

# Impact of Microfinance on Economic Empowerment of Rural Women in India: An Empirical Study

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## ABSTRACT

*The paper studies that how the micro financing delivered through Banks and MFI's have helped women to achieve economic empowerment in rural areas. In order to assess the impact of micro financing on rural women's economic empowerment, primary data was collected from 737 rural women through questionnaire personally administered by researcher. Descriptive research design has been followed. Multistage sampling, including random sampling and non-random sampling method, has been used. Out of four administrative divisions of Haryana, two divisions i.e. Gurgaon division and Rohtak division were sampled based on 50% proportionate random sampling. Out of 11 districts belonging to these two divisions, 6 districts were sampled using the criteria of 50% proportionate stratified sampling. Tabular, graphical and econometrical methods were followed to analyze the data.*

*Results show that micro financing has led to economic empowerment of rural women in India. Results of the Anova model, T-test showed that demographic factors like age, family income, had a positive and significant influence on economic empowerment of rural women availing micro financing.*

*Researcher has suggested that more emphasis should be given on development of entrepreneurial skills through training for income generating activities to the women along with provision of micro financing so that sustainable economic empowerment can be achieved for women in rural areas.*

*The paper recommends that the Government's micro financing scheme NRLM should be operational intensively in the districts where the reach of micro financing is limited.*

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**Keywords: Micro-finance, Women Empowerment, Economic empowerment, SHG (Self-Help-Groups), MFI (Micro Finance Institutions), NRLM (National Rural Livelihood Mission), India**

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## 1 INTRODUCTION

Microfinance has been considered as the most successful poverty alleviation, employment generation and women empowerment intervention for the very poor and marginalized sections of the society, all over the world. Microfinance got maximum attention and popularity in mid 1970s, by Grameen Bank model promoted and founded by Muhammad Yunus in Bangladesh. In recent Indian context, Pradhan Mantri Jan Dhan Yojna (PMJDY) scheme (2014), Pradhan Mantri MUDRA (Micro Units Development and Refinance Agency) Bank Loan Scheme (2015) and DeenDayal Upadhyaya Antyodaya Yojna National Rural Livelihood Mission (DAY-NRLM) (2011) have expedited the micro financing efforts in India.

Review of various studies on women empowerment and microfinance shows that women's involvement in the income generating activities, whether individually or through group mechanism have been able to empower women over a period of time. However, some researchers have also noted down the mixed impacts of micro financing on women like control of assets secured from loans by male members of the family whereas the liability to pay back the loan remains with the women.

In the current study, the researcher has analysed the impact of microfinance on the economic empowerment of women members of Self-Help Groups (SHGs) through the two most prevalent channels of distribution of micro financing i.e. SHG-MFI channel and SHG-Bank channel, in rural areas of Haryana. Results of the study show that micro financing has led to economic empowerment of rural women in India. Results of the Anova model, T-test showed that demographic factors like age, family income, had a positive and significant influence on economic empowerment of rural women availing micro financing. Researcher has recommended that more emphasis should be given on development of entrepreneurial skills through training for income generating activities to the women along with provision of micro financing so that sustainable economic empowerment can be achieved for women in rural areas. Government's micro financing scheme NRLM (National Rural Livelihood Mission) should be operational intensively in the districts where the reach of micro financing is limited.

## 2 LITERATURE REVIEW

A large number of studies are available on evaluating the impact of micro financing on economic empowerment of rural women. Various researchers have concluded that microfinance had a positive impact on economic and social empowerment of women (Hashemi et. al., 1996). Women participation in the group saving microfinance programme leads to increase in women's employment in small scale enterprises, Self confidence, greater control over house hold decision making, increase in income of the family (Naila Kabeer,2005, Ajjarapu Alimelu Annapurna,2012). The dependency on local money lenders is reduced to a great extent after joining SHGs.

The positive impact has been often higher for those who are nearer to poverty line, and longer period of membership as members begin to use loan for investment into assets rather than consumption (Naila Kabeer,2005) (Sarker D. and Dey S, 2010). Women participation in group lending programs leads to greater “personal autonomy”, Increased participation in collective action on issues such as water and sanitation, and engage in community affairs. Landless women are more likely to save regularly, and increase their cash income as a result of SEWA's programs, compared to landholders (Raj M. Desai and Shareen Joshi,2013)

However ,it is observed that proportion of women's loans are directly invested by their male relatives, women have no control over the assets purchased using loan money (Goetz A M, Gupta R S1966,) while women borrowers bear the liability for repayment(Garikipati S,2008). They have to rely on their wages to make repayments of loan. So it's the household who gets benefited from loan use but the women borrower only gets burden to pay back the loan. Micro financing through MFI\_SHG model (Gramin Bank style model) opposed to cohesion among villagers, among women, or among the community (Santi Rozario,2002) (Leach F, Sitaram S, 2002). SHG based Micro financing, supported by NGO's has become an important alternative to traditional lending in terms of reaching to poor at reasonable operating and monitoring cost. But there still exists a demand supply gap. Major concentration is in southern state (Batra V and Sumanjeet, 2011).

