Determinants Of Credit Gap Among The Borrowers Of Malur Taluk In Kolar District Of Karnataka

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Abstract—ThisAgricultural credit is important for sustainable agricultural development which increases productivity of the farmers. The study examines the socio-economic characteristics and credit gap of the farmers. To identify the factors determining the credit gap, discriminant analysis was carried out. The analysis brings out the credit gap in agricultural credit. The amount of crop loan overdues, farm income, land holdings, total assets, family labour, cost of production and number of crops cultivated emerged as significant factor in explaining the variations in the credit gap of farmers in Agrahara, Kambipura, Koduru and Araleri area.

IndexTerms—Sustainable agriculture development, productivity, credit gap, Discriminant analysis.
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I. INTRODUCTION

In a developing country like India agriculture contributes nearly 24.41 percent of the gross domestic product (Economic Survey, 2005-2006) and 67 percent of employment (Planning Commission, 2002). But, Indian farmers need credit and their liquidity constraint provides sub-optimal inputs and hence output. The role of credit is to bring the sub-optimal income to optimal level and enhance farmers' investment and output (Khandker and Binswanger, 1989). Recognizing the importance of agriculture sector in Indian development the government and RBI had a significant role in developing a broad- based institutional framework for meeting the increasing credit requirement of agriculture sector.

The commercial and co-operative banks were the major sources of institutional credit to agriculture in India. The share of commercial bank agricultural credit had increased from 51.94 percent in 1998-1999 to 71.64 percent in 2008-2009, but the share of co-operative banks had declined from 38.67percent to 17.9 percent in the same period, whereas Regional Rural Banks had 7 percent to 9 percent market share in agricultural credit in 2008-2009(Hand Book of Indian Economy 2011).

Several attempts had been made to increase farmers accessibility to credit through multiplicity of institutional agencies and still farmers face difficulties in obtaining credit for farming operations. A recent study by World Bank and National Council of Applied Economic Research (NCAER) revealedthat in Uttar Pradesh and Andhra Pradesh 79 percent of rural households did not have access to a formal bank loan and access was particularly denied to small and marginal farmers as 87 percent of marginal and 69 percent of small farmers did not have access to formal credit.

In this back ground an attempt was made to assess the credit gap and to identify the factors determining the credit gap.

II. REVIEW OF LITERATURE

Samuel Elias et.al (2015) in their study on "The Determinants of Access to agricultural credit for Small and Marginal Farmers in Dharwad District,Karnataka,India" examined the different factors determining small and marginal farmers access to agricultural credit. The data from two taluks of Dharwad districts has been used to identify and analyse the factors. Depending on the proportion of agricultural credit received by the group and the results show that smallest landholders had less opportunity for access to agricultural credit.

Amao (2013) in his study on "Determinants of credit Demand among arable Crop Farmers in Odo-Otin Local Government Area of Osun State,Nigeria" examined the determinants of credit demand. It revealed that majority of the respondents obtained credit from formal sources and were not given exact loan demanded. Most of the respondents were unable to repay the entire loan given to them. The study concluded that the repayment performance of the farmers was bad due to high interest rate and income of the farmers should be considered while providing credit to farmers.

III. PROFILE OF MALUR

The present study was confined to the farmers in four villages in Malur taluk in Kolar district of Karnataka. Malur is 46 kilometers(29 mi) fromBangalore City and 26 km from Kolar. Malur is located at 13.00°N 77.94°E. It has an average elevation of 910meters (2,990 ft).Malur was also called Malligepura in earlier days because the farmers here grow large number of jasmine flowers. There is a village called Shivarapattana, where one can find national award-winning rock sculpture makers. The village population depend on rock sculpture profession. Hullimangala Village is best known for growing capsicum and rose by new technology. Kodihalli is another village in Malur taluk famous for varieties of roses, and most of roses from here is exported to other states of the country. Most of the villages in the Malur taluk grows grains, vegetables and flowers and they sell their agricultural produce in Bangalore market (www.wikipedia.org).

