A STUDY ON REPAYMENT BEHAVIOR OF MEMBERS OF MICRO FINANCE INSTITUTIONS– AN EMPIRICAL STUDY IN UDAIPUR DISTRICT, RAJASTHAN

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ABSTRACT

Microfinance has come to play a major role in many gender and development strategies because of its direct relationship to both poverty alleviation and to the empowerment of women. Women are the most crucial elements of the social fabric and are playing a pivotal role in the socioeconomic scenario in Rajasthan. Microfinance programs among the SHGs in India have been promoted for their positive economic impact and the belief that they empower women. Microfinance programs among the JLGs in India have been promoted for their positive economic impact and the belief that they empower women and also improve repayment to MFI. The survey was conducted on around 100 respondents from various JLGs of Udaipur district, Rajasthan and the analysis was done to study the loan profile of the members of MFIs and their repayment behavior. Chi square test has been used to find the association/non-association between variables and it was found that all the demographic determinants like age, marital status, education, ownership of house, type of family and number of family members affect the amount of loan taken by members, the loan repayment capability of members of MFIs and also it was found that demographic factors affect the reason of default done by members of MFIs.

Key Words: Default, Joint liability Groups, Microfinance, Repayment,

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Introduction

Micro finance programs are being treated as a key strategy in addressing the development issues across nations since the last three decades. Microfinance has also gained huge prominence worldwide in the arena of economic development enhancement. The vision of micro financial systems worldwide is to serve the impoverished majority, help them to lift them out of poverty, and make them full participants in their country's social and economic development. Microfinance programs have been increasingly promoted in India for their positive economic impact and the belief that they empower women. Within the South Asian context, women empowerment is a process in which women challenge the existing norms and culture, to effectively improve their well-being. Micro finance system is an organized strategy that offers several types of financial services which helps in the development of rural and urban masses. In India micro finance activity has been playing a dominant role for the upliftment of the rural as well as the urban poor. The suffering of rural as well as urban poor has made them to realize that they should get united under some banner in order to have a better existence and such a banner was named as Self Help Group (SHGs). It has made them think how they can transform their lives, if they were organized and united. Thereby the benefits accruing on this account could be shared by them. This objective has made them to become well organized and a strong self supporting group.

Meaning of Microfinance

Microfinance is a type of banking service that is provided to unemployed or low-income individuals or groups who would otherwise have no other means of gaining financial services. Ultimately, the goal of microfinance is to give low income people an opportunity to become self-sufficient by providing a means of saving money, borrowing money and insurance. Microfinance is usually understood to entail the provision of financial services to micro-entrepreneurs and small businesses, which lack access to banking and related services due to the high transaction costs associated with serving these client categories. The two main mechanisms for the delivery of financial services to such clients are (1) relationship-based banking for individual entrepreneurs and small businesses; and (2) group-based models, where several entrepreneurs come together to apply for loans and other services as a group.

Microfinance is a movement whose object is "A world in which as many poor and near-poor households as possible have permanent access to an appropriate range of high quality financial services, including not just credit but also savings, insurance, and fund transfers." Many of those who promote microfinance generally believe that such access will help poor people out of poverty. For others, microfinance is a way to promote economic development, employment and growth through the support of micro-entrepreneurs and small businesses.

Review of Literature

(**Sanae Ito, 2010**) examined the ways in which the notion of social capital was employed to explain the success of microfinance programmes. He argued that various types of social interactions that were generated around successful microfinance operations were randomly called 'social capital'. This mean that the presence of social capital did not tell much about what sort of microfinance programmes, in terms of design and implementation, could be regarded as good practice. (**Jorge Albert to Gamez- Gutierrez, 2012**) found that women had a leading role in the allocation and use of microcredit, individually and in Joint Liability Loans, because she was one of the main pillars of the family. He analyzed the role of women in microcredit focusing on education and gender gap reduction. He finally studied the problems and weaknesses of microcredit. (**Benjamin Feigenberg, 2010**) showed that the increases in social interaction among clients more than a year later were associated with improvements in informal risk-sharing and reductions in default. A second field experiment among a subset of clients provided direct evidence that more frequent interaction increased economic cooperation among clients. Their results indicated that group lending was successful in achieving low rates of default without collateral not only because it harnessed the existing social capital, as has been emphasized in the literature, but also because it built new social capital among participants.(**Venkata Vijay Kumar, 2010**) attempted to survey the literature relevant to the individual and joint liability model and built a theoretical driven model in order to understand the factors which impact both joint liability and individual liability in terms of default rate. Loan size, interest rate and cost of operation had been found active factors to be impacting default rate for both the joint liability and individual liability. (**Gustavo a .Barboza, 2008**) supported micro credit as a feasible alternative to successfully provide financial resources to the poor, when controlling for asymmetric information. His study indicated that learning by association through peer mentoring was a significant determinant in explaining high repayment rates, whereas peer monitoring was not.

