

# An Empirical Study of Microfinance and Economic Development of Tribal Households in the TSP Areas of Southern Rajasthan

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## Abstract:

Microfinance has emerged as a key instrument for promoting financial inclusion and improving household level economic outcomes, particularly among marginalised communities. The present study examines the impact of microfinance on the economic development of tribal households in the Tribal Sub Plan areas of Southern Rajasthan. The study adopts a quantitative research design based on primary data collected from 178 tribal households with prior exposure to microfinance services. Data were gathered using a structured questionnaire comprising Likert scale statements measuring microfinance access and household economic development. Reliability of the instrument was confirmed using Cronbach's alpha, which indicated satisfactory internal consistency. Simple linear regression analysis was employed to assess the effect of microfinance on economic development. The findings reveal a statistically significant and positive relationship between microfinance and economic development, with microfinance explaining a substantial proportion of variation in household economic outcomes. The results suggest that access to microfinance services contributes to improvements in income stability, savings behaviour, asset creation, and overall economic well being of tribal households. The study offers empirical evidence relevant for policymakers and development practitioners seeking to strengthen microfinance interventions in tribal regions.

**Keywords:** Microfinance, Economic Development, Tribal Households, Financial Inclusion, and Tribal Sub Plan Areas.

## INTRODUCTION

Economic development in tribal regions continues to remain a significant policy challenge in many developing economies, including India. Tribal households often face persistent constraints related to limited access to formal financial services, unstable income sources, and vulnerability to economic shocks. These challenges have contributed to sustained levels of poverty and economic exclusion in several Tribal Sub Plan areas across the country.

Microfinance has been promoted as an important development intervention aimed at addressing financial exclusion by extending credit and related services to underserved populations. By enabling access to small scale loans, savings facilities, and financial guidance, microfinance institutions are expected to support income generating activities and enhance household level economic resilience. In tribal contexts, microfinance is often viewed as a mechanism that can facilitate livelihood diversification, asset accumulation, and improved consumption smoothing.

Despite the widespread expansion of microfinance programmes, empirical evidence on their economic impact among tribal households remains mixed and context specific. Variations in institutional practices, utilisation patterns, and local economic conditions may influence the extent to which microfinance

contributes to meaningful economic development outcomes. This has created a need for location specific empirical studies that assess the effectiveness of microfinance interventions within distinct socio economic settings.

Southern Rajasthan comprises a substantial proportion of tribal population residing within designated Tribal Sub Plan areas. While microfinance initiatives have been implemented across these regions, systematic evidence on their contribution to household level economic development is limited. Understanding whether and how microfinance influences economic outcomes among tribal households in this region is essential for informing policy design and programme implementation.

Against this backdrop, the present study empirically examines the impact of microfinance on the economic development of tribal households in the TSP areas of Southern Rajasthan. By focusing on households with prior exposure to microfinance services and applying regression based analysis, the study seeks to contribute empirical insights into the role of microfinance in shaping economic development outcomes in tribal contexts.

## REVIEW OF LITERATURE

(Lahiri & Wei, 2025) examined whether the length of participation in microcredit programmes translates into measurable development gains among Indian microfinance clients. Using survey evidence from three Indian cities, the study applied two stage least squares for financial outcomes and ordered probit modelling for social capital indicators. The analysis indicated that longer microcredit exposure tends to be associated with improved income and savings, although the strength of effects varied by city and the evidence on social capital formation was mixed. The study is directly relevant because it treats microfinance exposure as a measurable driver and links it to household level economic development outcomes.

(Pandhare et al., 2024) assessed how microfinance participation through Self Help Groups can shape women's empowerment and entrepreneurship outcomes in rural India. The article employed empirical analysis based on field data and positioned microfinance access as an enabling mechanism for income related advancement through enterprise engagement. The reported evidence supports the view that microfinance linked financial access can facilitate livelihood strengthening when accompanied by entrepreneurial activity, aligning conceptually with household economic development as an outcome of microfinance services.

(Basak & Roy Chowdhury, 2024) investigated whether participation in Self Help Groups and associated microcredit services improves socioeconomic development among rural women in Cooch Behar District, India. Using a cross sectional survey of SHG participants and comparative testing, the study reported improvements in socioeconomic development indicators following SHG participation, with microcredit membership identified as a central contributing element. This study strengthens the empirical basis for treating microfinance participation as a meaningful predictor of development oriented outcomes captured through structured questionnaire measurement.