IV. METHODOLOGY

The study was conducted in Malur taluk of Kolar district of Karnataka. Data were collected from primary sources. A multistage random sampling technique was adopted in selecting the sample of borrowed farmers. In the first stage, the area of Malur was selected. In the second stage, four highly intensive credit blocks were chosen. In the third stage 500 respondents were

selected from four areas that is 125 each from Agrahara, Kambipura, Koduru and Araleri area. The statistical technique used in the analysis are average and discriminant analysis.

V. LIMITATION

The study has few limitations. The respondents were reluctant to provide correct details regarding their credit from formal and informal sources.

VI. FINDING OF THE STUDY

Socio-Economic Characteristic of Farmers

An examination into the socio-economic conditions of farmers is highly essential for determining the living conditions and standard of living of the farmers. The variables associated with these are 'age', 'religion', 'income', 'education', 'years of experience' and 'expenditure'.

Most of the respondents were in the age group of 25-50 years. About 62.8 percent of the farmers belonged to the age group of 25 -50 years. Around 30.6 percent of the farmers belonged to the age group of 50-75 years and 6.6 percent of respondents were below 25 years.

The study revealed that 82 percent of the farmers followed 'Hindu' religion. About 10 percent were Christians and 8 percent were Muslims. Majority of the farmers are literate and educated. Around 29.8 percent of them have studied upto primary level. Only 9.8 percent of the farmers are illiterates. About 16.2 percent have studied upto secondary level and 17.2 percent upto higher secondary level. Around 23 percent of them were graduates and 4 percent were technically educated.

Around 45.4 percent of the respondents in the research area is involved in farming for 20 to 30 years. Around 34.6 percent of the farmers are engaged in farming for 10 to 20 years. About 14.2 percent of the farmers are involved in farming for above 40 years. Only 5.8 percent of the farmers are engaged in farming for below 10 years. The study area revealed that 41.6 percent of Agrahara area, 57.6 percent of Kambipura area, 70.4 percent of Koduru area and 52 percent of Araleri area farmers had a monthly income of ` 15000-` 30000. 8 percent spent up to ` 20000-` 30000 and 6.4 percent spent above ` 30000.

Credit Gap

Credit gap is the difference between the loan demanded and the loan sanctioned to the farmers. Farmers receive loan for their requirements but still there arise a difference in the loan sanctioned and loan demanded.

Table-1
Credit Gap

Area	Formal credit			Informal Credit		
	Average Amount of Loan Demanded (Rs.)	Average Amount of Loan Sanctioned (Rs.)	Credit Gap (Rs.)	Average Amount of Loan Demanded (Rs.)	Average Amount of Loan Sanctioned (Rs.)	Credit Gap (Rs.)
Agrahara	82049.04	73680.17	8,368.87	75695.75	70032.26	5,663.49
Kambipura	79933.17	73334.16	6,599.01	94153.26	77338.98	16,814.28
Koduru	80026.44	73420.67	6,605.77	87439.07	73400.67	14,038.4
Araleri	80432.91	73754.43	6,678.48	81609.16	77301.37	4,307.79

Source: Based on Field Survey, 2017

The above table revealed that among the various categories of formal credit borrowers, the average amount of loan demanded ranged between Rs 79933.17 to Rs. 82049.04. The average loan amount demanded by farmers from formal credit was observed to be higher in the Agrahara area. It can be inferred that the formal credit sanctioned ranged between Rs. 73334.16 to Rs. 73754.33. The average loan amount sanctioned from formal sources of credit was higher for Agrahara area farmers. The credit gap was higher for the farmers in Agrahara area.

In the case of informal credit, the average amount loan amount demanded ranged between Rs. 75695.75 to Rs. 94153.26. The average loan demanded by the farmers from informal source was observed to be high for Kambipura area. The informal credit sanctioned ranged between Rs. 70032.26 to Rs. 77338.98. The average loan sanctioned was higher for Kambipura area farmers. The credit gap was higher for the farmers in Kambipura area.

Credit Gap -Discriminant Analysis

To identify the factors determining the credit gap, discriminant analysis was carried out. The factors included in the analysis is credit gap, landholdings (X_1), crop loan overdue (X_2), total assets (X_3), farm income (X_4), nonfarm income (X_5), family labour (X_6), cost of production (X_7), number of crops cultivated (X_8).