(Ben Soltane Basse, 2008) lighted on the main factors vulnerable to affect the repayment performance of group lending. He found that tie up with the loan officers was able to improve positively the repayment performance of credit groups and also found that repayment was also influenced by the internal rules of conduct, the same business, the knowledge of the other members of the group before his formation, the peer- pressure the self selection and the non financial services. **(Klaus Abbinki, 2006)** found that microfinance programs provided poor people with small loans given to jointly liable self-selected groups. Follow-up loans provided incentives to repay. In this study they experimentally investigated the influence of those features on strategic defaults. Each group member invested an individually risky project, whose outcome was known only to the individual investors. Subjects decide whether to contribute to group repayment or not. Only those with successful projects could contribute. The experiment ended if too few repay. This investigated group size and social ties effected and observed robust high repayment rates. Group lending outperformed individual lending. Self-selected groups showed high but less stable contributions. **(Niels Hermes, 2006)** analyzed whether the effects of monitoring and social ties of the group leader and other group members on repayment performance of groups differed, using data from an extensive questionnaire held in Eritrea among participants of 102 groups. They found that social ties of the group leader did have a positive effect on repayment performance of groups, whereas this was not true for social ties of other group members. **(Joel M. Guttman, 2006)** developed a model of the strategic interaction of borrowers in the framework of group lending, in an environment characterized by moral hazard. He found that even without monitoring, repayment performance under group lending could compare favorably to such performance under individual liability. **(Chowdhury, 2005)** illustrated the importance of dynamic incentives in microfinance programs and showed that without dynamic incentives, group lending scheme could involve under- monitoring with the borrowers investing in undesirable projects. **(Marie Godquin, 2004)** analyzed the impact of Group lending, nonfinancial services and dynamic incentives on repayment performance and tested for endogeneity of loan size and use of instrumental variables to correct it. In the second section of the study, they used a comparative analysis of the determinants of the repayment performance and of loan size in order to make policy recommendation on the allocation of loans by MFIs. **(Denotes Vigenina, 2004)** analyzed the incentive mechanism of individual micro-lending contracts and compared its key factors with those of joint liability loan contracts. They found that

there was no better design than a combination of individually based and joint- liability loan contracts if a micro-lender aimed to reach all types of micro-entrepreneurs in certain. **(Abbinki, Irlenbusch, and Renner 2002)** argued that to guarantee the loan for non repayment constituted the basic problem of group lending. Thus microfinance institutions resorted in their methodologies to processes that helped members to repay their installments. The self-selection constituted one of these principals' processes since the strong social ties strengthened the methodology of group lending. **(Gangopadhyay and Lensink, 2001)** found that the Joint Liability incited group members to select themselves in a free and efficient manner that offered the MFI the possibility to use the social guarantee and the Joint Liability as a means to supervise borrowers . **(Maitreesh Ghatak, 1999)** analyzed how joint liability lending promoted screening, monitoring, state verification and enforcement of repayment. He also highlighted how joint liability worked in practice.

Objectives

From the above review of literature, the following objectives were found for the study

1. To study the socio economic background of members of microfinance institutions in Udaipur District.
2. To study the loan profile of members of microfinance Institutions.
3. To study the effect of demographic determinants on the repayment behavior of the members of microfinance institutions.

Hypothesis framed for the Study

Ho1: There is no significant association between demographic determinants and the Period of membership in MFIs.

Ho2: There is no significant association between demographic determinants and amount of loan taken from MFIs.

Ho3: There is no significant association between demographic determinants and loan repayment capability of members of MFIs.

Ho4: There is no significant association between demographic determinants and default done by members of MFIs.

Ho5: There is no significant association between demographic determinants and the reasons of default done by members of MFIs.

Demographic determinants were selected age, religion, marital status, educational qualification, annual Income, and type of family.

Research Methodology

The study used was descriptive in nature. A total of 120 well structured and pre tested questionnaires were administered for the study of which 100 were complete in all respect and used for the study.. Chi Square test was used to find the association/ non association between the variables. The use of Chi-square has been made to draw the meaningful inference from the study. All this was done with the help of statistical software packages and MS Excel. Chi-square test was used to find association between the selected variables.

Chi-square

The Chi-square statistics is used to test the statistical significance of the observed association in a cross-tabulation. It assists us in determining whether a systematic association exists between two variables. The null hypothesis **Ho** is that there is no association between the variables. The test is conducted by computing the cell frequencies. These expected cell frequencies, denoted **fe**, are then compared to the actual observed frequencies *fo*, found in the cross-tabulation to calculate the chi-square statistics. The greater the discrepancies between the expected and actual frequencies, the larger the value of the statistic. Assume the cross-tabulation has r rows and c columns and a random sample of n observation. Then the expected frequency for each cell can be calculated by using a simple formula shown below in equation (1):

$$fe = \frac{nrnc}{n}$$

Where nr = total number in the row, nc = total number in the column, n = total sample size

Then the value of chi-square is calculated by using the formula shown in equation (2):

$$\chi 2 = \sum \frac{(fo - fe)}{fe}$$

An important characteristic of the chi-square statistics is the number of degrees of freedom (df) associated with it. In general, the number of degree of freedom is equal to the number of observations less than number of constraints needed to calculate a statistical term. In the case of

chi-square statistic associated with a cross-tabulation, the number of degree of freedom is equal to the product of number of rows (r) less one and the number of columns (c) less one i.e. df = (r - 1) x (c - 1). The null hypothesis **Ho** of number of association between the two variables will be rejected only when the calculated value of the test statistics is greater than the critical value of chi-square distribution with the appropriate degree of freedom.