**Table 1.1 Summary of Key studies on Microfinance and Economic Empowerment of Women**

Author	Year	Country/ State	Theme/Focus	Results
Goetz A M, Gupta R S	1996	Bangladesh	Assesses the degree to which women actually control loans once they have gained access to credit institutions.	A significant proportion of women's loans are directly invested by their male relatives, while women borrowers bear the liability for repayment.
RoshanehZa for	2002	Pakistan	to clarify the link between women's empowerment and their access to microfinance services.	Impact of microfinance program on self-confidence and self-esteem of women, is much stronger than ability of such program to create better trust, solidarity and social interaction, opportunities for leveraging and networking
Santi Rozario	2002	Bangladesh	Article focuses on specific problems connected with GB- style microcredit in Bangladesh	GB- style model is basically opposed to solidarity among villagers, among women, or among the community
Juliet Hunt and Nalini Kasynathan	2002	Bangladesh and India- Bihar	Analyse the nature of the linkbetween access to credit by targeting women, and the transformation in gender relations needed for empowerment and equality.	The whole family is more likely to benefit from credit targeted to women, where they control income, than when it is targeted to men. However, donors and implementing agencies need to significantly improve the design and monitoring of microfinance programs to ensure that they support the empowerment of women
Leach F, Sitaram S	2002	India- Karnataka State	Impact of project on the economic and social status of MF users	It documents the impact that the project had on economic and social status of beneficiaries over a period of time and highlights the negative consequences of excluding male relatives from playing any meaningful role.
Naila Kabeer	2005	Bangladesh, India - Andhra Pradesh, Orissa, Jharkhand	Impact of microfinance with respect to poverty reduction and empowerment of poor women	Access to financial services make vital contributions to the economic productivity and social well-being of poor women and their households. However, it does not "automatically" empower women. Other interventions such as education, Political Quotas are also equally important. The positive impact has been often higher for those who are nearer to poverty line, and longer period of membership as members begin to use loan for investment into assets rather than consumption.
Ranjula Bali Swain	2007	India- Orissa, A.P,Tamil Nadu, U.P. Maharashtra	Survey to accumulate information on impact of SHG bank linkage program on Poverty, Vulnerability and social development	Microfinance program would have sustainable impact on the empowerment of women only when, SHGs with the help of NGOs also provide specialized training, education and create awareness along with financial services.
Garikipati S	2008	India - Andhra Pradesh	Analysed the impact of credit programs on core dimensions of household vulnerability and women empowerment	Loans taken by women are often used for improvement in household's assets and incomes. But lack of co-ownership of assets by woman leads to her disempowerment. The author is of the opinion that for real women empowerment women are required to be given control of productive assets.

Supriya. Garikipati	2010	India- Andhra Pradesh	Impact of micro credit on women empowerment by examining the <i>processes</i> around woman's loan use	Women are unable to access the income from the household's productive assets to make repayments, even when their loans have been used to create or enhance the assets. Most women have to rely on their wages to make repayments.
Batra V and Sumanjeet	2011	India	analyses the role and performance of various delivery models of micro financing in India	SHG based Micro financing, supported by NGO's has become an important alternative to traditional lending in terms of reaching to poor at reasonable operating and monitoring cost. But there still exists a demand supply gap. Major concentration is in southern state.
Sarmah G N; Das D K	2012	India- Assam	Analysed the role of Micro-Finance and Self-Help-Groups (SHGs) for the socio-economic development of the poor people in Lakhimpur district of Assam	Joining the SHGs has led to improvement in income and living standard of poor people by engaging in economic activities independently.
AjjarapuAli melu Annapurna	2012	India- Andhra Pradesh	Analysed impact of Micro-Financing through SHG channel on socio, economic and political empowerment of women in East Godavari District	SHG BLP program has led to increase in family income, increase in consumption, Increase in investment in productive activities. Women's role in the family and society has been transformed. She is now either primary or secondary bread earner. She has a say in family and society. The dependency on local money lenders is reduced to a great extent after joining SHGs. Microfinance programs have induced self confidence in women.
Borah A K and Hazarika E	2013	India- Assam	To find out the contribution of SHGs towards socio-economic development of women.	(Positive Correlation) overall status of women in terms of income, empowerment, welfare, etc. have improved because of Self Help Groups.
Raj M. Desai and Shareen Joshi	2013	(Rajasthan) India	To find out the contribution of SHGs towards socio-economic development of women.	As a result of two years of SHG membership women are More likely to participate in group saving programs, acquire greater "personal autonomy", Increased participation in collective action on issues such as water and sanitation, and engage in community affairs. Landless women are more likely to save regularly, and increase their cash income as a result of SEWA's programs, compared to landholders. No significant impact on income.

