

AN EMPIRICAL ANALYSIS OF THE IMPACT OF MICROFINANCE ON WOMEN ENTREPRENEURS IN RURAL RAJASTHAN

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ABSTRACT

In the recent years, microfinance has gained global recognition as a powerful instrument for promoting financial inclusion and fostering entrepreneurship among marginalized communities, particularly women in rural areas. By providing small-scale credit and related financial services to individuals without access to traditional banking systems, microfinance offers an opportunity to bridge economic inequalities and stimulate grassroots development. In the Indian context, where gender disparities in rural regions remain pronounced, microfinance has been actively deployed as a tool to empower women economically and socially. Though there have been various researches to explore the topic but specific research in the recent years stayed in research gap. This study examines the impact of microfinance on women entrepreneurs in rural Rajasthan, a state known for its cultural richness but also for its significant socio-economic challenges, especially in terms of gender inequality and poverty. The research explores how access to microfinance has influenced the entrepreneurial activities of women, their income-generating capacities, and their role within the household and the community. It also investigates whether microfinance initiatives have led to sustainable business practices and long-term economic independence among rural women. This paper contributes to the growing body of knowledge on rural development, gender empowerment, and financial inclusion in India.

Keywords: Microfinance, Women Entrepreneurs, Rural Development, Financial Inclusion, Economic Empowerment.

1. INTRODUCTION

The empowerment of women, especially in rural areas, has emerged as a crucial goal in India's broader agenda of inclusive and sustainable development. Despite significant strides in economic and social reforms, rural women continue to face numerous obstacles, including limited access to financial resources, lack of formal education, restricted mobility, and minimal participation in decision-making processes. In this context, microfinance has emerged as a powerful tool aimed at addressing some of these barriers by offering small-scale financial services to those traditionally excluded from the formal banking sector.

Microfinance, by definition, involves the provision of credit, savings, insurance, and other basic financial services to low-income individuals or groups who do not have access to conventional banking. It is not merely about financial support—it also serves as a catalyst for

entrepreneurship, enabling individuals, particularly women, to launch or expand income-generating activities. Over the past few decades, microfinance has been promoted as a key strategy for fostering women's economic empowerment, enhancing their social standing, and reducing poverty in rural regions.

Rajasthan, with its diverse socio-cultural landscape and predominantly rural population, presents a unique case for examining the role of microfinance in transforming women's lives. Many women in rural Rajasthan face deeply entrenched gender norms, limited educational opportunities, and scarce access to employment or business capital. In such settings, microfinance institutions (MFIs), self-help groups (SHGs), and cooperative societies have made notable efforts to fill the credit gap and promote entrepreneurship among women. These efforts have helped to nurture a new class of women entrepreneurs who are gradually gaining economic independence, improving household welfare, and participating more actively in their communities.

However, while the presence and outreach of microfinance in rural Rajasthan have grown substantially, questions remain regarding the depth and sustainability of its impact. Does access to microfinance truly translate into long-term entrepreneurial success? To what extent does it contribute to women's social empowerment? Are there regional disparities in its effectiveness? These are some of the critical questions this study seeks to explore.

This paper delves into the impact of microfinance on women entrepreneurs in rural Rajasthan, aiming to assess how financial access has influenced their business activities, economic status, and overall quality of life. By analyzing both quantitative data and qualitative insights, the study endeavors to provide a nuanced understanding of the challenges, opportunities, and outcomes associated with microfinance initiatives in the region. The findings of this research are expected to contribute to ongoing policy discussions around rural development, financial inclusion, and gender equality. They will also offer valuable recommendations for stakeholders—such as government agencies, NGOs, and microfinance providers—seeking to enhance the effectiveness of microfinance programs and promote more inclusive entrepreneurship in rural India.

