taken for first step of multiple regression analysis. The multiple correlation coefficient \((R)\) value dropped down from 0.8303 in first step to 0.7925 in second step and both were found to be significant at 1 per cent level of probability. The coefficient of multiple determination \((R^2)\) for first and
second step regression analysis was 0.72303 and 0.69426, respectively, which indicated that as much as 72.30 and 69.43 per cent variation in overdues of loans has been explained by the factors included in the model. It has been found that three independent variables, total income ($X_3 = 0.849$), amount of loan borrowed ($X_{12} = 0.544$) and amount of loan borrowed ($X_{13} = 0.301$) in the first step, while in the second step $X_3 (0.840)$, $X_{12} (0.503)$ and $X_{13} (0.314)$ were contributed significantly to increase the overdues. However, family size $[X_1 (-) 0.839$ and $(-) 0.773]$ was negatively significant in both step of multiple regression analysis. It means that non-repayment of loans was increased with the increase of family size and vice-versa. The land holding size ($X_7$), cropping intensity ($X_9$), natural calamities ($X_{10}$) and caste ($X_{11}$) were negatively influenced to the overdues by $X_7 (-) 0.708$, $X_9 (-) 0.339$ and $X_{10} (-0.064)$ in the first step. In the second step $X_2 (-0.122)$, $X_7 (-0.175)$, $X_8 (-0.043)$, $X_9 (-0.321)$ and $X_{10} (-0.036)$ was negatively influence to the overdues.

In case medium category of borrowers, all thirteen independents variables were taken for first step of multiple regression analysis. The multiple correlation coefficient ($R$) value was dropped down from 0.7437 in
first step to 0.7054 in second step and it was found significant at 5 per cent level of probability. The coefficient of multiple determination ($R^2$) for first and second step regression analysis was 0.65873 and 0.63241, respectively, which indicated that as much as 65.87 and 63.24 percent variation in overdues of loans has been explained by the factors included in the model, which indicates the overall contribution of thirteen and 10 independent variables to the overdues of loan in the first and second step regression analysis. It has been found that the three independent variables, dependency ratio ($X_2=0.386$), amount of loan borrowed ($X_{12}=0.591$) and amount of loan repaid ($X_{13}=0.376$) in the first step regression analysis, whereas, in the second step analysis, the coefficient values were dependency ratio ($X_2=0.376$), amount of loan borrowed ($X_{12}=0.505$) and amount of loan repaid ($X_{13}=0.369$), respectively showed positive significant impact on overdues. The family size, total income, land holdings size and unirrigated area showed positive impact on overdues but they were significant in both the steps of regression analysis, while food and non-food expenditure, cropping intensity and natural calamities showed negative impact on the overdues.
Under large category of borrowers, thirteen independent variables, the multiple correlation coefficient (R) value was dropped down from 0.8562 in first step to 0.8175, in second step and it was significant at 1 per cent level of probability. The coefficient of multiple determination (R²) for first and second step regression analysis was 0.7522 and 0.6987, respectively, which indicated that as much as 75.22 and 69.87 percent variation in overdues of loans has been explained by the factors included in the model. In quantative variables, land holding size (X7=1.378), unirrigated area (X8=0.883), amount of loan borrowed (X12=0.725) and amount of loan repaid (X13=0.467) in first step, while land holding size (X7=0.753), unirrigated area (X8=0.874), amount of loan borrowed (X12=0.589) and amount of loan repaid (X13=0.588) were contributed significantly to increase the overdues. However, total income [X3=(-) 0.569 and (-) 0.411] had negatively significant contributed to the overdues in both step of multiple regression analysis.

The type of family, dependency ratio, food and non-food expenditure, cropping intensity, natural calamities and caste positively contribute to the overdues in first step of multiple regression analysis. In second step of multiple regression analysis food and non-food expenditure and
cropping intensity were negatively contributed to the overdues.

- Out of 200 selected borrowers, 20.50 percent borrowers were of the reported that non-remunerative prices for their produce were the most important causes of overdues. The same trend was also observed in case of small farmers, while it changed for medium and large farmers. These farmers had reported that influence of political leaders and attitude & policies of State Govt. were the most important causes of overdues.