Analysis of the existing literature as shown in above table, on microfinance revealed certain gaps such as mixed impact of micro financing on women empowerment, wide inter-regional and interstate variations in the development of SHGs. Studies conducted by NABARD and NGOs are basically concerned with the southern states of the country. There is lack of literature on the condition of SHGs in the North India, especially Haryana. Present study has tried to cover these gaps.

### 3 RESEARCH METHODOLOGY

#### 3.1 Objectives of the Study

- To analyse the impact of microfinance on the economic empowerment of women members of Self Help Groups.
- To analyse the difference in the Economic empowerment of women availing micro financing through SHG-MFI channel and through SHG-Bank channel in Haryana.
- To analyse the impact of demographic factors like category, family income, purpose of loan, loan size, loan cycle on economic empowerment of rural women availing micro financing.

#### 3.2 Hypothesis

Following hypothesis have been taken into consideration on the basis of extensive literature review

H<sub>01</sub>: There exists no significant difference in the Economic empowerment of women availing micro financing through SHG-MFI channel and through SHG-Bank channel in Haryana.

H<sub>02</sub>: There exists no significant difference in empowerment of women with respect to category, family income, purpose of loan, loan size, loan cycle at the time of availing micro-financing programs in state of Haryana.

#### 3.3 Research Design

On the basis of objectives of present study, descriptive research design has been followed in the present study.

**Sampling element:** Women in rural Haryana who have availed micro financing through SHG-BLP channel (under NRLM Scheme) or SHG-MFI channel were the sampling element in this study. Respondents were taken from SHG's which are credit linked so as to assess the impact of micro financing on different aspects of women empowerment.

**Sampling Methods:** In the present study, multistage sampling including random sampling and non-random sampling method has been used. Out of four administrative divisions of Haryana, two divisions i.e. Gurgaon division and Rohtak division have been sampled on the basis of 50% proportionate random sampling. Out of 11 districts belonging to these two

divisions, using the criteria of 50% proportionate stratified sampling, 6 districts were sampled. Karnal, Panipat and Sonapat in Rohtak Division and Faridabad, Palwal and Gurgaon in Gurgaon Division were sampled. Villages were sampled using non-probability sampling method, based on the SHGs data provided by ADC office administering NRLM/ HSRLM. Fifteen to twenty villages were surveyed from each of the six districts.

**Selection of Respondents:** Rural women who have availed micro financing using SHG-Bank channel and SHG-MFI channel were sampled. Respondents from at least 1 to 2 years old SHG's that were credit linked were sampled to assess the impact of micro financing on different aspects of women empowerment.

Out of total of 737 respondents, 401 (54.4%) are availing micro financing through MFI and 336 (45.6%) are availing micro financing through Banks under NRLM scheme. Initially it was proposed to have no. of 160-170 respondents per district, 70-78 from SHG developed under (HSRLM/ SGSY/ SLBP) and 70-80- from SHG developed through Micro Finance Institutions (MFI). But during pilot study, researcher visited these villages and ADC (Additional District Commissioner) office and came to know that some of the villages /district are intensive and rest are non-intensive. So, researcher selected randomly an approximate proportionate number of SHG from each district. Most of the members of SHG's were contacted.

**Selection of Self-Help Groups Under NRLM/ SGSY credit linked with Banks:** The address and contact details of Self-Help Groups working were taken from the office of Additional Deputy Commissioner of respective district. An approximate proportionate number of SHGs were selected from each district.

**Selection of Self-Help Groups financed by MFI:** In addition to above, from the same villages, equal number of respondents was selected who have participated in MFI micro financing.

To choose the respondents i.e. rural women, non-random sampling method was used, which was purposive sampling technique.

**Sample Size:** The researcher has taken sample size as 737.

### **3.4 Data Collection**

Researcher has followed a hybrid approach for collecting the data, so data

has been collected from both primary and secondary sources

### **3.4.1 Secondary Sources**

The researcher has used some secondary sources to understand the concept, definitions, theories and empirical results. Various books, research articles from journals, reports published by Government, Semi-Government, and private agencies have been used as secondary sources of information for the purpose of the study. For this purpose, various libraries, official websites of government, semi-government, and prestigious private agencies (like RBI, NABARD, Haryana government, Ministry of women and Child development etc.) have been used.

