Microfinance and its economic impact on farmers in Mohali district of Punjab

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Abstract: 'Microfinance', as the name suggests, is the facility provided to certain sections of society in the form of small sized credit. The purpose of microfinance is to improve the economic standards of people while improving their livelihood. Microfinance is assumed to reduce poverty levels among people and is supposed to be inversely proportional to poverty. It means, that higher the microfinance lesser will be the poverty in a country. The concept of microfinance has penetrated through an array of medium in order to cater to the needs of those who do not have easy access to finance, either due to social or economic conditions. The study aims to find out the economic impact of microfinance on lives of farmers in the Mohali district of Punjab. An effective sample of 93 respondents was used to gather the requisite information and undergo analysis. Descriptive statistics along with T-test and one-way ANOVA has been used to analyse the data. The research concludes with an overall positive impact on economic well-being of farmers in the district under study.

Keywords: microfinance; microcredit; economic impact; social impact; SHGs.

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1   Introduction

Microfinance is "the provision of financial services to low-income poor and very poor self-employed people." Microfinance includes savings and credit in general while other financial services such as insurance and payment services may also come under its ambit.

> "Microcredit, or microfinance, is banking the unbankables, bringing credit, savings and other essential financial services within the reach of millions of people who are too poor to be served by regular banks, in most cases because they are unable to offer sufficient collateral. In general, banks are for people with money, not for people without." (van Maanen, 2004)

> "(Microcredit) is based on the premise that the poor have skills which remain unutilized or underutilized. It is definitely not the lack of skills which make poor people poor…charity is not the answer to poverty. It only helps poverty to continue. It creates dependency and takes away the individual's initiative to break through the wall of poverty. Unleashing of energy and creativity in each human being is the answer to poverty." (Yunus, 2003).

Credit facilities to poor have been a major contributor to improving the standard of living of thousands of households across India. Lack of credit has been the main obstacle to so many problems of people below poverty line. As per 'Microfinance India – State of the Sector report 2010', a comparative analysis of region wise performance of microfinance have been measured. Microfinance penetration among poor index (MPPI) is used for the purpose of a region wise comparison.

As it is clear from Table 1, southern region is better in comparison to other regions in India. However, the central and northern regions are still in the process of utilising the services of microfinance institutions in a better way.

Table 1   Comparison of MPPI with respect to region

Region	North	North East	East	Central	West	South
MPPI	0.41	0.71	0.74	0.32	0.81	3.40

Penetration of microfinance is still significant in certain parts of the country looking at the emerging need for the same and its potential for being able to solve problems of the poor.

2   Objectives

The study aims to fulfil the following two objectives:

1   to study the meaning and significance of microfinance

2   to study farmer's perception of microfinance as a tool for economic upliftment.

3   Research methodology

The research design used for the study is the mixed approach. Both qualitative and quantitative research methods are used for the study. The study is descriptive and

secondary data is used to understand the objectives of the study. Primary data was collected for a better understanding of the subject, including personal interviews and observational studies.

3.1 Study population and sample

The target population is farmers in the Mohali district of Punjab. Convenient sampling procedure was used to select 100 farmers for study. Rejecting the invalid responses by respondents, the effective sample size turned out to be 93.

3.2 Data sources

Both primary and secondary data was employed for the research study. The researcher reviewed relevant literature from secondary sources to assemble information as well as expand knowledge base to make conclusions about the subject matter. Journals, publications and the internet were employed to understand the concepts, key components, principles and dynamic operations of the microfinance institutions.

3.3 Research instrument

Structured questionnaire has been used to collect data from respondents in order to get a standard form of answers or responses. The use of interview and observation helped to tailor the questions asked to the respondent in order to get the information needed for this project.

3.4 Data analysis

Primary data is collected from the respondents (farmers of Mohali district, Punjab) and analysed using descriptive statistics. T-test is used to study the perception of respondents with respect to microfinance as a tool for economic upliftment, based on gender. One-way ANOVA has been used to find out any significant variation in the perception of respondents as per age group.

4 Microfinance and farmers

Microfinance loans are rarely used to finance crop farming enterprises and a significant part of it is utilised to finance trading business and processing/manufacturing activities, for livestock or for consumption. Out of several reasons for this, some of the main reasons include the terms and conditions of microfinance, amount of credit and repayment schedules that generally fails to fit in with the financial requirements of farm sector. Also, it has been seen that there exists a predominance of women borrowers with respect to microfinance. However, there have been several schemes and programs launched by NABARD exclusively for farmers.