2. LITERATURE REVIEW

Nagar, U. (2025) in their study titled “Impact of Rural Banking and Financial Inclusion: A Case Study of Women Empowerment and Entrepreneurship in Rajasthan” explored the transformative role of rural banking and financial inclusion in enhancing the economic independence and entrepreneurial activities of women in rural Rajasthan. Sample size of the study was 500 women entrepreneurs from various rural areas in Rajasthan. Study utilised Regression analysis, Chi square test and factor analysis to analyse the data collected for the purpose of the study. They found that financial inclusion, specifically through rural banking services, had a significant positive impact on women entrepreneurs in Rajasthan.

Mahato, J., & Jha, M. K. (2025) in their paper titled “Barriers restricting indigenous women from becoming successful entrepreneurs: empirical evidence from India” analysed the various barriers faced by indigenous women in India, which prevent them from becoming successful entrepreneurs. Sample size of the study was 350 indigenous women entrepreneurs from five states in India: Jharkhand, Odisha, Chhattisgarh, West Bengal, and Madhya Pradesh

and factor analysis and regression modelling were used to analyse the data collected for the purposes of the study. They found that limited access to financial resources and social discrimination is one of the significant barriers faced by indigenous women entrepreneurs. They also commented that easy access to financial sources is essential factors in enhancing the entrepreneurial success of indigenous women.

Vyas, A. (2025) in their case study titled “Reversing the Distress: Jhonthri Cluster Level Federation (JCLF), Dungarpur, Rajasthan” explored the transformative role of women-led collectives in alleviating economic distress in rural Rajasthan. The study focused on a specific cluster in Dungarpur district, analyzing the experiences of women participants within this federation. They found that the JCLF has been instrumental in fostering economic resilience among its members. Through collective action and mutual support, women have been able to initiate and sustain various livelihood activities, leading to improved income levels and financial stability.

Sahu, T. N., Agarwala, V., & Maity, S. (2024) in their research titled “Effectiveness of microcredit in employment generation and livelihood transformation of tribal women entrepreneurs: evidence from PMMY” assessed the effectiveness of microcredit in generating employment and transforming the livelihoods of tribal women entrepreneurs under the Pradhan Mantri Mudra Yojana (PMMY) scheme. Sample size of the study was 450 tribal women entrepreneurs across selected districts and multiple regression analysis, and propensity score matching (PSM) were used to analyse the data collected for the purposes of the study. They found that microcredit under PMMY has had a significant positive impact on employment generation and livelihood improvement among the tribal women .

Sekhon, S., & Kaur, N. (2024) in their study titled “Weighing women’s empowerment against patriarchal masculinity: a study of microcredit self-help groups in rural Rajasthan” analysed the complex interplay between women's empowerment through microcredit self-help groups (SHGs) and the prevailing patriarchal norms in rural Rajasthan. Sample size of the study was 46 women participants involved in SHGs and 21 men from the same communities, totaling 67 individuals. Thematic analysis was employed to identify and interpret patterns and themes emerging from the qualitative data. They found that participation in SHGs led to increased mobility and economic activity among women, challenging traditional gender roles. However, this shift was perceived by some men as a threat to established patriarchal structures. In response, certain men resorted to domestic violence as a means to reassert control, while others adapted by supporting their wives' involvement in SHGs, reflecting a spectrum of masculinities.

Rani, V. S., & Sundaram, N. (2023) in their paper titled “Impact of financial inclusion on women entrepreneurs in India: An empirical study” empirically studied the influence of financial inclusion on women entrepreneurs in India, focusing specifically on the Vellore district of Tamil Nadu. Sample size of the study was 357 women owned MSME’s and regression analysis used to analyse the data collected for the purposes of the study. They concluded that access to financial services not only enhanced business efficiency but also contributed to greater social inclusion among women entrepreneurs.