### **3.4.2 Primary Sources**

Primary data is collected through questionnaire which is tested for internal consistency by researcher. Questionnaire is administered personally by researcher and one male companion as respondents were from rural background and some of them had problem in reading and writing the questions. The data were related to the demographic information of respondents such as their age, education, marital status, family size, number of school going children, family income, and source of family income as well as their response on various indicators of economic empowerment.

## **4 Economic Empowerment of Women**

For purpose of the present study, together with considering indicators identified by earlier researchers for measuring economic empowerment of women, researcher has identified the indicators on the basis of thorough interaction with the HSRLM (Haryana State Livelihood Mission) staff, MFI Staff, Chartered Accountant working with NGO's working with women SHGs which reflect the realities of women's lives in rural Haryana.

Economic Empowerment in the present study is measured by nine indicators as shown in the table below along with the name of researchers who used the same indicators to measure economic empowerment:



**Table 1.2 : Economic Empowerment Indicators used by Researchers**

S. No.	Domain	Indicators used in present Study	Researcher who used the same indicator for measuring Economic Empowerment of women
1	Economic Empowerment	Increase in family income.	Kabeer and Murthy (1996)
2		Increase in family saving	Kabeer and Murthy (1996)
3		Helps to deal with financial crisis	Kabeer and Murthy (1996), Ranjula, Bali Swain (2007)
4		Reduces dependency on private money lenders.	Kabeer and Murthy (1996)
5		Women spend a portion of their income as per their discretion.	Beijing conference 1995, Malhotra, Schuler and Boender (2002), Malhotra and Schuler (2006), Sarker D and Dey S (2010)
6		Women have control over credit/loans.	Malhotra, Schuler and Boender (2002), Sarker D and Dey S (2010)
7		Independent savings bank account in women's name.	Kabeer and Murthy (1996), Shariff (2009)
8		Women to have ownership of household assets.	Shariff (2009), Malhotra and Schuler (2006)
9		Equal property rights.	Shariff (2009), Malhotra and Schuler (2006), Sarker D and Dey S (2010)

#### **4.1 Reliability of Primary Instrument (Cronbach's Alpha)**

Reliability of the measuring scale is checked statistically by using Cronbach's Alpha. Cronbach's alpha is a measure of internal consistency, that is, how closely related a set of items are as a group. It is considered to be a measure of scale reliability.

- a) Result of test conducted on the scale of 9 items of Economic Empowerment Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	No. of Items
.872	.873	9

It can be seen that Cronbach's alpha is 0.873, which indicates a high level of internal consistency for Economic Empowerment scale.

##### **4.1.1 Impact of Micro financing on Economic Empowerment of Rural Women**

###### *4.1.1.1 Descriptive analysis of Economic Empowerment*

Nine indicators are taken to study economic empowerment and descriptive

analysis using mean score is done to find out that out of these nine indicators which are most important in bringing economic empowerment.

Following table shows the descriptive and mean scores of all nine independent variables.

**Table 1.3: Descriptive Statistics of Economic Empowerment**

Indicator no.	Indicator	N	Mean	Std. Deviation
EQ1	Increase in family income.	737	3.06	1.099
EQ2	Increase in family saving	737	3.18	1.104
EQ3	Helps to deal with financial crisis	737	3.87	1.023
EQ4	Reduces dependency on private money lenders.	737	3.85	1.074
EQ5	Women spend a portion of their income as per their discretion.	737	3.63	.955
EQ6	Women have control over credit/loans.	737	3.60	1.000
EQ7	Independent savings bank account in women's name.	737	3.67	.943
EQ8	Women to have ownership of household assets.	737	3.28	1.026
EQ9	Equal property rights.	737	3.53	.954
Valid N		737		

Based on descriptive statistics table and mean scores, it can be seen that EQ3 and EQ4 have the highest mean score of 3.87 and 3.8 i.e. these are found to be the most important in deciding in economic empowerment. *Therefore, the two most important indicators of economic empowerment are 'Micro financing helps to deal with financial crisis' and 'Micro financing reduces dependency on private money lender'.*

#### *4.1.1.2 Measurement of Economic Empowerment of women in rural Haryana availing micro financing from different Micro financing Channel*

To measure economic empowerment, nine indicators are used in the present study. Each indicator is rated on five-point scale as follows: 1- Strongly Disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Strongly Agree. To measure the economic empowerment two categories are created empowered and Non-empowered using the following criteria:

Total highest score:  $9 \times 5 = 45$

Total Lowest Score:  $9 \times 1 = 9$

Taking average of these two values to calculate average score

$$\text{Average score} = (45 + 9) / 2 = 27$$

So, respondents with a total score of more than 27 are considered as Economically Empowered and respondents with a total score of less than or equal to 27 are considered as not empowered. The following results were found using crosstabs.

