

OVERDUE PROBLEM IN AGRICULTURAL CREDIT OF COOPERATIVE BANK AND GRAMIN BANK IN MANIHARI BLOCK OF GHAZIPUR DISTRICT OF EASTERN U.P.

S. K. Singh*, **R. P. Singh****

KEY WORDS

Agriculture Credit
Co-operative Banks
RRBs

Received on :
08.09.2010

Accepted on :
18.12.2010

The present study is based on the 90 borrower farmers of the Manihari block of Ghazipur district of eastern Uttar Pradesh, India. The study revealed that various factors like; unproductive use of loan, educational status, caste of borrowers, expenditure on farm and family living were causes for mounting overdue in the study area. The government and concerned departments need to over-come these problems of the financing institutions and the farmers.

INTRODUCTION

Mounting over-dues in agricultural credit in recent years has become a cause for serious concern. Over the years, the institutional credit system has been severely stressed and strained. The over-dues with cooperative credit system were 34 percent under short term, while it was 42 percent under long term structure during 2000-01. The regional rural banks and commercial banks registered 29 percent and 31 percent overdue during the same period. The high level overdue has constrained the capacity of such institutions to recycle credit to the service of the ever increasing of rural population. Reasons for high over-dues include willful defaults, natural calamities, inadequate appraisal of investment, insufficient supervision, collection efforts and in some instances active discouragement of collection efforts by state governments and local groups for politics reasons. Keeping these considerations in view, the present study was undertaken to find out the various factors responsible for mounting over-dues in agricultural credit in Manihari block of Ghazipur, district of Uttar Pradesh.

* Head, Department of Agricultural Economics, Udai Pratap Autonomous College, Varanasi - 221 002, e-mail : sk_singh11@rediffmail.com

** Chairman, Department of Agricultural Economics, RAC, Birsa Agricultural University, Kanke, Ranchi,

METHODOLOGY

The study is based on the 90 borrower- farmers comprising marginal (25), small (25), medium (25) and large farmers (25), respectively, which were selected from 5 villages of Manihari block of Ghazipur district of eastern Uttar Pradesh. The primary data was collected from the sample borrower's farmers. Regression analysis was used to measure the influence of different factors responsible for over-dues on borrower farmers.

Least square technique was deployed for estimating functions under reference for borrowers of Manihari block using the usual criteria of consistency of signs, significance of regression coefficients and closeness of fit model. Cobb-Douglas production function was most appropriate and was finally selected in estimating factors responsible for over-dues.

The **Cobb-Douglas** production function used here was of the following form:-

$$Y = aX_1^{b_1} X_2^{b_2} X_3^{b_3} X_4^{b_4} X_5^{b_5} X_6^{b_6} X_7^{b_7} X_8^{b_8} X_9^{b_9} X_{10}^{b_{10}} X_{11}^{b_{11}} X_{12}^{b_{12}}$$

Where,

- Y = Amount of over-dues (In Rs.)
 X_1 = Caste (score)
 X_2 = Educational status (score)
 X_3 = Family size (Number)
 X_4 = % of earning adult to total adult
 X_5 = Per capita off farm income (In Rs.)
 X_6 = Operational size of holding (ha.)
 X_7 = Cropping intensity (%)
 X_8 = Per capita income from crops (In Rs.)
 X_9 = % of total expenditure to total farm income
 X_{10} = Per capita expenditure on food consumption (In Rs.)
 X_{11} = Miscellaneous expenditure (In Rs.)
 X_{12} = % of production loan to total loan.

RESULTS AND DISCUSSION

Having identified the major factors responsible for over-dues of loan in the block, stepwise regression analysis was used in order to ascertain the relative importance of these factors.