Mr. Brij Mohan, who is a former Executive Director of SIDBI, speaks about the future of micro credit in agricultural sector in India. In his report he concluded that "Micro finance institutes are playing instrumental role in formulating the financial policies relating to agricultural sectors and he also suggest that the micro finance institutes focused on credit policies to offer better services to farmers in rural India" (Brij Mohan report submitted to SIDBI).

Dana (2007) considers entrepreneurship to be an economic undertaking at individual, small and large firm levels, in three main economic activity sectors: the bazaar, the state controlled arena and the firm type market and four parallel economic activities: informal (e.g., bartening, unrecorded sales from street vendors), internal (e.g., subsistence agriculture, covert and fictitious).

There is also an interrelationship between entrepreneurship and the economic conditions of people. Also, culture has been another factor inhibiting the entrepreneurship development in India (Dana, 2000). However, the paper focuses upon microfinance for farmers and its economic impact on their lives.

5   Data results

Respondents of the study were asked to answer to questions related to economic empowerment of rural farmers through microfinance. The purpose of the study is to understand whether provision of microfinance plays a significant role in economic upliftment. Data has been analysed using IBM SPSS Statistics 23.

Descriptive analysis has been carried out for all the variables of economic impact. Frequencies have been calculated and represented using relevant diagrams.

Respondents have been bifurcated into two groups based on gender, and independent sample T-test has been performed to understand the perception of males and females with respect to economic upliftment due to microfinance.

Also, the respondents have been grouped into three categories as per their age, and one-way ANOVA has been performed to see if there is any significant difference in the perceptions depending upon age group of the respondent.

5.1   Frequencies

SPSS has been used to calculate frequencies of the variables as per the data collected. The relevant notes and the output result of SPSS generated are shown in Table 2.

Figure 1   Gender frequency (see online version for colours)
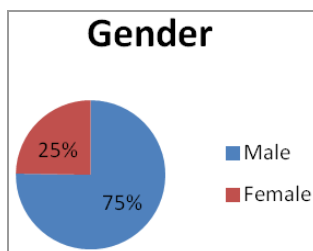
Figure 2 Age frequency (see online version for colours)
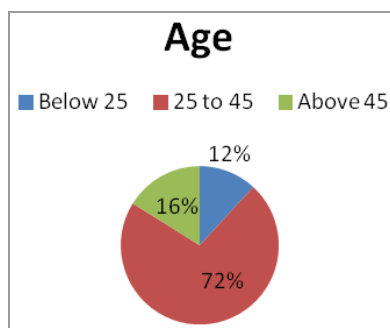
Figure 3 Average income frequency (see online version for colours)
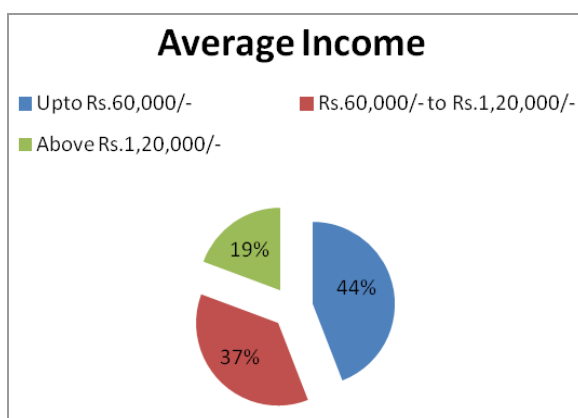
Table 2 Statistics

		Gender	Age	Average_income
N	Valid	93	93	93
	Missing	0	0	0
Mean		1.2473	2.04	1.7527
Median		1.0000	2.00	2.0000
Mode		1.00	2	1.00
Std. deviation		.43379	.530	.76123
Variance		.188	.281	.579
Range		1.00	2	2.00

Table 3 Gender

		Frequency	Percent	Valid percent	Cumulative percent
Valid	1.00	70	75.3	75.3	75.3
	2.00	23	24.7	24.7	100.0
	Total	93	100.0	100.0	

Table 4   Age

		Frequency	Percent	Valid percent	Cumulative percent
Valid	1	11	11.8	11.8	11.8
	2	67	72.0	72.0	83.9
	3	15	16.1	16.1	100.0
	Total	93	100.0	100.0	