**Table 1.4 : Economic Empowerment of Respondents for SHG-Bank and SHG-MFI channels**

		Economic Empowerment		Total
		Non-empowered	Empowered	
Micro-financing Channels	SHG-Bank	14	322	336
		4.2%	95.8%	100.0%
	SHG-MFI	195	206	401
		48.6%	51.4%	100.0%
Total		209	528	737
		28.4%	71.6%	100.0%

Source: Field Survey, 2016

The table shows that out of the total 737 respondents under study, 528 (71.6%) of the rural women availing micro financing are economically empowered. Further, it can be seen that women availing micro financing through bank channel i.e., SHG-Bank channel is empowered to the extent of 95.6% (322 out of 336 respondents) as compared to women availing micro financing through SHG-MFI channel where only 51.4% of respondents i.e. 206 respondents out of 401 are empowered.

#### *4.1.1.3 Difference in the Economic empowerment of women availing micro financing through SHG-Bank channel and SHG-MFI channel in the state of Haryana.*

Null Hypothesis ( $H_0$ ): There exists no significant difference in the Economic empowerment of women availing micro financing through SHG-Bank channel and SHG-MFI channel in the state of Haryana.

An Independent Sample t-test was conducted to check if there is any significant difference in the Economic empowerment of women availing micro financing through SHG-Bank channel and SHG-MFI channel in the

state of Haryana. Test results revealed a significant difference between the two groups,  $t(706.03) = 15.17$ ;  $p = .0000$  (when equal variance not assumed).

The test result shows that the significance value is less than 0.05, hence null hypothesis stands rejected. Therefore, there is a significant difference in the economic empowerment of the women availing loan through SHG-Bank channel and economic empowerment of women availing micro financing through SHG-MFI channel in the rural areas of state of Haryana.

Let us further validate the results using Mean Values

**Table 1.5: Means and Standard Deviation (Economic Empowerment through SHG-Bank channel and SHG-MFI channel)**

	Group	Mean	Standard Deviation
<b>Economic Empowerment</b>	SHG-Bank Channel	35.026	4.44
	SHG-MFI Channel	28.855	6.544

The sample means shows that participant of micro financing through SHG-Bank channel scored significantly higher economic empowerment than participant of micro financing through SHG-MFI channel (for SHG-Bank channel,  $M = 35.026$ ,  $SD = 4.44$ , for SHG-MFI channel,  $Mean = 28.855$ ,  $SD = 6.544$ ).

The test statistics of mean scores shows that economic empowerment of the women availing micro financing through SHG-Bank channel is much higher than the economic empowerment of the women availing micro financing through SHG-MFI channel.

#### *4.1.1.4 Category and Economic Empowerment*

Null Hypothesis ( $H_0$ ): There exists no significant difference in the Economic empowerment of women availing micro financing under "Unreserved" category and Reserved category.

An Independent Sample t-test was conducted to check if there is any significant difference in the Economic empowerment of women availing micro financing under Unreserved (UR) category and Reserved (R) Category in the state of Haryana.

The test results show that the significance value is less than 0.05, hence null hypothesis stands rejected. Therefore, there is a significant difference in the

economic empowerment of the women availing micro financing in state of Haryana between the two groups i.e. women under unreserved category and women under reserved category,  $t(599.549) = -2.303$ ;  $p = .022$  (when equal variance not assumed).

Let us further validate the results using Mean Values

**Table 1.6: Means and Standard Deviation (Economic Empowerment under Reserved (R) Category and Unreserved (UR) Category)**

	Group	Mean	Standard Deviation
<b>Economic Empowerment</b>	Reserved (R) category	32.1540	5.88266
	Unreserved (UR) category	31.0190	.40106

The sample means shows that the economic empowerment of women availing micro financing under Reserved category (Mean = 32.1540, SD = 5.88266) is higher than women availing microfinance under Unreserved category (M = 31.0190, SD = .40106).

#### **4.1.1.5 Family Income and Economic Empowerment of women**

Null Hypothesis ( $H_0$ ): There exists no significant difference in the Economic empowerment of women in income groups of Less than ₹5000, Between ₹5000 to ₹10,000, and Above ₹10,000 conditions.