The regression coefficients, standard errors and coefficient of multiple determinations (R^2) of all variables included are presented in table - 1. The results of table no. 1 show that independent variables included in the regression equation for short term, medium term and pooled (overall) data explained 65%, 92% and 62% respectively, variation in amount of over-dues of loan of borrower being minimum (62%) in overall and maximum (92%) in medium categories of loan. The difference in value of coefficient of multiple determinations (R^2) might be due to variation in income of the farmer, expenditure, production process, educational status etc. in different types of borrowers. However, quite a substantial portion of variation in amount of over-dues remained unexplained by the factors including in the preferred model probably because of non-inclusion of factors like political

TABLE - 01
Regression Coefficient, Standard Error and Coefficient of Multiple Determination (R²)
of Overdues in Short and Medium Term Loans on Borrower Farmers of Manihari Block

| Categories Of Loan | No. of Observation | intercept | X ₁ | X ₂ | X ₃ | X ₄ | X ₅ | X ₆ | X ₇ | X ₈ | X ₉ | X ₁₀ | X ₁₁ | X ₁₂ | R ² |
|--------------------|--------------------|-------------------|--------------------|------------------|---------------------|-------------------|-------------------|---------------------|-------------------|-------------------|----------------------|---------------------|---------------------|---------------------|----------------|
| Short Term Loan | 49 | 0.580 (1.727) | 0.502 (0.592) | 0.180 (0.301) | -0.011 (0.351) | 0.25 (0.162) | 0.101* (0.042) | 0.600*** (0.221) | 0.910* (0.510) | 0.500* (0.210) | -0.234 (0.553) | -0.321** (0.112) | 0.501*** (0.155) | -0.521** (0.241) | 0.65 |
| Medium Term Loan | 16 | 13.755 (7.466) | -1.306 (1.012) | 1.756 (1.8) | -1.998** (0.959) | -0.803 (0.683) | -0.234 (0.189) | 0.363 (0.999) | -1.938 (2.361) | -0.333 (0.278) | -1.166*** (0.511) | 0.571 (0.411) | -0.032 (0.297) | -0.143 (0.377) | 0.92 |
| Pooled | 69 | 2.140 (1.028) | -1.410* (0.598) | 0.196 (0.308) | 0.162 (0.397) | 0.071 (0.179) | 0.885* (0.32) | 0.744*** (0.240) | 1.20* (0.52) | -0.031 (0.178) | -0.286 (0.375) | -0.039 (0.157) | 0.133 (0.142) | 0.50** (0.152) | 0.62 |

* Significant at 10%

** Significant at 5%

*** Significant at 1%

Values in brackets are standard error of corresponding variables.

factors, follow-up action of bank employees, weather factor, and management factor for utilization of loan etc.

Short Term Loan

The table further indicates that the most important and significant variables responsible for over dues of short term loan were $X_5, X_6, X_7, X_8, X_{10}, X_{11}, X_{12}$, respectively. The coefficient of X_5 (Per capita off-farm income) was positive (0.101) and statistically significant at 10%. It shows that increase in income of borrower from other sources does not help in paying overdue of loan. It indicates that these types of farmers are not paying loan deliberately inspite of having income. The regression coefficient of operational size holding (X_6) was 0.600 which was significant at 1% level, it further indicates that there is the possibility of becoming a defaulter more and more because of the large size of holding. Similarly, the regression coefficient of cropping intensity (X_7) was positive, further showing that higher cropping intensity would not help in reducing the overdues of the borrower. The higher cropping intensity on the farm is expected to generate more and more income and employment which increase repayment capacity of the borrowers but it was not found in the study area. The coefficient of per capita income from crop (X_8) was found to be positive (0.5) and significant at 10%. It reflects that higher income from crop production did not affect the amount of over-dues in the sample farms. The regression coefficient of per capita expenditure on food consumption (X_{10}) was negative (-0.321) which was statistically significant at 5%. The results are unexpected and again satisfy that increase in expenditure on food does not affect the saving capacity of the borrowers. The coefficient of miscellaneous expenditure (X_{11}) was observed to be positive (0.501) which was highly significant at 1% level. It indicates that the repayment capacity of the borrower is highly affected by per capita expenditure which was expected. It was found that regression coefficient of percentage of production loan to total advance (X_{12}) was negatively associated with amount of over-dues. The value of coefficient was negative (-0.52) which was significant at 5% which explains that by utilization of loan advance for which loan was given will increase repayment capacity of the borrower in the study area.

