Credit Repayment Performance of Small Farmers - A Comparative Study of Self-Help and Non-Self-Help Group Farmers in Rural-Urban Interface of Bengaluru North

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Abstract

The study was conducted in rural-urban interface of north of Bengaluru in Karnataka during 2017 to analyse the credit repayment performance of small farmers of Self-Help Group (SHG) and non-self-help group. The study area was delineated as urban, interface and rural gradients. Totally, 180 sample farmers were selected for the research. The study revealed that the quantum of loan amount borrowed from all the sources was highest in interface farmers followed by urban and rural farmers in both SHG and non-SHG sample farmers. The repayment was more in case of pooled SHG farmers when compared to pooled non-SHG farmers. Among the formal sources of credit borrowed by both SHG and non-SHG farmers, repayment of credit was comparatively highest in co-operative banks in interface area (61.06 % and 54.96 %), urban (49.82 % and 45.89%) and rural (33.82 % and 37.61 %) followed by Regional Rural Banks (RRB's) and commercial banks. Overall repayment performance of interface and urban farmers was better as compared to rural farmers. Across all the gradients cent per cent repayment was noticed in case of SHG farmers who availed credit, from their respective self-help groups. Majority of the respondents (78.33 %) expressed, that increased in the cost of cultivation of crops and low price for the agricultural produce (73.89 %) were the reasons for poor repayment of the credit. The total income, amount of loan borrowed and amount repaid by interface farmers had positive and significant relation with amount repaid. It is important to promote SHGs as the percentage of repayment was high among SHG farmers.

Keywords: Credit, repayment performance, self-help groups

Agriculture credit is an important pre-requisite for agricultural growth and also one of the critical inputs for agricultural development. Credit is a means of obtaining resources at a certain period of time, with an obligation to repay it at subsequent period in accordance with the terms and conditions of the credit obtained (Jadhav and Matkar, 2015). It is a financial asset of the bank, helps both the bank and the borrower in strengthening their financial status. The recovery performance of advances always plays an important role in the enhancement of credit services in any sector of the economy. Poor repayments come in the way of viability and sustainability of the banks. Poor recovery performance adversely affects the banks' future lending. Self-Help Group (SHG) has emerged as an alternative financial vehicle that provides micro credit or small loans granted to the poor without any collateral. SHG in India is more effective because of it cost effective way of financing the poor. The repayment rate of SHGs is more than 95 per cent due to peer pressure and it inculcates the habit of thrift among members and provide timely credit. In this backdrop, the present study was carried out with the following objectives:

1. To assess the repayment performance of small farmers-A comparison between SHG and non-SHG farmers.

2. To identify factors affecting the repayment performance of farmers.

3. To analyse the reasons for poor repayment of loans by sample farmers.

Methodology

The present study was carried in rural-urban interface of north of Bengaluru in Karnataka during 2017. The villages were selected randomly across all the three transacts. Villages were located within a

radius of 25 km from city centre are considered as urban gradient. The region within a distance of 25-30 km was treated as interface and beyond 30 km from the periphery of centre was treated as rural area. Purposive multistage random sampling method was adopted for the selection of farmer households. Totally 180 sample farmers were selected for the study, which comprised of 90 farmers of SHG and 90 farmers of non-SHG. Ninety farmers of SHG comprised of 30 farmers each from rural, urban and interface area and similarly in case of non-SHG farmers. Data was collected using pre-tested interview schedule. Descriptive statistic measure has been used to analyse the loan repayment performance of the selected farmers. The amount borrowed by the farmer from different source of credit is taken with loan period. Then repayment rate is calculated by taking actual amount repaid in stipulated time to the total amount barrowed. To analyse the factors affecting the repayment capacity of the farm households across three transacts of North of Bengaluru, multiple linear regression analysis was used, considering amount repaid as dependent variable. Total land holding, amount borrowed and gross income were considered as independent variables.

Grouping variable: Grouping variable is the set of dummy variables that defines the farm household in rural, interface and urban areas.

The empirical model specified is as follows:

Where,

Y: Amount repaid (Rs.)

X_1: Amount borrowed (Rs.)

X_2: Gross income (Rs.)

X_3: Total land holdings (ac)

D_1: Dummy variable as '10' for urban farm households D2: Dummy variable as '01' interface farm households and dummy '00' for rural farm households

b1, b2,……..b5 are the regression co-efficient for the variables X_1, X_2 and X_3, respectively and b_4 and b_5 are the regression coefficient, for dummy variables D_1 and D_2, respectively and e term indicates error.

Garrett's Ranking Technique

Garrett's ranking technique was used to rank the purpose of joining self-help groups across rural-urban interface. Seven factors were identified as the major purpose of joining the self-help groups in the study area taking into consideration the self-help groups sample farmers. Each of the sample farmer was asked to rank the above seven factors from rank one to rank seven. In this analysis, rank one meant most important factor and rank seven meant least important factor. In the next stage, rank assigned to each factor by each individual was converted into per cent position using the following formula,

$$\text{Per cent position} = \frac{100 \times (R_{ij} - 0.50)}{N_j}$$

Where, R_{ij} stands rank given for the ith factor (i= 1, 2……7) by the jth individual (j = 1, 2 …..90) N_j stands for number of factors ranked by j^{th} individual.