Samineni, S., & Ramesh, K. (2023) in their research titled “Measuring the impact of microfinance on economic enhancement of women: Analysis with special reference to India” conducted a detailed investigation into the role of microfinance in promoting economic advancement among women in India. Sample size of the study was 500 women beneficiaries of various microfinance institutions across different regions in India and paired t-tests, and regression analysis were used to analyse the data collected for the purposes of the study. They found that increase in average monthly income among participants following their involvement in microfinance programs. In addition to higher income, many women reported greater control over household finances, improved ability to save, and enhanced self-reliance in managing small business ventures.

Rathee, S., & Aggarwal, D. (2023) in their paper titled “Transition in Employability and Women Empowerment: Substantiates from Pradhan Mantri Mudra Yojana” examined how the availability of collateral-free loans under PMMY has contributed to enhancing employability and promoting entrepreneurship among women, particularly those from disadvantaged socio-economic backgrounds. Sample size of the study was 500 beneficiaries of PMMY scheme and data was analysed using regression analysis. They found that while a significant number of women were able to start small businesses in sectors like retail, tailoring, food processing, and beauty services, the success of these ventures was closely tied to other enabling factors such as financial literacy, training support, and market linkages.

Gehlot, V., Sudha, R., Krishna, S. H., Chordiya, K., & Sinha, A. (2022) in their study titled “Women Entrepreneurs of Rajasthan: Decoding Managerial Skills” conducted a study on women entrepreneurs in Rajasthan with the aim of understanding the nature and scope of managerial competencies possessed by them. Sample size of the study was 384 women entrepreneurs across different districts of Rajasthan. Correlation analysis, and regression techniques were used to analyse the data collected for the purposes of the study. They found that most women entrepreneurs in Rajasthan demonstrated a moderate to high level of managerial competence, particularly in the areas of customer handling and basic financial planning.

Tomar, M. D. (2022) in their paper titled “An Analysis of Growth and Progress of Micro Enterprises in India: A Comparative Study of Rajasthan and Uttarakhand” evaluated the development patterns of micro enterprises across two Indian states—Rajasthan and Uttarakhand. Sample size of the study was 200 micro enterprise units was selected through a purposive sampling method—100 from Rajasthan and 100 from Uttarakhand—ensuring a balanced representation of businesses from diverse sectors such as textiles, handicrafts, food processing, and services. They found that that while both states have demonstrated positive growth in micro enterprises, Rajasthan showed slightly higher levels of business sustainability and access to formal credit.

Nainawat, R. (2021) in their study titled “An analytical study on impact of financial inclusion on empowerment of women in rural India” investigated into the relationship between financial inclusion and the empowerment of women in rural India. Sample size of the study was 250 rural women, selected through a stratified random sampling method across different districts. Correlation analysis, and Regression analysis were used. They concluded that while access to banking and credit services had improved significantly due to

government schemes like Pradhan Mantri Jan Dhan Yojana (PMJDY), continued efforts in education, awareness, and institutional support were necessary to translate financial access into long-term empowerment.

Shastri, S., Shastri, S., Pareek, A., & Sharma, R. S. (2021) in their paper titled “Exploring women entrepreneurs’ motivations and challenges from an institutional perspective: evidences from a patriarchal state in India” examined the underlying motivations and institutional challenges faced by women entrepreneurs operating within the traditionally patriarchal context of Rajasthan, India. Sample size of the study was 150 women entrepreneurs from various districts of Rajasthan, selected through purposive sampling to ensure representation across different sectors, age groups, and educational backgrounds. Correlation and Regression analysis were used to analyse the data collected for the purposes of the study. They found that while internal motivation and resilience play a crucial role in initiating business ventures, external institutional pressures often restrict the growth and sustainability of these enterprises.

Rathore, K. K. (2020) in their paper titled “Women empowerment through microfinance” analysed the role of microfinance in advancing women’s empowerment, particularly in rural and semi-urban areas of India. Sample size of the study was 200 women beneficiaries associated with various microfinance programs. Chi-square tests and Percentage analysis were used to analyse the data for the purposes of the study. a positive correlation between access to microfinance and multiple dimensions of empowerment. A significant proportion of the respondents reported improvements in their ability to contribute to household income, express opinions in family matters, and pursue small-scale entrepreneurial ventures.