Medium Term Loan

From table no. 1. it is clear that the variables which affect over-dues significantly are family size (X_3), per capita income from crops (X_8), percent of total expenditure to total farm income, (X_9) and per capita expenditure on food consumption (X_{10}). The coefficient of family size (X_3) was found negative (-1.998) which was significant at 5% level of significance i.e. one percent increase in family size resulted in 1.998% decrease in over-dues. It means increase in family size may result in higher income and more saving that helps in decreasing over-dues. Similar finding has been reported by Gupta et al (1993). Similarly the coefficient of percentage of total expenditure to total farm income (X_9) was (-1.166) showing 1% increase in total expenditure to total income resulted in -1.359 decrease in over-dues. It implied that repayment capacity of borrower may be increased by reducing excess amount of expenditure on the farm. Singh (1996) reported similar findings.

For pooled data the variables which are affecting over-dues in greater proportion are per capita off-farm income (X_5), operational size of holding (X_6), cropping intensity (X_7), and percentage of production loan to total loan advanced (X_{12}). The coefficient of per capita off-farm income (X_5) is 0.885, which is significant at 10% level of significance. It means increase in per capita off-farm

TABLE - 02
Regression Coefficient of Significant Variables, Standard Error and Coefficient of Multiple Determination (R²) of Overdue in Short and Medium Term Loans on Borrower Farmers of Manihari Block

| Categories Of Loan | No. of Observation | intercept | X ₁ | X ₂ | X ₃ | X ₄ | X ₅ | X ₆ | X ₇ | X ₈ | X ₉ | X ₁₀ | X ₁₁ | X ₁₂ | R ₂ |
|--------------------|--------------------|------------------|-------------------|---------------------|---------------------|-------------------|---------------------|------------------|--------------------|----------------|----------------|----------------------|---------------------|-------------------|----------------|
| Short Term Loan | 49 | 0.120 (1.182) | — | — | — | 0.090* (0.04) | 0.582*** (0.180) | 1.02* (0.457) | 0.405** (0.132) | — | — | -0.249* (0.131) | 0.407*** (0.137) | -0.52* (0.228) | 0.63 |
| Medium Term Loan | 16 | 7.707 (0.926) | -1.103 (0.460) | 2.389*** (0.619) | -1.995** (0.715) | — | — | — | — | — | — | -1.666*** (0.298) | — | — | 0.86 |
| Pooled | 69 (1.280) | 1.615 | — | — | — | 0.072* (0.040) | 0.627*** (0.14) | 1.17* (0.592) | — | — | — | — | — | 0.389* (0.174) | 0.58 |

Values in brackets are standard error of corresponding variables.

*** Significant at 1% level of probability

** Significant at 5% level of probability

* Significant at 10% level of probability

income would not help in reducing over-dues, because farmers are already in deficit in meeting family expenditure so they prefer to spend on consumption rather than paying over-dues. The regression coefficient of operational size of holding (X_6) was positive and highly significant at 1% level indicates that as farm size increased farmers become more and more defaulters. It was further observed from analysis that higher educated farmers were more defaulters than low educated farmers. The regression coefficient of caste (X_1) which was obtained to be negative (-1.41) revealed that lower social profile families become defaulters than higher social profile families.

Final result of significant variables contributing in over-dues in short term loan, medium term loan and pooled obtained through step down method are given in table no.2.