Data Analysis and Interpretation

Demographic Profile of the respondents

Table 1		Frequency	Percent
Age	< 25 years	26	26.0
	25-35 years	43	43.0
	35-45 years	27	27.0
	> 45 years	4	4.0
	Total	100	100.0
Religion	Hindu	81	81.0
	Christian	3	3.0
	Muslim	16	16.0
	Total	100	100.0
Marital status:	Married	82	82.0
	Divorce/Widow	18	18.0
	Total	100	100.0
Education	Illiterate	50	50.0
	Senior secondary	30	30.0
	Higher Secondary	20	20.0
	Total	100	100.0
Annual Income	< Rs 100000	76	76.0
	Rs 100000-200000	2	2.0
	Rs 200000-300000	22	22.0
	Total	100	100.0
Ownership of house	Self	45	45.0
	Rented	43	43.0
	Mortgage	12	12.0
	Total	100	100.0
Type of	Joint	53	53.0

Family	Nuclear	47	47.0
	Total	100	100.0
Family Members	< 2 members	25	25.0
	3 members	12	12.0
	4 members	38	38.0
	> 5 members	25	25.0
	Total	100	100.0

Interpretation: From the above we find that maximum (43%) respondents were of the age group of 25-35 years, were Hindus (81%), and were married (82%), were illiterate (50%),had an annual income of less than Rs. 1,00,000/-(76%), had their own house(45%),lived in joint family(53%)and had 4 members (38%)

Association between demographic determinants and the period of membership in MFIs

Table 2(A)					
		Period of membership of MFI			
		< =12 months	13-23 months	> = 24 months	Total
Age	< 25 years	26	0	0	26
	25-35 years	16	20	7	43
	35-45 years	5	20	2	27
	> 45 years	0	4	0	4
Total		47	44	9	100
Religion	Hindu	35	37	9	81
	Christian	3	0	0	3
	Muslim	9	7	0	16
Total		47	44	9	100
Marital status:	Married	47	30	5	82
	Divorce/Widow	0	14	4	18
Total		47	44	9	100
Education	Illiterate	28	22	0	50
	Senior secondary	7	18	5	30
	Higher Secondary	12	4	4	20
Total		47	44	9	100
Annual Income	< Rs 100000	47	26	3	76
	Rs 100000-200000	0	2	0	2
	Rs 200000-300000	0	16	6	22

	Total	47	44	9	100
Ownership of house	Self	22	19	4	45
	Rented	24	16	3	43
	Mortgage	1	9	2	12
	Total	47	44	9	100
Type of Family	Joint	34	15	4	53
	Nuclear	13	29	5	47
	Total	47	44	9	100
Family Members	< 2 members	25	0	0	25
	3 members	12	0	0	12
	4 members	8	25	5	38
	> 5 members	2	19	4	25
	Total	47	44	9	100
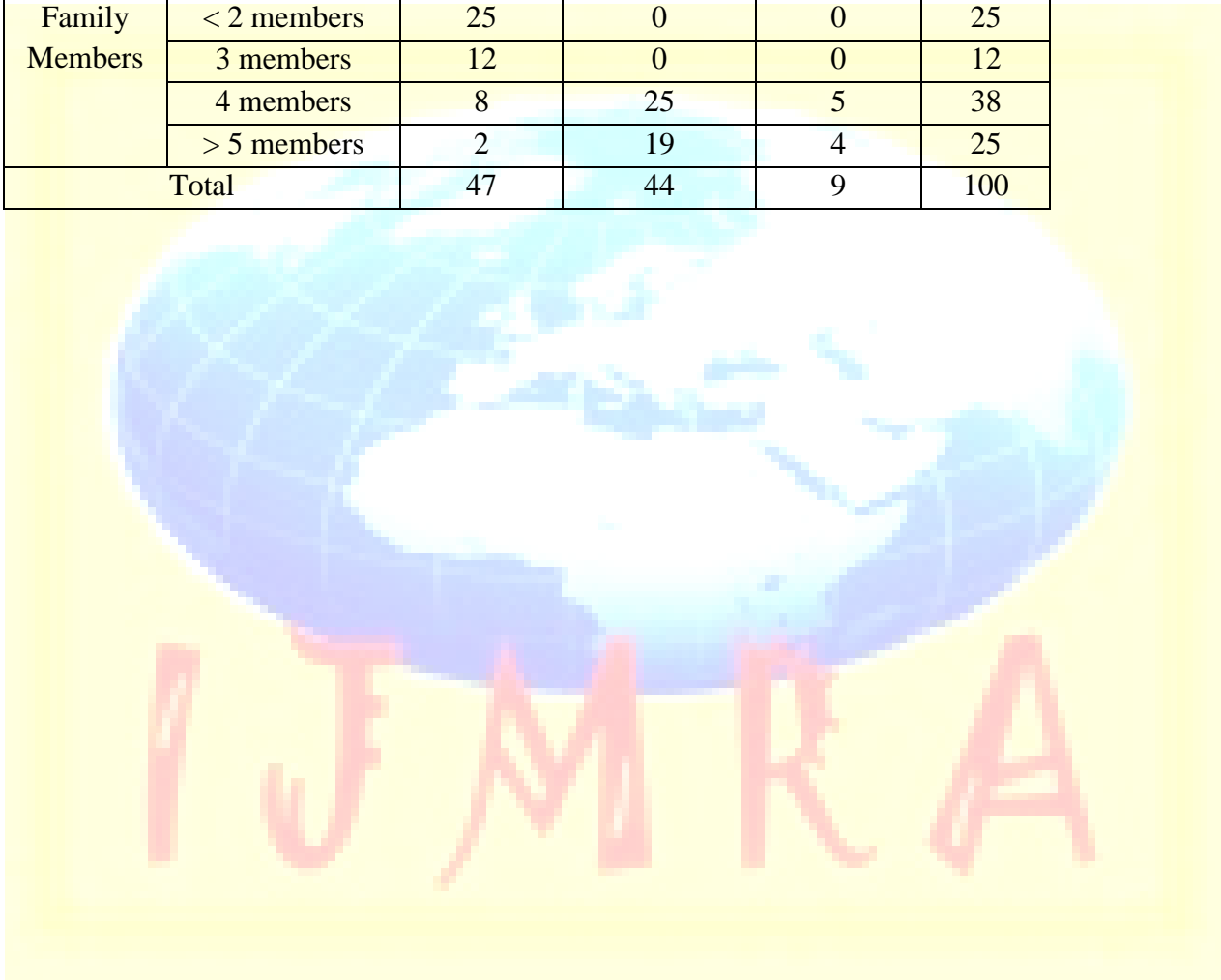
Null Hypothesis