Table 5   Average_income

		Frequency	Percent	Valid percent	Cumulative percent
Valid	1.00	41	44.1	44.1	44.1
	2.00	34	36.6	36.6	80.6
	3.00	18	19.4	19.4	100.0
	Total	93	100.0	100.0	

5.2   Descriptives

The descriptive statisctics indicate a domination of males over the number of females, as there are 75% males among the respondents, while only 25% are females. Taking into consideration the age, it has been found that a majority of the respondents, i.e., 72% of them, fall in the age bracket of 25–45 years. The income descriptive indicates that 44% of respondents earn less than Rs. 60,000 per annum, hence reflecting an economically weak status of farmers in the district.

Table 6   Descriptive statistics

	N	Minimum	Maximum	Mean	Std. deviation
Income	93	2.00	5.00	3.8280	.95124
Household_req	93	2.00	5.00	3.5591	1.06794
Diet_req	93	2.00	5.00	3.5484	1.04794
Saving	93	2.00	5.00	3.6774	.80974
Investment	93	2.00	5.00	3.7527	.71712
Financial_stress	93	2.00	5.00	3.8495	.60696
Income_fluctuation	93	2.00	5.00	3.4086	.88755
increased_wealth	93	1.00	4.00	3.2151	.68919
better_seeds	93	2.00	5.00	4.1634	.85208
better_fertilizers	93	2.00	5.00	3.9892	.65100
better_pesticides	93	2.00	5.00	3.4839	.98481
increased_production	93	2.00	5.00	3.7204	.78527
Quality_production	93	2.00	5.00	3.3226	.73958
Better_AgriTools	93	2.00	5.00	3.6667	.83839
Dependence_pvt.lenders	93	2.00	5.00	3.7204	.90127
Regularity_of_loan.repayment	93	1.00	5.00	3.3226	.95737
Valid N (listwise)	93				

The output confirms that there is increase in income, reduction in stress due to financial conditions, ability to purchase better fertilisers and seeds among other variables of economic upliftment.

5.3 T-test

Independent sample T-test has been conducted for the variables of economic impact construct. The independent groups studied are classified as per gender, i.e., male and female groups.

The hypotheses are formulated as follows:

H0 There is no significant difference in the means of two groups, i.e., males and females.

H1 There is a significant difference in the means of two groups, i.e., males and females.

5.3.1 Variables: income, savings, investment

Independent sample T-test performed on the basis of gender for variables of economic upliftment, namely, income, savings and investment. As can be seen in Table 8, the p-value for all the three variables is greater than 0.05 and hence the null hypothesis is accepted. This means, that there is no significant difference in the means of two groups, i.e., males and females. Hence, microfinance is equally beneficial for both male and female rural farmers.

Table 7 Group statistics

	Gender	N	Mean	Std. deviation	Std. error mean
Income	1.00	70	3.8714	.96190	.11497
	2.00	23	3.6957	.92612	.19311
Saving	1.00	70	3.6714	.81154	.09700
	2.00	23	3.6957	.82212	.17142
Investment	1.00	70	3.7143	.66251	.07919
	2.00	23	3.8696	.86887	.18117

5.4 One-way ANOVA

One-way ANOVA has been performed using SPSS to study the perception on economic upliftment due to provision of microfinance to rural farmers. The test has been performed for the all the variables of the economic impact construct with respect to three major groups, classified as per ages. Age group '1' representing respondents below 25 years of age, age group '2' representing respondents within the age group of 25 to 45 years and age group '3' representing respondents above 45 years of age.

The hypotheses are formulated as follows:

H0 There is no significant difference in means of the three age groups.

H1 There is a significant difference in means of the three age groups.