Dummy values were given for the variable credit gap. The values assigned are classified distinctly. If the credit gap is below Rs. 3000 the value 1 was assigned, credit gap with in Rs. 3000 to Rs. 6000 the value 2 was assigned and for the credit gap above Rs. 6000, the value 3 was assigned. Landholdings was measured in terms of hectares. Crop loan overdues, total assets, farm income, non-farm income and cost of production in terms of Rupees. Family labour and number of crops cultivated in terms of numbers.

The estimation of mean and standard deviation of the variables are given below.

The perusal of the data revealed that the farmers in Agrahara area incurred higher cost of production, total assets and farm income that is Rs. 26006.6960, Rs. 15472.4000, and Rs. 9049.2000 respectively. The farmers in Kambipura area incurred higher cost of production (Rs. 32795.4880), croploanoverdue (Rs. 18632.0000) and farm income (Rs. 14523.1200). The farmers in Koduru area have higher cost of production (Rs. 22306.400), croploanoverdue (Rs. 32912.00) and total assets (Rs. 37216.000).

In Araleri area the farmers incurred higher total assets, cost of production, croploanoverdue that is Rs. 74632.000, Rs. 71917.7200, and Rs. 62854.000 respectively.

Table-2
Test of Equality of Group Means

Area	Variables	Wilks' Lambda	F	df1	df2	Sig.
Agrahara	LandHoldings(X_1)	0.995	0.277	2	122	0.759
	CropLoan Overdue(X_2)	0.982	1.134	2	122	0.325
	Total Assets(X_3)	0.921	5.265	2	122	0.006
	Farm Income(X_4)	0.945	3.577	2	122	0.031
	Non-Farm Income(X_5)	0.959	2.588	2	122	0.079
	Family Labour(X_6)	0.957	2.771	2	122	0.067
	Cost of Production(X_7)	0.994	0.368	2	122	0.693
	Number of Crops Cultivated(X_8)	0.995	0.281	2	122	0.756
Kambipura	LandHoldings(X_1)	0.986	0.873	2	122	0.420
	CropLoan Overdue(X_2)	0.995	0.319	2	122	0.727
	Total Assets(X_3)	0.945	3.529	2	122	0.032
	Farm Income(X_4)	0.982	1.117	2	122	0.331
	Non-Farm Income(X_5)	0.883	8.120	2	122	0.000
	Family Labour(X_6)	0.946	3.500	2	122	0.033
	Cost of Production(X_7)	0.988	0.742	2	122	0.478
	Number of Crops Cultivated(X_8)	0.925	4.937	2	122	0.009
Area	**Variables**	**Wilks' Lambda**	**F**	**df1**	**df2**	**Sig.**
Koduru	LandHoldings(X_1)	0.957	2.727	2	122	0.069
	CropLoan Overdue(X_2)	0.988	0.714	2	122	0.492
	Total Assets(X_3)	0.960	2.520	2	122	0.085
	Farm Income(X_4)	0.959	2.589	2	122	0.079
	Non-Farm Income(X_5)	0.999	0.086	2	122	0.918
	Family Labour(X_6)	0.959	2.633	2	122	0.076
	Cost of Production(X_7)	0.983	1.077	2	122	0.344
	Number of Crops Cultivated(X_8)	0.939	3.957	2	122	0.022
Araleri	LandHoldings(X_1)	0.960	2.549	2	122	0.082
	CropLoan Overdue(X_2)	0.997	0.196	2	122	0.822
	Total Assets(X_3)	0.971	1.846	2	122	0.162
	Farm Income(X_4)	0.879	8.382	2	122	0.000
	Non-Farm Income(X_5)	0.880	8.344	2	122	0.000
	Family Labour(X_6)	0.955	2.884	2	122	0.060
	Cost of Production(X_7)	0.942	3.768	2	122	0.026
	Number of Crops Cultivated(X_8)	0.933	4.385	2	122	0.014

The above table shows the significance level of the mean differences in the variables between the farmers in Agrahara, Kambipura, Koduru and Araleri area. The large values of F-test together with smaller p values indicate that the mean differences between the groups are statistically significant. Lambda varies from 0 to 1, where 0 indicates that the group means differ and 1 indicates all group means are the same. The F-test of Wilks' Lambda tells about the statistical significance of the contributions made by the variables. For the farmers in Agrahara area, the Wilks' Lambda is statistically significant for four variables, out of the total eight variables like total assets (0.006), farm income (0.031), non-farm income (0.079) and family labour (0.067).