3. RESEARCH OBJECTIVE

1. To evaluate the impact of microfinance on women's economic empowerment in rural Rajasthan.
2. To use statistical methods, such as regression and correlation analysis, to assess this impact.
3. To determine the extent to which access to microfinance contributes to variations in economic empowerment indicators.

4. RESEARCH METHODOLOGY

A descriptive and analytical approach was employed, with a focus on assessing the degree to which microfinance services influence women empowerment levels among individuals. The study used a cross-sectional survey method, collecting data at a single point in time to capture current patterns and perceptions. A sample size of 175 respondents was selected using simple random sampling, ensuring that each participant had an equal chance of being included. Primary data were gathered through a structured questionnaire, designed to capture key indicators of women empowerment and microfinance participation. The questionnaire consisted of closed-ended questions using a Likert scale to quantify responses.

5. VARIABLES AND MEASUREMENT

Independent Variable: Access to microfinance services (measured by loan availability, frequency of use, and participation in savings or credit programs).

Dependent Variable: Economic empowerment (measured through indicators such as income enhancement, financial independence, decision-making power, and entrepreneurial activity).

6. HYPOTHESIS

H01: There is no significant impact of the microfinance on women empowerment in Rural Rajasthan.

H0A: There is a significant impact of the microfinance on women empowerment in Rural Rajasthan.

7. DATA ANALYSIS TECHNIQUES

Data were analyzed using statistical software to ensure accuracy and consistency. The following techniques were applied:

- Descriptive statistics to summarize demographic characteristics and key variables.
- Pearson correlation analysis to determine the strength and direction of the relationship between microfinance and economic empowerment.
- Simple linear regression to assess the predictive power of microfinance on economic empowerment and estimate the extent of explained variance.

8. EMPIRICAL ANALYSIS

8.1 Hypothesis Test

H01: There is no significant impact of the microfinance on women empowerment in Rural Rajasthan.

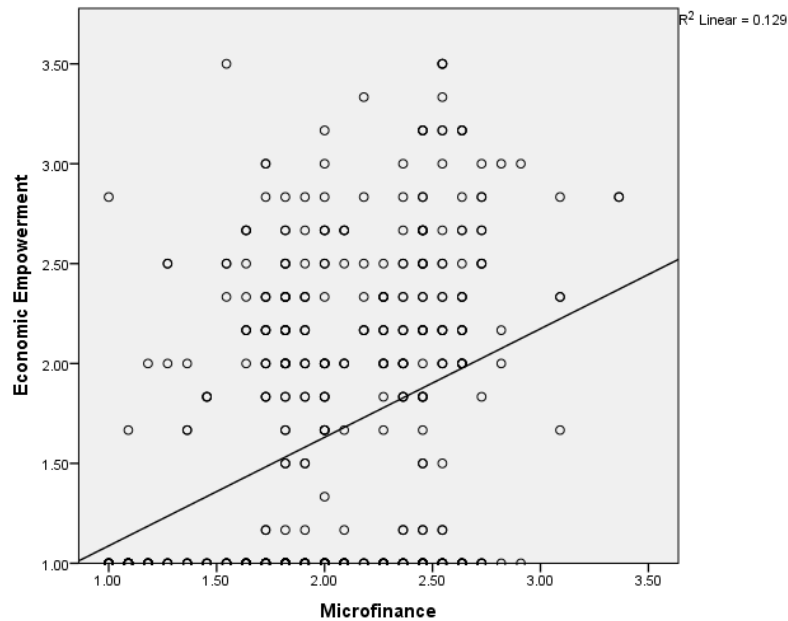
H0A: There is a significant impact of the microfinance on women empowerment in Rural Rajasthan.