(Al-Kubati & Selvaratnam, 2023) synthesised India's experience with the Self Help Group Bank Linkage Programme and examined how the programme contributes to development outcomes, including livelihood strengthening and regional disparity in progress. The study combined descriptive assessment with quantitative consideration of sustainability and equality related indicators to interpret the programme's developmental role. Although not framed as a household impact evaluation, its relevance lies in clarifying how large scale microfinance delivery models in India are expected to translate into development gains, while also signalling variation across regions.

(Bordoloi & Singh, 2023) explored microfinance and financial inclusion linkages within India, focusing on how microfinance participation can influence financial access and related socioeconomic conditions. Using empirical assessment grounded in Indian context, the study argued that microfinance mechanisms can contribute to improved household welfare pathways when they enhance inclusion and reduce reliance on informal finance. This supports the conceptual positioning of microfinance as a practical intervention with plausible economic development implications measurable through household level indicators.

(Raghunathan et al., 2023) evaluated whether participation in women's savings and credit Self Help Groups in India produces sustained improvements in household economic well being at scale. Drawing on panel data across five Indian states, the study estimated impacts of SHG membership on household expenditure and asset ownership and reported modest gains, including improvements in expenditure and certain asset indicators such as livestock ownership, with indications that effects may taper as programmes scale. The findings are closely aligned with the present study's focus because they operationalise development outcomes at household level and empirically test links with microfinance group participation. (Hoffmann et al., 2021) provided experimental evidence on a microfinance intervention in India, studying whether expanding access to microcredit affects household level outcomes. Using a randomised evaluation design, the study offered a rigorous approach to isolating the causal contribution of microfinance services to welfare related measures. Its relevance lies in supporting the empirical expectation that microfinance access can alter household economic trajectories, while also cautioning that impacts may be context dependent and uneven across outcome domains.

(Khan et al., 2020) examined microfinance participation among women's Self Help Groups in Kashmir Valley, India, and assessed multiple empowerment domains including economic aspects. Using empirical survey based analysis, the study reported improvements on several measured dimensions among microfinance participants, including indicators connected to economic standing. For the present study, its importance is in reinforcing the plausibility that microfinance exposure can be reflected in measurable economic development related outcomes captured through Likert scale instruments.

## RESEARCH METHODOLOGY

- **Research Objective**

To empirically assess the impact of microfinance access on the economic development of tribal households in the Tribal Sub Plan areas of Southern Rajasthan.

- **Research Design**

The study adopted a descriptive and analytical research design to examine the impact of microfinance on the economic development of tribal households. This design was considered suitable as it facilitates systematic collection and quantitative analysis of primary data to assess relationships between clearly defined variables within a specific socio economic context.

- **Research Approach**

A quantitative research approach was employed in the study. This approach was appropriate given the use of structured questionnaire data, Likert scale measurements, and inferential statistical techniques to test the stated hypothesis and evaluate the relationship between microfinance and economic development.

- **Population and Sample**

The target population comprised tribal households residing in the Tribal Sub Plan areas of Southern Rajasthan. The sample included only those tribal households with prior exposure to microfinance services, enabling assessment of their economic development outcomes. A total of 178 respondents were selected using a structured sampling approach suitable for household level survey research. The selected sample size was considered adequate for regression analysis and for

drawing statistically meaningful inferences regarding the impact of microfinance on economic development.

• **Research Variables**

Microfinance was treated as the independent variable and was operationally defined as access to and utilisation of microfinance services by tribal households. Economic development was considered the dependent variable and was operationally defined in terms of changes in household income, savings behaviour, asset ownership, financial stability, and overall economic well being. The identification and operationalisation of variables were aligned with the research objective and the stated hypothesis.

• **Instrument Development and Measurement**

Primary data were collected using a structured questionnaire developed for the study. The instrument consisted of two constructs, namely microfinance and economic development, each measured using ten Likert type statements. Responses were recorded on a five point Likert scale ranging from 1 representing Strongly Disagree to 5 representing Strongly Agree. The statements were designed to capture respondents’ perceptions of microfinance services and household level economic conditions.