Table 8   Independent samples test

		Levene's test for equality of variances		T-test for equality of means					95% confidence interval of the difference	
		F	Sig.	t	df	Sig. (two-tailed)	Mean difference	Std. error difference	Lower	Upper
Income	Equal variances assumed	.010	.919	.767	91	.445	.17578	.22914	−.27937	.63093
	Equal variances not assumed			.782	38.805	.439	.17578	.22474	−.27888	.63044
Saving	Equal variances assumed	.004	.950	−.124	91	.902	−.02422	.19566	−.41289	.36444
	Equal variances not assumed			−.123	37.129	.903	−.02422	.19696	−.42326	.37482
Investment	Equal variances assumed	.462	.498	−.900	91	.370	−.15528	.17253	−.49799	.18743
	Equal variances not assumed			−.785	30.849	.438	−.15528	.19772	−.55862	.24806

Table 9 Descriptives

		N	Mean	Std. deviation	Std. error	95% confidence interval for mean		Minimum	Maximum
						Lower bound	Upper bound		
Income	1	11	4.0909	1.04447	.31492	3.3892	4.7926	2.00	5.00
	2	67	3.8955	.88992	.10872	3.6785	4.1126	2.00	5.00
	3	15	3.3333	1.04654	.27021	2.7538	3.9129	2.00	5.00
	Total	93	3.8280	.95124	.09864	3.6321	4.0239	2.00	5.00
Saving	1	11	3.7273	1.00905	.30424	3.0494	4.4052	2.00	5.00
	2	67	3.6567	.78917	.09641	3.4642	3.8492	2.00	5.00
	3	15	3.7333	.79881	.20625	3.2910	4.1757	2.00	5.00
	Total	93	3.6774	.80974	.08397	3.5107	3.8442	2.00	5.00
Investment	1	11	3.9091	.83121	.25062	3.3507	4.4675	2.00	5.00
	2	67	3.8060	.67955	.08302	3.6402	3.9717	2.00	5.00
	3	15	3.4000	.73679	.19024	2.9920	3.8080	2.00	5.00
	Total	93	3.7527	.71712	.07436	3.6050	3.9004	2.00	5.00

Table 10   Test of homogeneity of variances

	Levene statistic	df1	df2	Sig.
Income	1.378	2	90	.257
Saving	.331	2	90	.719
Investment	.230	2	90	.795

Table 11   ANOVA

		Sum of squares	df	Mean square	F	Sig.
Income	Between groups	4.736	2	2.368	2.715	.072
	Within groups	78.511	90	.872		
	Total	83.247	92			
Saving	Between groups	.103	2	.051	.077	.926
	Within groups	60.220	90	.669		
	Total	60.323	92			
Investment	Between groups	2.325	2	1.163	2.326	.104
	Within groups	44.987	90	.500		
	Total	47.312	92			

The test was conducted to see whether there exists a difference in opinions of different age groups with respect to microfinance as a tool for economic upliftment. The variables studies are income, savings and investment, which intends to prove that microfinance helps in increasing the level of income, savings and investment of people. As can be seen in Table 11, showing the results of ANOVA for the said variables, the significance values are 0.072, 0.926 and 0.104 respectively. The values are greater than 0.05 and hence the null hypothesis is accepted. This means that there is no significant difference in the means of the three sample groups.

6   Findings

The study was undertaken to understand the various microfinance schemes available for rural farmers in Punjab. The research area was restricted to the district of Mohali (Sahibzada Ajitsingh Nagar) of Punjab, keeping in view the time and resource constraints. The respondents included rural farmers of Mohali district of Punjab. The aims of the study included understanding the perceptions of rural farmers with respect to microfinance as a tool for economic upliftment.

The major findings of the study are as follows:

- there is a significant economic impact of microfinance on rural farmers in Mohali district of Punjab

- the data analysis results reveal that the income of farmers increases with the availability of microfinance

- The results show that there is an increase in savings after availing microfinance by farmers

- farmers are able to invest their savings efficiently. However, female farmers hold a preference to save, than invest

- consumption smoothing was used as a variable to study economic impact. With a fluctuation in income, the essential consumption of the household remains unaffected after availing microfinance.

7 Suggestions

Though there are a number of microfinance schemes launched by the Union Government for farmers, however, the penetration of banking and NBFC sector in rural areas should be increased for better financial inclusion.

Most of the farmers availing microfinance schemes are large farmers. While, small and marginal farmers are devoid of microfinance due to barriers of collateral or accessibility issues.

The awareness with respect to microfinance schemes must be increased through sources of personal approach. It would enable individual query handling and better understanding of schemes by farmers.

A mechanism for supervision of the usage of credit received my farmers would help track whether the funds are used for the intended purpose. Monitoring the investment would enable the right use of microfinance.

Barriers of microfinance may be addressed by increasing literacy and awareness among rural farmers, developing a monitoring system for both MFIs and the lenders so as to ensure the credit reaches the right person and is utilised for the right purpose.

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