For testing the hypothesis one-way Anova test has been used.

The assumptions/conditions for applying this test were tested and test was applied.

- A) Normality of data
- B) Homogeneity of Variance using Levene's test
- C) Variance of means within the sample left to chance

**Table 1.7: ANOVA (Family Income and Economic Empowerment)**

Ecopwr

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1631.232	2	815.616	20.587	.000
Within Groups	29079.987	734	39.619		
Total	30711.218	736			

As the value of test statistic is less than 0.05, the Null hypothesis stands rejected. Therefore, it can be said that family income has an impact on psychological empowerment of women availing micro financing in rural areas of Haryana for the three conditions [ $F(2,734) = 20.587, p = .000$ ].

In order to check, under which category difference is significant, a Post hoc comparisons using the Tukey HSD test is conducted.

**Table 1.8: Multiple Comparisons (Family Income and Economic Empowerment)**

Dependent Variable: Ecopwr

Tukey HSD

(I) Average Family Income	(J) Average Family Income	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Less Than ₹ 5000	Between ₹ 5000 to ₹10,000	1.15745	.65440	.181	-.3794	2.6943
	Above ₹ 10000	3.99811 *	.71069	.000	2.3291	5.6672
Between ₹ 5000 to ₹ 10,000	Less Than ₹ 5000	-1.15745	.65440	.181	-2.6943	.3794
	Above ₹ 10000	2.84066 *	.52770	.000	1.6014	4.0800
Above ₹ 10000	Less Than ₹ 5000	-3.99811 *	.71069	.000	-5.6672	-2.3291
	Between ₹ 5000 to ₹10,000	-2.84066 *	.52770	.000	-4.0800	-1.6014

\*The mean difference is significant at the 0.05 level.

The result of Post Hoc test using Tukey HSD indicated that the mean score for 'Less than ₹5000' income group ( $M=33.49$ , Standard Deviation= $5.20$ ) is significantly different and higher than 'Above ₹10000' income group ( $M=29.49$ ,  $SD=7.26$ ,  $p=.000$ ). The mean score for the income group 'Between ₹5000 to ₹10000' ( $M=32.33$ , Standard Deviation= $6.00$ ) is significantly different and higher than 'Above ₹10000' income group ( $M=29.49$ ,  $SD=7.26$ ,  $p=.000$ ). However, there is no significant difference between the mean score of income group 'Less than ₹5000' ( $M=33.49$ , Standard Deviation= $5.20$ ) and mean score of income group 'between ₹5000 to ₹10000' ( $M=32.33$ , Standard Deviation= $6.00$ ,  $p=.181$ ).

The result shows that economic empowerment of women availing microfinance, with a family income of less than ₹5000 as well as women whose family income is between ₹5000 to ₹10000 is significantly higher than women whose family income is above ₹10000.

Taken together our result suggests that for microfinance users, women with a low family income (less than ₹10000) feel more empowered economically as compared to women who belong to higher income group (income above ₹10,000).

#### *4.1.1.6 Purpose of Loan and Economic Empowerment*

Null Hypothesis ( $H_0$ ): There exists no significant difference in the Economic empowerment of women availing loan for productive purpose and Consumption purpose

An independent Sample t-test was conducted to check if there is any significant difference in the Economic empowerment of women using loan for productive purpose and women availing loan for consumption purpose.

The test results show that the significance value is more than 0.05, hence null hypothesis stands accepted. Therefore, there is no significant difference in the economic empowerment of women between the two groups,  $t(735) = -.104$ ;  $p = .917$  (when equal variance assumed).

Let us further validate the results using Mean Values

**Table 1.1 Means and Standard Deviation (Economic Empowerment and Purpose of Loan)**

	Group	Mean	Standard Deviation
<b>Economic Empowerment</b>	Consumption purpose	31.64	6.14
	Productive purpose	31.69	6.14

The sample means shows that there is not much difference in the economic empowerment of women availing loan for productive purpose and women availing loan for consumption purpose. (For consumption purpose,  $M = 31.64$ ,  $SD = 6.14$ , for productive purpose,  $Mean = 31.69$ ,  $SD = 6.14$ ).

The result suggests that there is no statistically significant difference in the economic empowerment of the women who are availing micro financing for consumption purpose and women who are availing micro financing for production purpose.

#### **4.1.1.7 Loan Size and Economic Empowerment of women**

Null Hypothesis ( $H_0$ ): There exists no significant difference in the Economic empowerment of women availing micro financing in Loan size of Less than ₹10,000, Between ₹10,000 – ₹25,000, and Above ₹25,000 conditions.

