A Study of Overdues Problem in Agricultural Credit in Manihari Block of Ghazipur District of Eastern Uttar Pradesh

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Abstract

Financing institutions are facing very critical problem of mounting over dues. The over dues have been blocking the capital, hindering the circulation and furthering of the development. In view of this it was thought that it would be useful and worthwhile to study the problem of over dues of agricultural loans and to find out the various factors responsible for mounting over dues in agricultural loan. The present study was based on the 90 borrower farmers of the Manihari block of Ghazipur district of eastern Uttar Pradesh. The study revealed that the various factors like unproductive use of loan, educational status, caste of the borrowers, amount of over dues, expenditure on farm and family living were found for mounting of over dues in the study area. The government and concern departments need to overcome this problem in the interest of the financing institutions and the farmers.

Introduction

Mounting over dues in agricultural credit in recent years has becomes a cause for serious concern. Over the years, the institutional credit system has been several stressed and strains. The over dues with cooperative credit system was 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 over dues during the same period. The high level over dues has constrained the capacity of such institutions to recycle credit to service of ever increasing number of rural population. Reasons for high over dues include wilful 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 political reasons. Keeping these considerations in view the present study was undertaken to find out the various factors responsible for mounting the over dues in agricultural credit in Manihari block of Ghazipur, district of Uttar Pradesh.

Methodology

The study is based on the 90 borrower farmers comprising of 25, 25, 25, 15 for marginal, small, medium and large farmers respectively which were collected from 5 villages of Manihari block of Ghazipur district of eastern Uttar Pradesh. The primary data were collected from the sample borrowers farmers. Regression analysis was used to measure the influence of different factors responsible for over dues on borrowers farmers.

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

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

$$Y = aX1^{b1}X2^{b2}X3^{b3}X4^{b4}X5^{b5}X6^{b6}X7^{b7}X8^{b8}X9^{b9}X10^{b10}X11^{b11}X12^{b12}$$

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
X_6 =	Operational size of holding (ha.)

$X_7 =$ Cropping intensity (%)
$X_8 =$ Per capita income from crop
$X_9 =$ % of total expenditure to total farm income
$X_{10} =$ Per capita expenditure on food consumption
$X_{11} =$ Miscellaneous expenditure
$X_{12} =$ % of production loan to total loan.

Results and Discussion

Having indentified 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 determination (R^2) of all variables included are presented in table – 01.

The results of table no. 01 shows that independent variables included in the regression equation for short term, medium terms 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 determination (R^2) might be due to variation in income of the farmer, expenditure, production process, educations status etc. in different types of borrowers. However, quite a substantial portion of variation in amount of over dues remained unexplained by the factor including in the preferred model probably because of non-inclusion of factors like political 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 overdues of short terms loan were X_5, X_6, X_7, X_8, X_9, 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 would not help in paying overdues 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 it is possibility of become defaulter more and more on large size of holding. Similarly the regression coefficient of cropping intensity would not help in reducing overdues of 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 an 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 on 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 10% explain that by utilization of loan advance for which loan was given will increase repayment capacity of the borrower in the study area.

The remaining variables like caste (X_1), educational status (X_2), % of earning adult to total (X_4) were having positive value but non-significant. Similarly the coefficient of X_1 (family size) and X_9 (% of total expenditure to total farm income) were having negative value and also non-significant in the equation.

Medium term loan:

From table No. 01 it is clear that the variables which affect over dues significant are family size (X_3) and percentage of total expenditure to total farm income (X_9) only. The coefficient of family size (X_3) was found negative (-1.998) which is significant at 5% level of significant i.e. 1% increase in family size results in 1.99% decreased 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). Same result is reported in the case of variable X_2 (percentage of total expenditure to total farm income). The coefficient of this variable was (-1.166) showing 1% increase in total expenditure to total income resulted in 1.166% decrease in overdues. It implied that repayment capacity of the borrower may be increased by reducing excess amount of expenditure on the farm. Singh (1996) observed similar finding.

For pooled data the variables which are affecting over dues in greater proportion are per capita

Table 1: Regression coefficients, standard errors and coefficient of multiple determination (R^2) of overdues in Short and Medium Term Loans on Borrower Farmers of Manihari Block

Categories of loans	No. of observations	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 (0.041)	0.582 (0.180)	1.02 (0.557)	0.405 (0.132)	-	-0.249 (0.131)	0.407 (0.137)	-0.544 (0.228)	0.63
Medium Term Loan	16	7.707 (0.926)	-1.103 (0.460)	2.389 (0.619)	-1.775 (0.718)	-	-0.273 (0.067)	-	-	-0.364 (0.176)	-1.359 (0.298)	-0.675 (0.161)	-	-	0.86
Long Term Loan	04	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pooled	69	1.615 (1.280)	-	-	-	-	0.072 (0.040)	0.627 (0.140)	1.17 (0.592)	-	-	-	-	0.389 (0.174)	0.58

Values in brackets are standard error of corresponding variables.

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}). Here due to positive coefficient of all these variables are affecting over dues positively. 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 income would not help in reducing ovedues, because farmers are already in deficit in meeting family expenditure so they preferred to spend in consumption rather than paying over dues. The regression coefficient of operational size of holding (X_6) was positive and highly significant at one percent level indicates that as farm size increased farmers become more and more defaulter.

Similarly regression coefficient of cropping intensity was positive and significant related with amount of over dues. The variables like educational status (X_2), Family size (X_3), per capita income from crop (X_8), percentage of total expenditure to total farm income (X_9) and per capita expenditure on food consumption have negative coefficient but statistically insignificant.

Final results 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 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 crop (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 crop, 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}) are having negative value indicating that production loan would be helpful in increasing production of farmers leads improvement in repaying capacity of the farmers. The regression coefficient of per capita expenditure on food was negative indicating that amount of over dues are not affected rather ovedues amount reduced due to curtail in expenditure in non-food item.

In case of medium term, coefficient of education status (X_{12}) was positive indicating that educated farmer become more and more defaulter than illiterate farmers. The amount of over dues is very much affected by expenditure in respect to income which has been observed by value of coefficient in paying of over dues of loan which indicate that these type of farmers are not paying loan deliberately inspite of having income. The result shows that repayment capacity of the borrower is highly affected by

Table 2: Regression coefficients, standard errors and coefficient of multiple determination (R^2) of overdues in Short Term and Medium Term Loans on Borrower Farmers of Manihari Block

Categories of loans	No. of observations	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 (1.800)	-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
Long Term Loan	04	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pooled	69	2.140 (1.028)	-1.410 (0.598)	0.196 (0.308)	-0.162 (0.397)	0.071 (0.179)	0.885* (0.320)	0.744*** (0.240)	1.20* (0.520)	-0.031 (0.178)	-0.286 (0.375)	-0.039 (0.157)	0.133 (0.142)	0.500** (0.152)	0.62

*Significant at 10%   **Significant at 5%   ***Significant at 1%   Values in brackets are standard error of corresponding variable.

per capita expenditure. The production loan would help in increasing production of farmers leads improvement in repaying capacity of the farmers which may also increase by reducing excess amount of expenditure on the farms. The study revealed that the educated farmers become more and more defaulter than illiterate farmers and lower caste is much defaulter than higher caste due to poor saving. The overall results of short terms and medium term loan shows that regression coefficient of operational size of holding (X_6) was positively associated with amount of overdues, which further indicates that large farmers become more defaulter 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 pushing farmer into defaulter due to psychology of waiving off loan/wilful defaulter.

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