For the farmers in Kambipura area, the Wilks' Lambda was statistically significant for four variables like total assets (0.032), non-farm income (0.000), family labour (0.033) and number of crops cultivated (0.009). In Koduru area the Wilks' Lambda is statistically significant for five out of the total eight independent variables like land holdings (0.069), total assets (0.085), farm income (0.079), family labour (0.076) and number of crops cultivated (0.022).

It can be revealed that for the farmers in Araleri area, where the Wilks' Lambda is statistically significant for six out of the total eight independent variables like land holdings(0.082), farm income(0.000),non-farm income(0.000), family labour(0.060) ,cost of production(0.026) and number of crops cultivated(0.014).

Table-3
Potency Index for Discriminating Analysis

Area	Variables	Discriminant function1	Discriminant function 2

		Loading	Squared loading	Relative eigen value	Potency value	Loading	Squared loading	Relative eigen value	Potency value	Potency index
Agrahara	LandHoldings (X₁)	0.099	0.009	0.131	0.0011	0.212	0.044	0.072	0.0031	0.0042
	Croploan Overdue (X₂)	0.035	0.001	0.131	0.0001	0.505	0.255	0.072	0.0183	0.0184
	Total Assets (X₃)	0.709	0.503	0.131	0.0658	0.529	0.279	0.072	0.0200	0.0858
	Farm Income (X₄)	0.639	0.408	0.131	0.0534	0.264	0.069	0.072	0.0049	0.0583
	Non-Farm Income (X₅)	0.377	0.142	0.131	0.0186	0.573	0.328	0.072	0.0236	0.0422
	Family Labour (X₆)	-0.307	0.094	0.131	0.0123	0.676	0.456	0.072	0.0328	0.0451
	Cost of Production (X₇)	0.151	0.023	0.131	0.0030	0.206	0.042	0.072	0.0030	0.0060
	Number of Crops Cultivated (X₈)	0.060	0.003	0.131	0.0003	-0.239	0.057	0.072	0.0041	0.0044
Kambipura	LandHoldings (X₁)	0.094	0.008	0.198	0.0015	0.342	0.116	0.107	0.0124	0.0139
	Croploan Overdue (X₂)	0.159	0.025	0.198	0.0049	-0.049	0.002	0.107	0.0002	0.0051
	Total Assets (X₃)	0.521	0.271	0.198	0.0536	0.196	0.038	0.107	0.0040	0.0576
	Farm Income (X₄)	0.164	0.026	0.198	0.0051	0.348	0.121	0.107	0.0129	0.0180
	Non-Farm Income (X₅)	0.820	0.281	0.198	0.0556	0.051	0.002	0.107	0.0002	0.0558
	Family Labour (X₆)	0.531	0.280	0.198	0.0554	-0.125	0.015	0.107	0.0016	0.0570
	Cost of Production (X₇)	0.246	0.060	0.198	0.0118	-0.041	0.001	0.107	0.0001	0.0119
	Number of Crops Cultivated (X₈)	0.234	0.054	0.198	0.0106	-0.809	0.654	0.107	0.0699	0.0805
Koduru	LandHoldings (X₁)	0,404	0.163	0.272	0.0443	0.111	0.012	0.031	0.0003	0.0446
	CroploanOverdue (X₂)	-0.117	0.013	0.272	0.0035	0.511	0.261	0.031	0.0080	0.0115
	Total Assets (X₃)	-0.381	0.145	0.272	0.0394	0.238	0.056	0.031	0.0017	0.0411
	Farm Income (X₄)	-0.380	0.144	0.272	0.0391	0.313	0.097	0.031	0.0030	0.0421
	Non-Farm Income (X₅)	-0.046	0.002	0.272	0.0005	-0.149	0.022	0.031	0.0006	0.0011
	Family Labour (X₆)	0.397	0.157	0.272	0.0427	-0.077	0.005	0.031	0.0001	0.0428
	Cost of Production (X₇)	-0.222	0.049	0.272	0.0133	0.374	0.139	0.031	0.0043	0.0176
	Number of Crops Cultivated (X₈)	0.420	0.176	0.272	0.0478	0.742	0.550	0.031	0.0170	0.0648
Araleri	LandHoldings (X₁)	0.414	0.171	0.224	0.0383	0.247	0.061	0.058	0.0035	0.0418
	Croploan Overdue (X₂)	0.110	0.012	0.224	0.0026	-0.091	0.008	0.058	0.0004	0.0030
	Total Assets (X₃)	0.224	0.050	0.224	0.0112	0.573	0.328	0.058	0.0190	0.0302