For testing the hypothesis one-way Anova test has been used.

The assumptions/conditions for applying this test were tested and test was applied.

- A) Normality of data
- B) Homogeneity of Variance using Levene's test
- C) Variance of means within the sample left to chance

**Table 1.10: ANOVA (Economic Empowerment and Loan Size)**

Ecopwr

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2142.461	2	1071.231	20.522	.000
Within Groups	28568.757	734	38.922		
Total	30711.218	736			

As the value of test statistic is less than 0.05, the Null hypothesis stands rejected. Therefore, it can be said that loan size has a significant impact on economic empowerment of women availing micro financing in rural areas of Haryana for the three conditions [ $F(2,734) = 27.522, p = .000$ ].

In order to check, under which category difference is significant, a Post hoc comparisons using the Tukey HSD test is conducted.



**Table 1.11: Multiple Comparisons (Economic Empowerment and Loan Size)**

Dependent Variable: Ecopwr

Tukey HSD

(I) Loan size	(J) Loan size	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Less Than ₹ 5000	Between ₹ 10000 to ₹ 25000	2.05270*	.58469	.001	.6796	3.4258
	Above ₹ 25000	4.58879*	.62728	.000	3.1157	6.0619
Between ₹ 10000 to ₹ 25000	Less Than ₹ 10000	-2.05270*	.58469	.001	-3.4258	-.6796
	Above ₹ 25000	2.53609	.53421	.000	1.2815	3.7907
Above ₹ 25000	Less Than ₹ 10000	-4.58879*	.62728	.000	-6.0619	-3.1157
	Between ₹ 10000 to ₹ 25000	-2.53609*	.53421	.000	-3.7907	-1.2815

\* The mean difference is significant at the 0.05 level.

A Post hoc comparisons using the Tukey HSD test indicated that the mean score of loan size of 'Less than ₹10,000 (M=34.30347, SD=4.555) condition is significantly different and higher from mean score 'Between ₹10,000- ₹25,000 (M=31.9820, SD=6.3511, p= .001). The mean score of loan size of 'Less than 10,000 (M=34.30347, SD=4.555) condition is significantly different and higher from mean score of 'Above ₹25,000' condition (M=29.4459, Standard Deviation. = 7.1039, p= .000). The mean score of 'Between ₹10,000- ₹25,000 (M=31.9820, SD=6.3511) condition is also significantly higher than 'Above ₹25,000' condition (M=29.4459, Standard Deviation. = 7.1039, p= .000)

The result shows that economic empowerment of women with smaller loan size (Less than ₹10,000) is higher than economic empowerment of women with larger loan size (i.e. Between ₹10,000- ₹25,000 and Above 25,000).

#### *4.1.1.8 Loan Cycles and Economic Empowerment of women*

Null Hypothesis ( $H_0$ ): There exists no significant difference in the Economic empowerment of women in 1-2 loan cycles, 3-4 loan cycles and above 4 loan cycles conditions.

For testing the hypothesis one-way Anova test has been used.

The assumptions/conditions for applying this test were tested and test was applied.

- A) Normality of data
- B) Homogeneity of Variance using Levene's test
- C) Variance of means within the sample left to chance

**Table 1.12: ANOVA (Economic Empowerment and Loan Cycles)**

Ecopwr

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3513.298	2	1756.649	47.407	.000
Within Groups	27197.921	734	37.054		
Total	30711.218	736			

As the value of test statistic is less than 0.05, the Null hypothesis stands rejected. Therefore, it can be said that number of loan cycles has an impact on economic empowerment of women availing micro financing in rural areas of Haryana for the three conditions  $[F(2, 734) = 47.407, p = .000]$ .

In order to check, under which category difference is significant, a Post hoc comparisons using the Tukey HSD test is conducted.

**Table 1.13: Multiple Comparisons (Economic Empowerment and Loan Cycles)**

Dependent Variable: Ecopwr

Tukey HSD

(I) Loan cycle	(J) Loan cycle	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1-2 cycles	3-4 cycles	-5.25111 <sup>*</sup>	.67648	.000	-6.8398	-3.6624
	More than 4 cycles	-9.21885 <sup>*</sup>	1.45526	.000	-12.6365	-5.8012
3-4 cycles	1-2 cycles	5.25111 <sup>*</sup>	.67648	.000	3.6624	6.8398
	More than 4 cycles	-3.96774 <sup>*</sup>	1.56749	.031	-7.6489	-.2865
More than 4 cycles	1-2 cycles	9.21885 <sup>*</sup>	1.45526	.000	5.8012	12.6365
	3-4 cycles	3.96774 <sup>*</sup>	1.56749	.031	.2865	7.6489

\*The mean difference is significant at the 0.05 level.