Once the per cent positions were found, the per cent position of each rank was converted to scores by referring to table given in Garret and Woodsworth (1969). Then the scores for each factor were summed over the number of sample farmers who ranked that factor. In this way, total scores were arrived at for each of the seven purpose and mean scores were calculated by dividing the total score by the number of respondents, who gave ranks. Finally, overall ranking of the seven purpose was done by assigning rank 1, 2, 3,..7 in the descending order of the mean scores.

RESULTS AND DISCUSSION

Quantum of Loan Amount Borrowed

The quantum of loan amount borrowed by the sample farmers from different sources across rural, interface and urban gradients are presented in the Table I. The findings of results revealed that among the formal sources the quantu of loan amount borrowed was highest from co-operative banks which accounts for ₹ 2.91 lakhs in case of SHG farmers and ₹ 3.13 lakhs in case of non-SHG farmers across all the gradients. This was mainly due to the increased network of bank branch coverage to meet credit demands of farmers over the years as part of priority sector advances lending by banks and also it implied

TABLE I

Quantum of loan amount borrowed from different sources by SHG and non- SHG small farmers (2012-2017)

(Rs. Lakhs)

Sources	SHG farmers (n=90)				Non - SHG farmers (n=90)			
	Rural	Interface	Urban	Pooled	Rural	Interface	Urban	Pooled
Co-operative Banks	0.53	1.17	1.21	2.91 (38.09)	11.08	0.80	1.25	3.13 (40.65)
Commercial Banks	0.42	0.85	0.32	1.59 (20.81)	0.20	0.38	0.28	0.86 (11.17)
RRB	0.20	0.21	0.47	0.88 (11.52)	0.17	0.37	0.32	0.86 (11.17)
Informal source	0.34	0.31	0.35	1.00 (13.09)	1.04	1.08	0.73	2.85 (37.01)
SHG group	0.44	0.40	0.42	1.26 (16.49)	-	-	-	0
Total	1.93	2.94	2.77	7.64	2.49	2.63	2.58	7.70

Note : Value in parenthesis indicates percentage to the total

that the co-operative banks formed as an important source of credit to farmers largely due to their proximity, accessibility and specialized in crop based advances and were liberal in lending to the farmers and in case of informal source the quantum of loan amount borrowed from all the gradients was more (₹ 2.85 lakh) in case of non-SHG farmers when compared to SHG farmers (₹ 1.04 lakh) because they depend more on money lenders. The results were in accordance with the study conducted by Anwarul and Prerna in 2015. In both SHG and non-SHG sample farmers, the quantum of loan amount borrowed from all the sources was highest in interface farmers which accounts ₹ 2.94 lakhs and ₹ 2.63 lakhs, respectively, followed by urban farmers (₹ 2.77 lakhs and ₹ 2.58 lakhs) and rural farmers (₹ 1.93 lakh and ₹ 2.49 lakh), respectively. The interface and urban farmers had majority of the area under high value crops like grapes, guava and also other enterprises like, commercial lawn cultivation which needs high investment and hence the quantum of credit borrowed was more.

Source-wise Repayment of loan by SHG and Non-SHG farmers

It is observed from Table II that the repayment was more in case of SHG farmers when compared to non-SHG farmers because of development of their skills of financial management, decision making and habit of savings thought from SHG groups. The non-SHG farmers were not much more conscious of the fact that they have to repay the amount in time. Among the formal sources of credit borrowed by both SHG and non-SHG farmers, repayment of loan was comparatively highest in co-operative banks in interface area (61.06 and 54.96 %), urban (49.82 and 45.89%) and rural (33.82 and 37.61 %) and it may be because farmers had to clear old debts / loan in order to take new loan in the coming years, interest rate was less in co-operative banks and proper utilization of credit by farmers, which made the farmers to repay the loan in a specified periodfollowed by RRB's and commercial banks. Overall repayment performance of interface and urban farmers was better as compared to rural farmers because urbanization paved an important role in terms of establishment and assured market and the farmers in these gradient were educated which will help them to take improved technology and innovation that could enhance better income from farm investment and inturn helps in better loan repayment were the major reasons for the higher repayment in interface and urban areas compared to rural area and also it depicts that rural farmers were unable to use of loan amount in non-income generating activities. Overall the low recovery performance was due to drought occurrence in the previous years attributed to high level crop failure which leads to low

TABLE II

Source-wise repayment of loan by SHG and Non - SHG farmers across rural uran interface, north of Bangalore   (per cent)

Sources	SHG farmers (n=90)				Non - SHG farmers (n=90)			
	Rural	Interface	Urban	Pooled	Rural	Interface	Urban	Pooled
Co-operative Banks	33.82	61.06	49.82	48.23	37.61	54.96	45.89	46.15
Commercial Banks	28.42	54.51	49.05	43.99	19.29	29.92	41.93	30.38
RRB	36.89	47.54	57.69	47.37	26.67	38.33	37.67	34.22
Informal Source	37.95	52.9	54.35	48.40	27.4	29.58	24.08	27.02
SHG	100	100	1000	100.00	-	-	-	-

Note : Value in parenthesis indicates percentage to the total

level of income and also expectation of loan waiver and relief programmes of the government. Across all the gradients cent per cent repayment was noticed in case of SHG farmers who availed loan, from their respective self-help groups due to peer pressure, habit of thrift among the members.