8.1.1 Correlation Analysis

Table 1: Correlations		
		Women Empowerment
Microfinance	Pearson Correlation	.359
	Sig. (2-tailed)	.000
	N	175

Source: Output of IBM-SPSS 22

Figure 4.1: Scatter Plot



Source: Output of IBM-SPSS 22

Inferences:

Above table presents the correlation analysis of the variables taken for the purposes of the study. The Pearson correlation coefficient between microfinance and economic empowerment is 0.359, indicating a moderate positive relationship between the two variables. This suggests that as access to or participation in microfinance services increases, there tends to be a corresponding improvement in economic empowerment among individuals. The significance level (p-value) of 0.000 confirms that this correlation is statistically significant at the 1% level, meaning the likelihood of this result occurring by chance is very low. The sample size of 175 adds credibility to the analysis, reinforcing the reliability of the observed relationship.

8.1.2 Regression Analysis

Table 2: Model Summary					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.359a	.129	.127	.44202	1.872
a. Predictors: (Constant), Microfinance					
b. Dependent Variable: Women Empowerment					

Source: Output of IBM-SPSS 22

Inferences

The regression analysis (presented above) yields a correlation coefficient (R) of 0.359, indicating a moderate positive relationship between the independent and dependent variables.

The R Square value of 0.129 suggests that approximately 12.9% of the variation in the dependent variable can be explained by the independent variables included in the model. The Adjusted R Square is slightly lower at 0.127, accounting for the number of predictors in the model and indicating a similar level of explanatory power after adjustment.

The standard error of the estimate (0.44202) reflects the average distance between the observed values and the regression line; a lower value generally indicates a better fit, though in this case, the moderate size suggests some degree of prediction error remains. The Durbin-Watson statistic of 1.872 is close to 2, indicating that there is no significant autocorrelation in the residuals, and thus the assumption of independence in errors is reasonably satisfied.

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14.263	1	14.263	73.001	.000b
	Residual	96.519	174	.195		
	Total	110.782	175			
a. Dependent Variable: Economic Empowerment						
b. Predictors: (Constant), Microfinance						

Source: Output of IBM-SPSS 22

Inferences:

The ANOVA table evaluates the impact of microfinance on women empowerment. The regression model shows a significant F-value of 73.001 with a p-value of .000, which is well below the conventional significance level of 0.05. This indicates that the model explaining the relationship between microfinance (the predictor) and women empowerment (the dependent variable) is statistically significant.

Out of the total variation (Sum of Squares = 110.782) in women empowerment, 14.263 units can be attributed to the variation explained by microfinance, while the remaining 96.519 units are due to unexplained or residual factors. The relatively high F-statistic further confirms that microfinance has a substantial effect on the dependent variable. Thus, there is strong statistical evidence to conclude that microfinance significantly contributes to explaining variations in women empowerment among the subjects studied.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.624	.050		32.780	.000
	Microfinance	.237	.028	.359	8.544	.000
a. Dependent Variable: womenempowerment						

Source: Output of IBM-SPSS 22

Inferences:

The constant value (intercept) is 1.624, which is statistically significant ($p < 0.001$). This implies that even in the absence of microfinance support, the baseline level of women empowerment is 1.624 units (on the scale used in this study). The unstandardized coefficient for microfinance is 0.237, indicating that for every one-unit increase in access to or use of microfinance services, the level of women empowerment increases by 0.237 units, holding all other factors constant. The effect is statistically significant at the 0.001 level ($p = 0.000$), suggesting a strong positive association. The standardized beta value is 0.359, which allows for comparison across variables measured on different scales. This indicates a moderate positive effect of microfinance on women empowerment, meaning that microfinance is a meaningful contributor to improving individuals' economic and social standing. The t-statistic for microfinance is 8.544, which is quite high, further reinforcing the statistical significance and strength of the relationship. The results suggest that microfinance plays a substantial role in enhancing women empowerment. As the accessibility and utilization of microfinance services increase, individuals are likely to experience improvements in their economic and social conditions. These findings support the view that microfinance initiatives can be effective tools for poverty reduction and financial inclusion.