The result of Post Hoc test using Tukey HSD indicated that the mean score of women in 1-2 loan cycles ( $M=30.7812$ ,  $SD = 6.270$ ) condition is significantly different and lower from mean score of women in 3-4 loan cycles ( $M=36.0323$ ,  $SD= 5.213$ ,  $p=.000$ ) condition. The mean score of women in 1-2 loan cycles ( $M=30.7812$ ,  $SD = 6.270$ ) condition is significantly different and lower from mean score of women in 'More than 4 loan cycle' ( $M=40.000$ ,  $SD= 2.656$ ,  $p=.000$ ) condition. There is also a significant difference between mean score of women in 3-4 loan cycles ( $M=36.0323$ ,  $SD= 5.213$ ) and women in More than 4 loan cycles ( $40.000$ ,  $SD= 2.656$ ,  $p=.031$ ) condition.

The result shows that economic empowerment of women who have completed more than 3-4 loan cycles is significantly higher than women who are in their first or second loan cycle. Economic empowerment of women who have completed more than 4 loan cycles is also significantly higher than women who have completed. 3-4 loan cycles. Thus, with every successfully completed loan cycle economic empowerment of women increases significantly. The result suggests that as number of loan cycles increases the economic empowerment also increases.

## CONCLUSION

In the study nine indicators are taken to measure the economic empowerment of the rural women in Haryana. The nine indicators are used in the study are increase in family income, increase in family saving, dealing with financial crisis, reduced dependence on private money lenders, discretion on spending a portion of women's income, control over loans, saving bank account in name of women, ownership of household assets and equal property rights. Using descriptive analysis, it is found that two most important indicators are 'Micro financing helps to deal with financial crises and 'Micro financing reduces dependency on private money lender' with a mean score of 3.877 and 3.8 respectively. Further, using mean scores it is evident that Microfinance leads to economic empowerment of the women in rural areas of Haryana. 71.6% of the rural women availing micro financing under study are found to be economically empowered. There are two channels through which women are availing micro financing one is SHG-Bank channel and other is SHG-MFI channel. The study shows 95.5% of women availing micro financing through SHG-Bank channel are empowered as compared to only 51.4% of women availing micro financing through SHG-MFI channel.

The result emphasis the results of the previously carried out studies (Harper, Malcom 2002) comparing SHG-Bank linkage program and micro financing through SHG-MFI channel that most of the women availing micro financing through SHG-Bank channel are economically empowered than the women availing micro financing through SHG-MFI channel. Further, demographic factors such as family income purpose of loan, loan size, loan cycles are studied in relation to economic empowerment of women. Using 'Independent sample t-test' result, purpose of loan is not found to be a significant factor in the economic empowerment of the women. Using Anova test, Family income is found to be an important factor in economic empowerment of women availing microfinance in rural areas of Haryana. For microfinance users, women with a low family income (less than ₹10000) feel more empowered economically as compared to women who belong to higher income group (income above ₹10,000). Number of loan cycles also has a significant impact on economic empowerment of women availing microfinance in rural areas of Haryana. As number of loan cycles increases the economic empowerment also increases. Loan size is also proved to be a significant factor in economic empowerment of women using micro financing. Women with a smaller loan size are found to be more economically empowered than women who have taken higher loan amount.

## **RECOMMENDATIONS**

- MFIs, Banks should work in association with local governing bodies such as gram panchayat to train women to participate in more stabilise livelihood activities. They should be given knowledge of alternate livelihood activities in more organised manner at village level and block level in collaboration with NGO's, Government agencies such as NRLM, DRDA's (District Rural Development Agencies) etc. More efforts are requiring towards capacity building of rural women. Collaborations could also be made between local industry associations such as collaboration with NDDDB (National Dairy Development Board) can result in to dairy farming at centralised level by women of SHG's.
- Sensitizing rural women about various government schemes which are promoting education and financial literacy, facilitating skill development, vocational training, apprenticeship and technical education. The government has come up with such schemes in recent years in this direction like Pradhan Mantri Kaushal Vikas Yojna (2015),

Pradhan Mantri Kaushal Rin Yojna (Skill Loan Scheme) (2015) etc.

- UGC, MHRD should encourage educational institutions/universities to include a course on micro financing sensitisation in poor people in rural and urban areas which will provide exposure to students and help to create awareness in rural people about importance of personal savings and these small saving can contribute towards meeting credit requirements of group members and how it leads to economic, social, psychological and political empowerment of poor rural women.

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