Ho1: There is no significant association between demographic determinants of the respondents and their period of membership in MFIs.

Table 2 (B)

	Age	Religion	Marital Status	Education	Annual Income	Ownership of House	Type of Family	Family Members
Chi-Square Calculated value	48.166	5.815	20.273	18.668	32.547	8.646	13.638	67.267
Degree of Freedom	6	4	2	4	4	4	2	6
Chi-Square Table Value	12.59	9.49	5.99	9.49	9.49	9.49	5.99	12.59
Accepted/Rejected	Rejected	Accepted	Rejected	Rejected	Rejected	Accepted	Rejected	Rejected

Level of Significance: 5%

Interpretation: The null hypothesis is accepted in case of religion and ownership of house indicating no significant association but has been rejected in case of age, marital status. Educational level, annual income, type of family and number of family members indicating that there is significant association between these mentioned demographic determinants and their period of membership in MFIs. The above table 2(B) indicates that except religion and ownership of house, all other demographic factors affect the period of membership in MFIs.

Association between demographic determinants and amount of loan taken from MFIs.

Table 3 (A)						
		Amount of Loan taken				
		< Rs 5000	Rs 5000-10000	Rs10000-25000	> Rs25000	Total
Age	< 25 years	26	0	0	0	26
	25-35 years	7	5	24	7	43
	35-45 years	0	8	17	2	27
	> 45 years	0	0	4	0	4
	Total	33	13	45	9	100
Religion	Hindu	22	9	41	9	81
	Christian	3	0	0	0	3
	Muslim	8	4	4	0	16
	Total	33	13	45	9	100
Marital status:	Married	33	13	27	9	82
	Divorce/Widow	0	0	18	0	18
	Total	33	13	45	9	100
Education	Illiterate	18	10	22	0	50
	Senior secondary	3	3	15	9	30
	Higher Secondary	12	0	8	0	20
	Total	33	13	45	9	100
Annual Income	< Rs 100000	33	10	26	7	76
	Rs 100000-200000	0	0	2	0	2
	Rs 200000-300000	0	3	17	2	22
	Total	33	13	45	9	100
Ownership	Self	22	0	19	4	45

of house	Rented	11	9	20	3	43
	Mortgage	0	4	6	2	12
Total		33	13	45	9	100
Type of Family	Joint	33	1	15	4	53
	Nuclear	0	12	30	5	47
Total		33	13	45	9	100
Family Members	< 2 members	25	0	0	0	25
	3 members	8	4	0	0	12
	4 members	0	7	26	5	38
	> 5 members	0	2	19	4	25
Total		33	13	45	9	100

Null Hypothesis

Ho2: There is no significant association between demographic determinants and Amount of loan taken from MFIs..