CONCLUSIONS

In order to achieve national goal of uplifting rural population, apex bank, DCCB and PACSs have been assigned a significant role in their action plan because of their local knowledge, responsiveness to local needs and democrate management. The performance of DCCB, Raipur and PACSs Mandir hasaud, Arang and Dharsiwa branches during the period 1990-91 to 2001-02, has been critically examined in this study considering various parameters like amount granted, distributed, loan repayment and overdues etc. The important conclusions emerged from this study are summarized below:

- All parameters under study have shown positive trend and the compound growth rates of above
parameters was positive and highly significant over the period of study (1990 to 2001).

- Though higher growth rates of amount granted and distributed are good indication for better performance of DCCB and sampled PACSs, significant and comparatively higher growth rates of repayment and overdues are warranted.

- The problem of overdues was the highest among the large farmers (61.56%) followed by medium farmers (52.89%) and small farmers (42.52%), while, maximum credit gap was observed in case of small farmers (21.72%).

- The main causes of overdues among the 200 sampled borrowers of the study area were misuse of the loan for consumption purposes (22%), non-remunerative price of their produce (21%) and attitude and policies of the Government (17%). The other causes of overdues were short periods of repayment (14%), influence of political leaders (12%), inadequate income (10%) and failure of crop (6%).

- The multiple regression analysis revealed that dependency ratio, total income, land holding size, amount of loan borrowed and amount of loan repaid
were the major factors contributing the accumulation of overdues at the farmers level.

Thus, it can be inferred that DCCB and PACSs have an undisputedly important role in 3-tire federal cooperative credit structure since it is operating in a limited geographical area and is in direct touch with the rural masses to understand requirements of local people. However, in present environment of competition, bank should slightly mould their activities, and more emphasis should be given to income generating activities, effective credit disbursement, recovery campaign, curtailment of expenditure and efficiently mobilization of rural savings. This will help bank to reap benefits of better performance.

SUGGESTED MEASURES TO SOLVE THE PROBLEM

In the light of the foregoing analysis and examination of the position of overdues in the institutional agricultural finance in the Primary Agricultural Cooperative Societies (PACSs) and District Central Cooperative Bank (DCCB), Raipur the following suggestions have been made for the remedy of malady of large scale default in repayment of agricultural credit.
• Loans should not be sanctioned in hurry or under pressure and every application for loan should be properly and thoroughly examined so that no loan is sanctioned to any undeserving applicant.

• Cooperative societies should closely coordinate and cooperate with each other to avoid their working at cross-purposes and to ensure that a defaulting cultivators for one institution may not get finance from another.

• The lending institution should strictly monitor the utilization of the loan by frequent visits to the borrowers so that the loans may be used for the purpose for which they are sanctioned.

• Proper procedure with suitable repayment schedule should be adopted for the recovery of the loans at the time when the farmers sell their produce. Efforts should be made well in advance to collect installments by sending reminders and notices before the due date.

• The officers entrusted with the duty of collection of dues from the cultivators should be delegated adequate powers to take coercive action against the wilful defaulters and the state Governments should extend their wholehearted cooperation in recovery.
• There should not be political interference in the working of the credit institution in granting loans to the deserving applicants and taking suitable actions against defaulting borrowers.

• Governments and other public authorities should help in creating a favourable environment conducive for timely recovery of the dues of the institution providing agricultural finance.

• The farmers should be ensured of getting remunerative prices for their produce and adequate supply of agricultural inputs at reasonable prices.

• The officials of the credit institutions should educate the cultivators and explain them the importance of prompt and timely repayments of loan.

• Crop insurance scheme should be implemented throughout the country and more crops should be covered under it.

• Adequate incentives should be given to the farmers for prompt repayment of loans and also to the employees of the credit institution for better recovery.

• The cooperative bank must check the overdues by reducing the backlogs.
It is observed that the large farmers wait for debt waive so that they do not pay the loan amount. Hence, the debt waive should be totally abolished by the Government.

The above suggestions, if properly implemented, will go a long way in improving the recovery of agricultural loans and overcoming the problems of mounting overdus, which has been eclipsing the multi-agency approach to agricultural finance adopted in our country.