The analysis reveals a statistically significant and moderately positive relationship between microfinance and women empowerment. The Pearson correlation coefficient of 0.359 indicates that individuals who have better access to microfinance services tend to show higher levels of economic empowerment. The p-value of 0.000 confirms that this association is unlikely to have occurred by chance, affirming its reliability at the 1% significance level. With a sample size of 175, the study's results are both dependable and representative.

9. RESULT OF THE STUDY

The results of the study indicate a statistically significant and moderately positive relationship between microfinance and women empowerment in rural Rajasthan. A Pearson correlation analysis revealed a correlation coefficient of $r = .359$, $p < .001$, suggesting that increased access to microfinance services is associated with higher levels of empowerment among women. Further, a simple linear regression analysis confirmed the significance of this relationship, $F(1, 174) = 73.00$, $p < .001$, with microfinance explaining approximately **12.9%** ($R^2 = .129$) of the variance in women empowerment. The unstandardized regression coefficient was $B = .237$, $SE = .028$, and the standardized beta coefficient was $\beta = .359$, indicating a moderate effect size. The regression model showed no issues with autocorrelation, as evidenced by the Durbin-Watson statistic of **1.87**. These findings provide strong empirical support that microfinance significantly contributes to enhancing women empowerment in the rural areas of Rajasthan.

10. DISCUSSION

The regression results further substantiate this relationship. The correlation coefficient (R) remains at 0.359, while the R Square value of 0.129 suggests that microfinance accounts for roughly 12.9% of the variation in women empowerment. After adjusting for the number of variables, the Adjusted R Square stands at 0.127, showing only a slight reduction in explanatory power. Although the standard error of 0.44202 indicates some prediction error, it

remains within an acceptable range for a model of this nature. Durbin-Watson statistic of 1.872 is close to the ideal value of 2, indicating that there is no significant autocorrelation in the residuals, and the model satisfies the assumption of independence of errors. The ANOVA test highlights that the regression model is statistically significant, with an F-value of 73.001 and a p-value of 0.000. This demonstrates that microfinance meaningfully explains variations in women empowerment. Of the total variation, 14.263 units are attributable to the influence of microfinance, while the remaining 96.519 units result from other unexplained factors.

The analysis of the regression coefficients further supports these conclusions. The intercept (1.624) is statistically significant, suggesting a baseline level of women empowerment even in the absence of microfinance. The unstandardized coefficient for microfinance (0.237) indicates that each one-unit increase in access to microfinance leads to a corresponding increase of 0.237 units in women empowerment. The standardized beta coefficient (0.359) and the high t-value (8.544) reinforce the strength and significance of this positive relationship.

11. CONCLUSION

Overall, the empirical evidence gathered in this study strongly supports the role of microfinance as a catalyst for women empowerment in rural Rajasthan. The statistically significant results, derived from both correlation and regression analyses, underscore the positive and moderately strong association between access to microfinance services and improvements in women's socio-economic status. The findings suggest that microfinance does not merely provide financial resources but also contributes to enhancing self-reliance, decision-making capacity, and economic participation among women. By offering capital, savings mechanisms, and financial literacy, microfinance institutions enable women to initiate and expand income-generating activities, which in turn foster greater economic independence and social recognition.

Furthermore, the results of the study clearly refute the null hypothesis (H_{01}), which posited no significant impact of microfinance on women empowerment. Instead, they provide robust support for the alternative hypothesis (H_{a1}), affirming that microfinance exerts a statistically significant and beneficial effect on empowering women in rural settings. These findings not only validate the theoretical underpinnings of microfinance as a development tool but also carry practical implications for policymakers and development practitioners. Expanding microfinance access can be a strategic lever for promoting inclusive growth, reducing gender-based disparities, and enhancing financial resilience among marginalized populations. Hence, investment in microfinance infrastructure and outreach should be considered a vital component of broader rural development and gender equity programs.

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