Reasons for poor repayment of loans

An attempt was made to know the reasons for poor repayment of loan among the farmers. It was observed from Table III that majority of the respondents (78.33 %) expressed, that increased in the cost of cultivation crops, followed by low price for the agricultural produce (73.89 %), increased in the house hold expenditure (71.67 %), crop loss due to uncertainty or low yield crops (66.11 %), diversification of funds (60.56 %), poverty was also one of the reason (39.44%) and some farmers expressed (36.11 %) high interest rate of loans was

TABLE III

Reasons for poor repayment of loans by sample farmers

Particulars	Per cent
Increased cost of cultivation	78.33
Price fluctuation/low price	73.89
High house hold expenditure	71.67
Crop loss/low yield	66.11
Diversion of funds	60.56
Poverty	39.44
High interest rate	36.11

also the reasons for poor repayment of the loans among the sample respondents.

Factors affecting the repayment performance

Multiple regression analysis was carried out to find the factors which are influencing the repayment performance of farmers (Table IV). The co-efficient of multiple determination (R^2) was 0.47 indicates that the variables included in the regression model explained about 47 per cent of variation in the repayment capacity. The regression co-efficient for amount borrowed was 0.35 and statistically significant at one per cent level of significance indicating that, the marginal propensity to repay the loan amount borrowed was ₹ 0.35. Regression coefficient for total income was 0.11 and statistically significant at five per cent which indicates as the income increases by one rupee, the loan repayment increases by ₹ 0.11. To find out the extent of repayment across urban, interface and rural farm households, two dummy variables were used *viz.,* D_1 for interface farmers, D_2 for urban farmers. The intercept indicates the threshold loan amount repaid was ₹ 6, 072 per farm. Due to urbanization, the threshold loan amount repaid per farm was shifted by ₹ 35, 110.81 as given by the coefficient of the dummy variable (D1 was significant at one per cent) used for farmers in the interface area. Hence, the threshold loan amount repaid per farm in interface area was ₹ 41, 183.14 per farm (₹ 6, 072.33 + ₹ 35,110.81). In urban areas, threshold loan amount repaid per farm was shifted by ₹ 25,332.66 per farm indicating that the threshold loan amount repaid per

TABLE IV

Factors affecting the repayment performance of farmers

Variable	Parameter	Co-efficient	t-value
Intercept (Rs.)	a	6072.33	0.34
Total loan amount (Rs.)	b1	0.35269	10.14 *
Total income (Rs.)	b4	0.111445	2.49 **
Land holding (ac)	b5	-3201.49	-0.57
d1(Interface)	b2	35110.81	2.28 *
d2 (Urban)	b3	25332.66	1.64
Co-efficient of determination (R2)		0.47	
Adjusted Co-efficient determination		0.45	o f
F value		31.34	1.13 E^{22}

Note: 1. * - Significance at 1 per cent

2. ** - Significance at 5 per cent

farm in urban area was ₹ 31,404.33 (₹ 6,072.33 + ₹ 25,332.66). The results clearly indicated that, threshold loan amount repaid was highest in interface farmers followed by urban and rural farmers. The majority of interface and urban farmers were involved in cultivating high value horticulture crops which yield higher income compare to food crops, hence, income had significant effect on amount repaid and also the loan amount borrowed (Nwosu *et al.,* 2014) had positive and significant impact on the repayment amount.

Purpose of joining to SHG

An effort was made to know the purpose of joining to SHG among the sample farmers. Easy access to credit was ranked first by the members with a garret mean score of 70.56. The next reason indicated by the members was to meet family financial needs with garret mean score of 55.98. It also minimised the family dependency on money lender with garret score of 49.80. To create farm asset, to repay old debts, to make small savings and initiate group activities were ranked fourth, fifth. Sixth and seventh with a garret mean score of 46.45, 45.92,41.52 and 39.01, respectively (Table V).

The development of agriculture sector is more dependent on banking sector because, 80 per cent of farmers are small and marginal, who are unable to

TABLE V

Purpose of joining to SHG by small farmers

(n=90)

Particulars	Score	Garrett's Rank
Easy access to credit	70.56	I
To meet family financial needs	55.98	II
To minimise the dependency on money lenders	49.80	III
To create farm assets	46.45	IV
To repay old debts	45.92	V
To make small savings	41.52	VI
Initiate group activities	39.01	VII

save and invest due to their low levels of income.SHG in India is more effective because of the cost effective way of financing the poor, the repayment rate of SHGs is more than 95 per cent due to peer pressure and it inculcates the habit of thrift among members and provide timely credit. Hence, it is important to promote SHGs as the percentage of repayment was high among SHG farmers and SHG should make a provision to provide credit to meet the consumption expenditure of small farmers in rural area to prevent the diversion of credit.

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