This table shows that in short term loan the variable like per capita off-farm income (X_5), operational size of holding (X_6), cropping intensity (X_7), per capita income from crops (X_8) and miscellaneous expenditure (X_{11}) have positive effect on over-dues showing 1% increase in per capita off-farm income, operational size of holding, cropping intensity, per capita income from crops and miscellaneous expenditure cause 0.09%, 0.582%, 1.02%, 0.405% and 0.407% increase in over-dues, respectively. The regression coefficient of percentage of production loan to total loan advance (X_{12}) have a negative value indicating that production loan would be helpful in increasing production of farmers and leads to improvement in repaying capacity of farmers. The regression coefficient of per capita expenditure on food (X_{10}) was negative indicating that amount of over-dues are not affected rather over-dues amount reduce due to curtail in expenditure on non-food item.

In case of medium term, coefficient of family size (X_3) was negative (-1.995) and significant with 5% probability level indicating that small size family were more defaulters due to less earning family members than that of large families.

*Significant at 10% level of probability the coefficient of percent of total expenditure to total income (X_9) was found to be negative (-1.666) which further indicates that high expenditure families in comparison to their total annual income were having less amount of over-dues in the study. The regression co-efficient of per capita expenditure on food consumption (X_{10}) was negatively associated with over dues amount indicates that after reducing expenditure on food consumption it increased the saving capacity of the borrower farmers. Thus the farmer should pay back the loan. But this was not found in the study area thus resulting in a wilful defaulter. The regression co-efficient of caste score (X_1) was significantly negatively associated with over dues amount indicating that lower caste borrower farmers were more defaulters than higher caste ones. The regression co-efficient of education status score (X_2) was positively significant with over dues amount that indicates that the educated borrower farmers were found to be more defaulters than illiterate farmers which was unexpected because they are already acquainted with the benefit of loan payment at appropriate time and recycling of loan among farmers.

The overall pooled results of short term and medium term loan show that regression coefficient of operational size of holding (X_6) was positively associated with amount of over-dues, which further indicates that large farmers have more over-dues than small farmers. The coefficient of per capita off farm income (X_5) further revealed that increase in income of house hold from other than agriculture does not help in reducing over due amount of the borrower farmers indicating non importance of bank credit return. The regression coefficient cropping intensity (X_7) was again positively related with amount of over-dues. This result further explained that higher income does not help in reducing amount of over-dues. The higher cropping intensity pushing the farmer into a defaulter is due to the

psychology of waiving off loan/willful defaulter. The regression coefficient of X_{12} (% of production loan to total loan) was found to be positive which shows that higher share of production loan to the farms might be helpful in increasing income of the farmers but it does not mean that it will act as motivation for paying the installment on due date.

CONCLUSTION

The study finds out the major factors responsible for over-dues in agricultural loan of borrower farmers. Increase in income of borrower from other sources would not help in paying of over-dues of loan which indicates that these type of farmers are not paying the loan deliberately inspite of having income. The result shows that repayment capacity of the borrower is highly affected by per capita expenditure. The production loan would help in increasing production of farmers which leads to improvement in repaying capacity of the farmers may also be increased by reducing excess amount of expenditure on the farms. The study revealed that the educated farmers become greater defaulter than illiterate farmers and the lower caste are much defaulters than the higher castes due to poor saving. The overall results of short term and medium term loan show that regression coefficient of operational size of holding (X_6) was positively associated with amount of over-dues, which further indicates that large farmers become greater defaulters than small farmers. The cropping intensity was again positively related with amount of over-dues. This result further explained that higher income does not help in reducing amount of over-dues. The higher cropping intensity pushes the farmer into becoming a defaulter due to the psychology of waiving off loan/willful defaulter.

The government and bank officials should take utmost care at the time of disbursing loan and ensure that it must be sanctioned according to the farmers repaying capacity strictly. The factors like political interference, willful default, unproductive use of loan, supervision of loan over its use should be carefully reviewed to minimize the over-dues problem in agricultural loan. In case of crop failure the borrowers should be allowed more time preferably more than three years to pay their loan.

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ACKNOWLEDGEMENT

The authors are grateful to U.P.C.A.R., Lucknow for providing financial assistance for present investigation.