Table 3 (B)

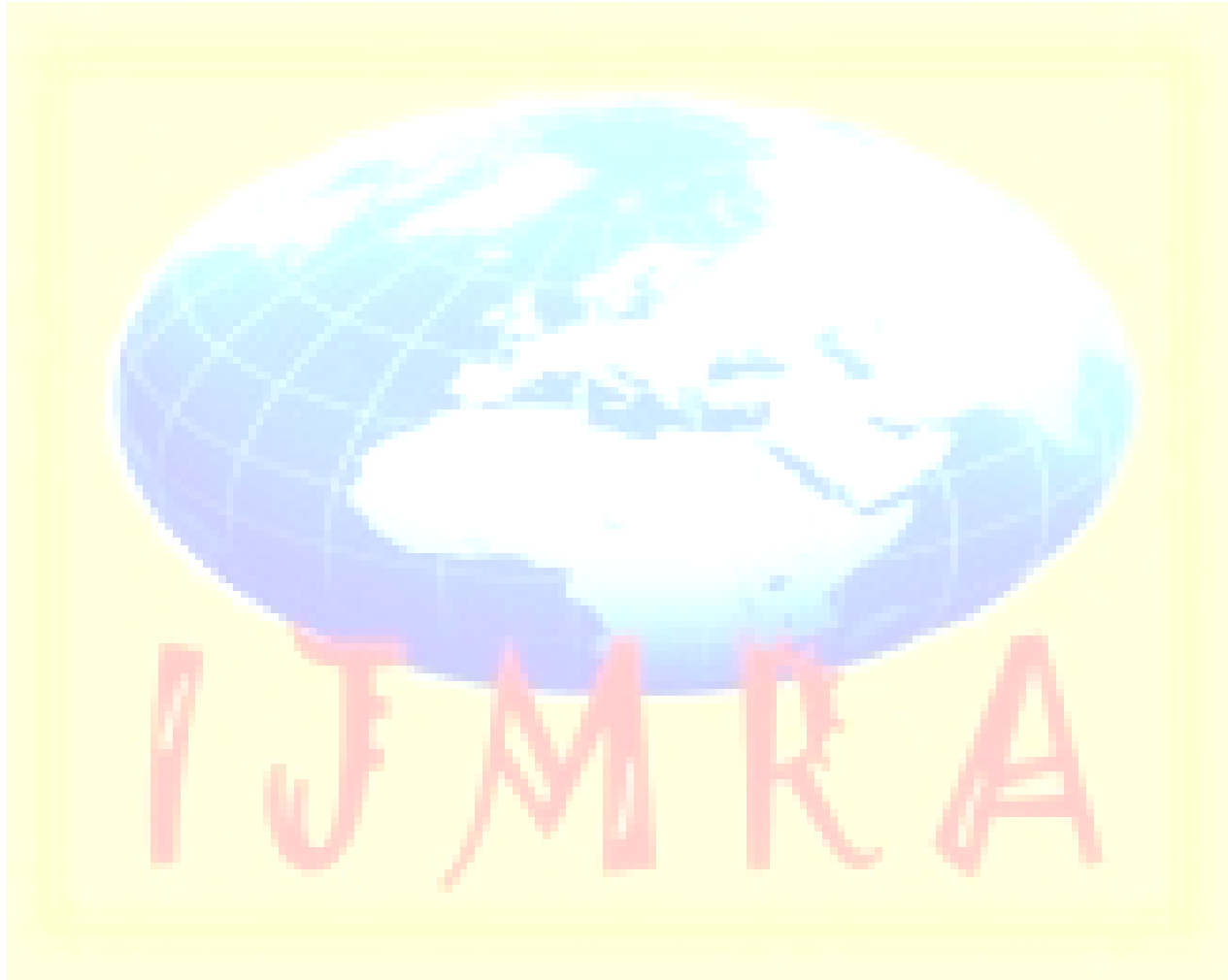|	Age	Religion	Marital Status	Education	Annual Income	Ownership of House	Type of Family	Family Members
Chi-Square Calculated value	81.697	14.155	26.829	35.345	19.276	21.012	47.229	99.368
Degree of Freedom	9	6	3	6	6	6	3	9
Chi-Square Table Value	16.92	12.59	7.82	12.59	12.59	12.59	7.82	16.92
Accepted/Rejected	Rejected	Rejected	Rejected	Rejected	Rejected	Rejected	Rejected	Rejected

Level of Significance: 5%

Interpretation: The null hypothetical is rejected in all the cases (age, religion, marital status, education, income, ownership of house, type of family and number of family members) indicating that there is significant association between these mentioned demographic determinants and Amount of loan taken from MFIs. The above table 3(B) indicates that all the demographic factors affect the amount of loan taken from MFIs.

Association between demographic determinants and the loan repayment capability of members of MFIs.