Farm Income (X₄)	0.767	0.588	0.224	0.1317	0.319	0.101	0.058	0.0058	0.1375
Non-Farm Income (X₅)	-0.765	0.585	0.224	0.1310	0.318	0.101	0.058	0.0058	0.1368
Family Labour (X₆)	-0.426	0.181	0.224	0.0405	-0.341	0.116	0.058	0.0067	0.0472
Cost of Production (X₇)	0.392	0.153	0.224	0.0342	0.688	0.473	0.058	0.0274	0.0616
Number of Crops Cultivated (X₈)	-0.567	0.321	0.224	0.0719	0.120	0.014	0.058	0.0008	0.0727

The above table shows the calculation of the potency index of the farmers in Agrahara, Kambipura, Koduru and Araleri area. Loadings represent the correlation between the independent variables and the discriminant score. Potency index represents the total discriminating effect across discriminant functions. The potency indices of Agrahara area reveals that total assets(X_3) has the highest potency index (0.0858) followed by farm income(X_4) with the value of 0.05830.For the other variables like land holdings, crop loan overdue, non-farm income, family labourers, cost of production and number of crops cultivated, the potency index values were low.

The analysis of potency indices of the farmers in Kambipura area revealed that the number of crops cultivated(X_8) has the highest potency index (0.0805) and for crop loan overdue(X_2) the potency index was low that is it was 0.0051.In Koduru area has highest potency index was for the variable landholdings(X_1),it was 0.0446 and the second highest potency index was for the variable family labourers(X_6) with the value of 0.0428.The other variables like crop loan overdue,total assets, farm income,non-farm income, cost of production and number of crops cultivated had a very low loading or low potency index.

In the case of the farmers in Araleri area, highest potency index was for farm income (0.1375) followed by non-farm income(0.1368).The other variables like land holdings,croploan overdue,total assets, family labour, cost of production and number of crops cultivated had a very low potency index.

The farmers in the Agrahara, Kambipura, Koduru and Araleri area opined that they borrowed more of formal credit from Co-operative Banks and from money lenders. The distribution of formal credit was high in Araleri area and informal credit in Kambipura area.

VII. CONCLUSIONS

The analysis brings out the credit gap in agricultural credit. The amount of crop loan overdues, farm income, land holdings, total assets, family labour, cost of production and number of crops cultivated emerged as significant factor in explaining the variations in the credit gap of farmers in Agrahara, kambipura,Koduru and Araleri area.

VIII. SUGGESTIONS

- Lending approach should be based on potentiality of the area.
- Procedure for sanctioning loan should be relaxed.
- Appropriate policy measures should be adopted to restrict the fall in prices of agricultural commodities.

IX. BIBLIOGRAPHY

[1] Samuel Elias,Isah Musa Ahmad and Patil B.L (2015),"The Determinants of access to Agricultural Credit for Small and Marginal Farmers in Dharwad District,Karnataka,India",Research Journal of Agriculture and Forestry Sciences,Vol.35,No.5,PP.1-6.

[2] Amao J.O (2013), "Determinants of Credit Demand among Arable Crop farmers in Odo-Otin Local Government Area of Osun State,Nigeria",American-Eurasian Journal of Agriculture and Environment Science,Vol.13,No.10,PP.1382-1389.

[3] Ololade and Olaganju (2013)," Determinants of Access to Credit among Rural Farmers in Oyo State, Nigeria",Global Journal of Science Frontier research Agriculture and Veterinary Sciences",Vol.13,No.2,PP.2-7.

[4] Khandher, S.R. and Binswanger, H.P. (1989), The Effect of Formal Credit on Output and Employment in India, Working Paper 277, The World Bank.