Table 4 (A)							
		How about your loan repayment sources?					Total
		*Very bad	*bad	*Satisfactory	*Good	*Very good	
Age	< 25 years	4	8	0	14	0	26
	25-35 years	7	9	4	8	15	43
	35-45 years	0	0	7	3	17	27
	> 45 years	4	0	0	0	0	4
Total		15	17	11	25	32	100
Religion	Hindu	12	5	11	25	28	81
	Christian	3	0	0	0	0	3
	Muslim	0	12	0	0	4	16
Total		15	17	11	25	32	100
Marital status:	Married	11	17	0	22	32	82
	Divorce/Widow	4	0	11	3	0	18
Total		15	17	11	25	32	100
Education	Illiterate	12	4	7	18	9	50
	Senior secondary	3	1	0	3	23	30
	Higher Secondary	0	12	4	4	0	20
Total		15	17	11	25	32	100
Annual Income	< Rs 100000	13	13	4	22	24	76
	Rs 100000-200000	2	0	0	0	0	2
	Rs 200000-300000	0	4	7	3	8	22
Total		15	17	11	25	32	100
Ownership of house	Self	15	8	8	3	11	45
	Rented	0	9	0	18	16	43
	Mortgage	0	0	3	4	5	12
Total		15	17	11	25	32	100
Type of Family	Joint	15	8	8	15	7	53
	Nuclear	0	9	3	10	25	47
Total		15	17	11	25	32	100

Family Members	< 2 members	11	0	0	14	0	25
	3 members	0	8	0	4	0	12
	4 members	0	9	3	6	20	38
	> 5 members	4	0	8	1	12	25
Total		15	17	11	25	32	100

Null Hypothesis

Ho4: There is no significant association between demographic determinants and the loan repayment capability of members of MFIs.

Table 4(B)

	Age	Religion	Marital Status	Education	Annual Income	Ownership of House	Type of Family	Family Members
Chi-Square Calculated value	71.049	64.425	62.24	72.3	27.563	42.318	28.198	97.408
Degree of Freedom	12	8	4	8	8	8	4	12
Chi-Square Table Value	21.03	15.51	9.49	15.51	15.51	15.51	9.49	21.03
Accepted/Rejected	Rejected	Rejected	Rejected	Rejected	Rejected	Rejected	Rejected	Rejected

Level of Significance: 5%

Interpretation: The null hypothetical was rejected in all the cases (age, religion, marital status, education, income, ownership of house, type of family and number family members) indicating that there is significant association between these mentioned demographic determinants and the loan repayment capability of members of MFIs. The above table 4(B) indicates that all the demographic factors affect the loan repayment capability of members of MFIs

*Very Bad- Respondent repaid loan by borrowing money with interest

*Bad- Respondent repaid loan by borrowing money without interest

*Satisfactory-Respondent repaid loan by her saving

*Good- Respondent repaid loan by her husband's Income

*Very Good- Respondent paid her loan by her own Income.

Association between demographic determinants and default done by members of MFIs.

Table 5(A)				
		Have you ever defaulted?		Total
		Yes	No	
Age	< 25 years	22	4	26
	25-35 years	23	20	43
	35-45 years	4	23	27
	> 45 years	4	0	4
	Total	53	47	100
Religion	Hindu	38	43	81
	Christian	3	0	3
	Muslim	12	4	16
	Total	53	47	100
Marital status:	Married	45	37	82
	Divorce/Widow	8	10	18
	Total	53	47	100
Education	Illiterate	34	16	50
	Senior secondary	7	23	30
	Higher Secondary	12	8	20
	Total	53	47	100
Annual Income	< Rs 100000	47	29	76
	Rs 100000-200000	2	0	2
	Rs 200000-300000	4	18	22
	Total	53	47	100
Ownership of house	Self	30	15	45
	Rented	23	20	43
	Mortgage	0	12	12
	Total	53	47	100
Type of Family	Joint	37	16	53
	Nuclear	16	31	47
	Total	53	47	100
Family Members	< 2 members	21	4	25
	3 members	12	0	12
	4 members	12	26	38

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	> 5 members	8	17	25
	Total	53	47	100
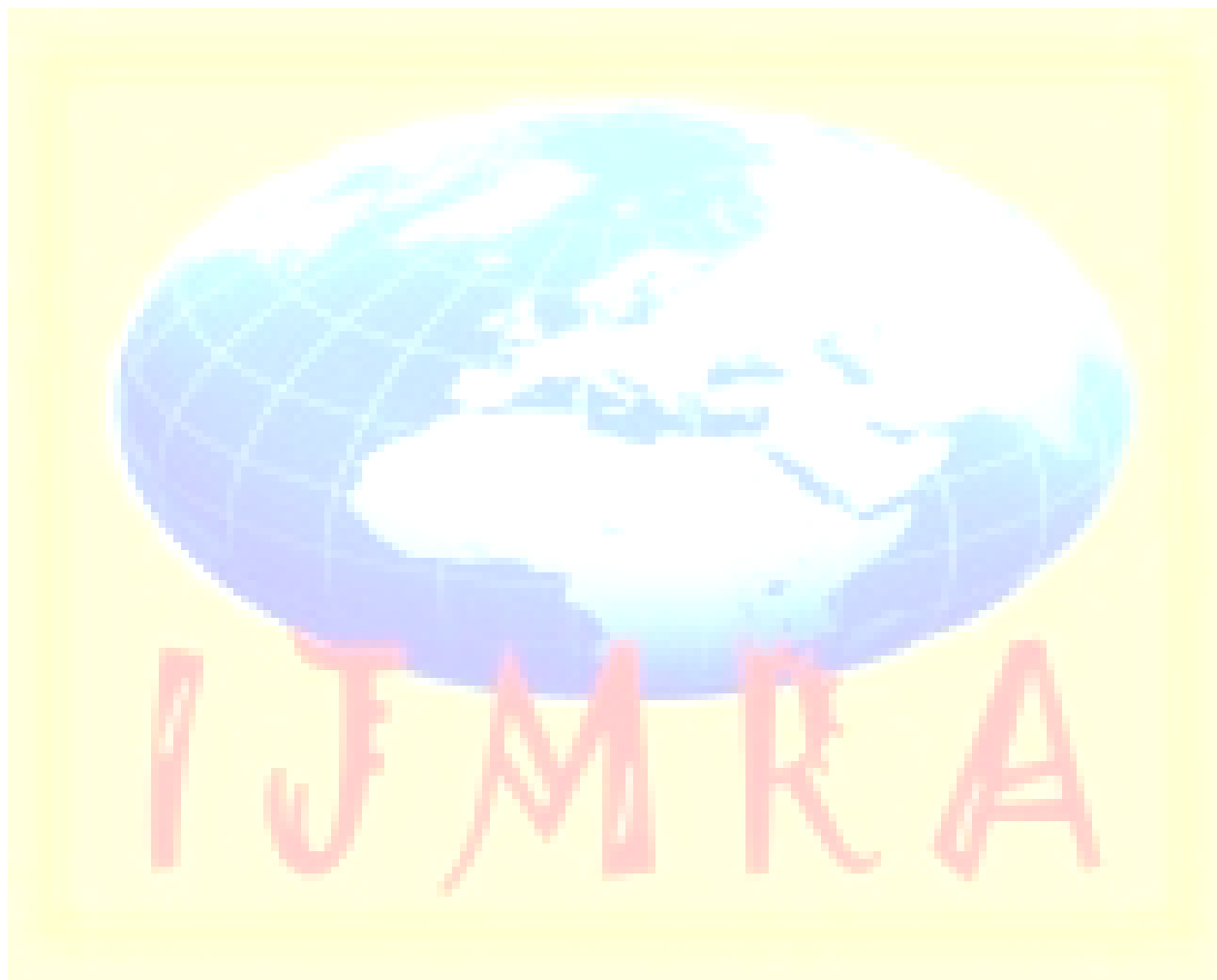
Null Hypothesis

Ho5: There is no significant association between demographic determinants and the default done by members of MFIs.
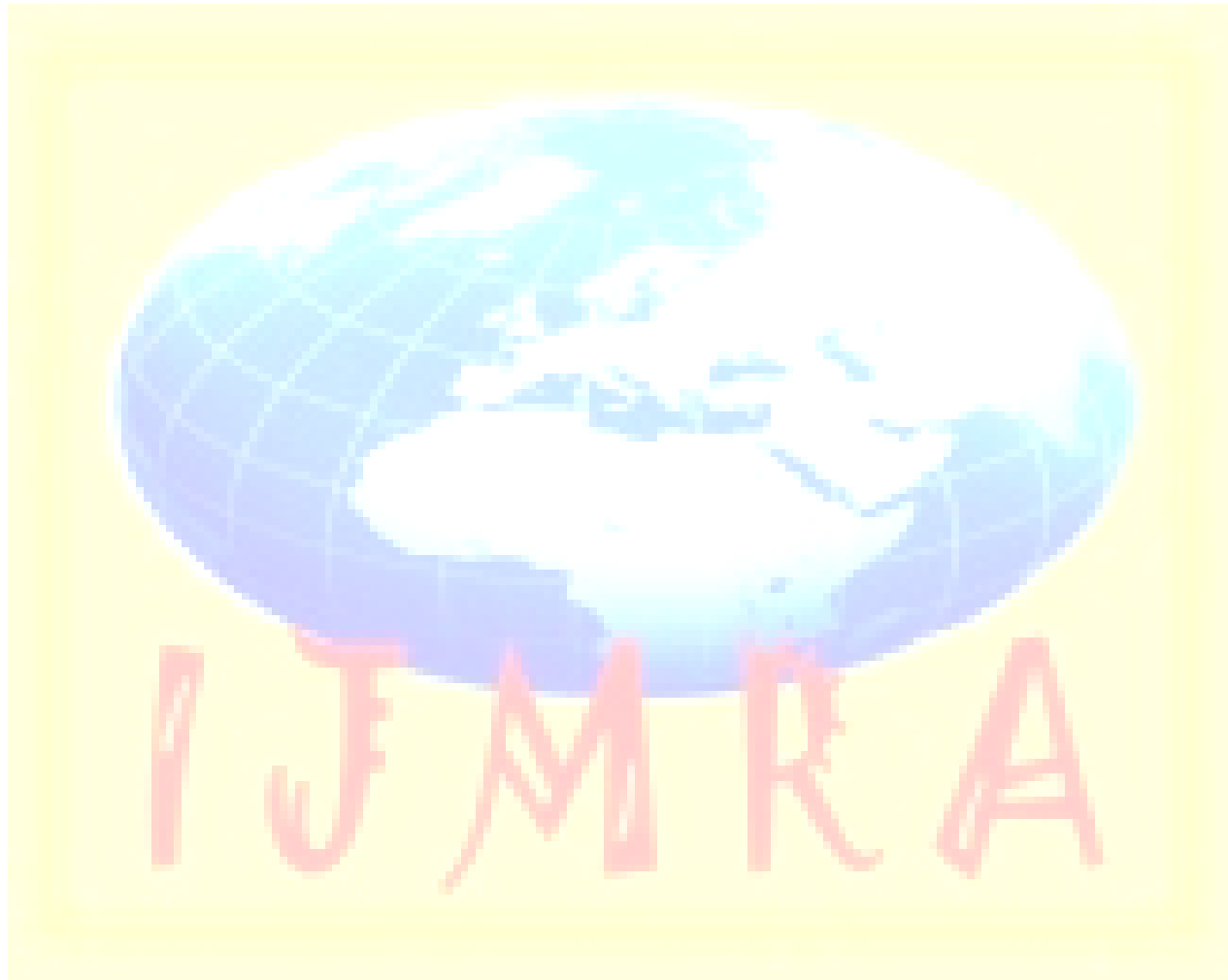
Table 5 (B)

	Age	Religion	Marital Status	Education	Annual Income	Ownership of House	Type of Family	Family Members
Chi-Square Calculated value	29.79	6.974	0.645	15.509	14.866	16.91	12.794	31.712
Degree of Freedom	3	2	1	2	2	2	1	3
Chi-Square Table Value	7.82	5.99	3.84	5.99	5.99	5.99	3.84	7.82
Accepted/Rejected	Rejected	Rejected	Accepted	Rejected	Rejected	Rejected	Rejected	Rejected

Interpretation: The null hypothesis is accepted in case of marital status indicating no significant association but has been rejected in case of age, religion, educational level, annual income, ownership of house type of family and number of family members indicating that there is significant association between these mentioned demographic determinants and default done by members of MFIs. The above table 5(B) indicates that except marital status, all other demographic factors affect the default done by members of MFIs.

Association between demographic determinants and the reasons of default done by Members of MFIs.

Table 6(A)					
		Reason of default?			Total
		Not enough profit	Family problems	Never defaulted	
Age	< 25 years	26	0	0	26
	25-35 years	14	9	20	43
	35-45 years	0	7	20	27
	> 45 years	0	4	0	4
Total		40	20	40	100
Religion	Hindu	29	13	39	81
	Christian	3	0	0	3
	Muslim	8	7	1	16
Total		40	20	40	100
Marital status:	Married	40	12	30	82
	Divorce/Widow	0	8	10	18
Total		40	20	40	100
Education	Illiterate	22	12	16	50
	Senior secondary	6	4	20	30
	Higher Secondary	12	4	4	20
Total		40	20	40	100
Annual Income	< Rs 100000	40	11	25	76
	Rs 100000-200000	0	2	0	2
	Rs 200000-300000	0	7	15	22
Total		40	20	40	100
Ownership of house	Self	22	8	15	45
	Rented	18	9	16	43
	Mortgage	0	3	9	12
Total		40	20	40	100
Type of Family	Joint	33	8	12	53
	Nuclear	7	12	28	47
Total		40	20	40	100

Family Members	< 2 members	25	0	0	25
	3 members	12	0	0	12
	4 members	3	12	23	38
	> 5 members	0	8	17	25
Total		40	20	40	100

Null Hypothesis

Ho6: There is no significant association between demographic determinants and the reasons of default done by members of MFIs.

Table 6 (B)

	Age	Religion	Marital Status	Education	Annual Income	Ownership of House	Type of Family	Family Members
Chi-Square Calculated value	75.181	16.302	16.667	14.4	27.856	10.265	23.826	88.542
Degree of Freedom	6	4	2	4	4	4	2	6
Chi-Square Table Value	12.59	9.49	5.99	9.49	9.49	9.49	5.99	12.59
Accepted/Rejected	Rejected	Rejected	Rejected	Rejected	Rejected	Rejected	Rejected	Rejected

Interpretation: The null hypothetical is rejected in all the cases (age, religion, marital status, education, income, ownership of house, type of family and the family members) indicating that there is significant association between these mentioned demographic determinants and the reasons of default done by members of MFIs. The above table 6(B) indicates that all the demographic factors affect the reason of default done by members of MFIs.

Conclusions

From the above study on the repayment behavior of members of micro finance institution the basic findings were as follows.

Except religion and ownership of house, all other demographic factors like age, marital status, educational level, annual income, type of family, and number of family members affect the period of membership of members in Microfinance Institutions.

Other demographic factors except marital status affect the default done by members of MFIs or we can say that marital status does not affect the default done by members of MFIs.

All the demographic determinants affect the amount of loan taken by members and also the loan repayment capability of members of MFIs. And also conclude that all the demographic factors affect the reason of default done by members of MFIs.

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