*Table 1.1: Opinion of the respondents regarding Microfinance*

S NO	Likert Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	Microfinance services are easily accessible to my household when needed.	7	26	59	41	45
		3.93%	14.61%	33.15%	23.03%	25.28%
2	The loan amount available through microfinance is adequate for my household’s needs.	7	26	40	48	57
		3.93%	14.61%	22.47%	26.97%	32.02%
3	The interest rate charged by the microfinance institution is affordable for my household.	13	29	44	47	45
		7.30%	16.29%	24.72%	26.40%	25.28%
4	The repayment schedule of microfinance loans is flexible for my household.	24	31	53	49	21
		13.48%	17.42%	29.78%	27.53%	11.80%
5	Microfinance participation has improved my household’s habit of regular saving.	20	36	51	44	27
		11.24%	20.22%	28.65%	24.72%	15.17%
6	Training or guidance provided with microfinance services is useful for my household.	21	29	43	47	38
		11.80%	16.29%	24.16%	26.40%	21.35%
7		7	29	46	58	38

S NO	Likert Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	Microfinance group meetings (if applicable) are conducted regularly and effectively.	3.93%	16.29%	25.84%	32.58%	21.35%
8	The procedures for obtaining microfinance loans are simple and transparent.	21	27	52	46	32
		11.80%	15.17%	29.21%	25.84%	17.98%
9	My household mainly uses microfinance loans for productive or income-generating activities.	14	28	65	35	36
		7.87%	15.73%	36.52%	19.66%	20.22%
10	Microfinance services have increased my household's confidence to make financial decisions.	8	25	51	30	64
		4.49%	14.04%	28.65%	16.85%	35.96%

The Likert scale analysis indicates that tribal households generally hold favourable perceptions regarding both microfinance services and their economic development outcomes. Responses related to microfinance show moderate to high agreement on accessibility of services, adequacy of loan amounts, usefulness of training support, effectiveness of group mechanisms, and increased confidence in financial decision making. Although certain aspects such as interest rate affordability, repayment flexibility, and productive utilisation of loans attracted neutral responses from a section of respondents, overall perceptions suggest that microfinance services are viewed as supportive and beneficial at the household level.

**Table 1.2: Opinion of the respondents regarding Economic Development**

SNO	Likert Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	My household's overall income has improved in recent years.	9	25	61	47	36
		5.06%	14.04%	34.27%	26.40%	20.22%
2	My household's income has become more stable and predictable.	12	42	42	48	34
		6.74%	23.60%	23.60%	26.97%	19.10%
3	My household's ability to meet essential monthly expenses has improved.	21	36	61	24	36
		11.80%	20.22%	34.27%	13.48%	20.22%
4	My household's savings or financial reserves have increased.	7	17	48	40	66
		3.93%	9.55%	26.97%	22.47%	37.08%

SNO	Likert Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
5	My household has been able to purchase or improve productive assets (e.g., livestock, tools, equipment).	4	27	54	57	36
		2.25%	15.17%	30.34%	32.02%	20.22%
6	My household's spending on children's education has improved.	7	19	58	53	41
		3.93%	10.67%	32.58%	29.78%	23.03%
7	My household's ability to afford healthcare when needed has improved.	17	22	48	37	54
		9.55%	12.36%	26.97%	20.79%	30.34%
8	My household's food security has improved throughout the year.	11	19	47	46	55
		6.18%	10.67%	26.40%	25.84%	30.90%
9	My household's housing condition has improved (e.g., repairs, materials, facilities).	11	35	51	39	42
		6.18%	19.66%	28.65%	21.91%	23.60%
10	My household is better able to cope with unexpected financial shocks (e.g., illness, crop loss).	17	23	45	43	50
		9.55%	12.92%	25.28%	24.16%	28.09%

Findings on economic development indicate notable improvements across multiple dimensions of household welfare. Respondents reported moderate to strong agreement regarding increases in income stability, savings and financial reserves, asset creation, food security, education and healthcare expenditure, housing conditions, and the ability to cope with unexpected financial shocks. While income improvement indicators showed some variation across households, stronger agreement on savings growth and economic resilience suggests that microfinance contributes not only to income related outcomes but also to broader financial security and stability. Collectively, the Likert scale findings reinforce the positive association between microfinance participation and economic development among tribal households.

• **Data Collection Procedure**

Data were collected through a field-based survey administered to the selected respondents in the identified TSP areas of Southern Rajasthan. The questionnaire was personally administered to ensure clarity of items and completeness of responses. Data collection was carried out over a defined period following informed consent from the respondents.

• **Reliability of the Instrument**

The reliability of the measurement instrument was assessed using Cronbach's alpha. Reliability analysis was conducted for both the microfinance and economic development constructs.

**Table 1.3: Reliability Statistics**

Cronbach's Alpha	N of Items
<b>.843</b>	<b>20</b>

The obtained alpha values exceeded the generally accepted threshold of 0.70, indicating satisfactory internal consistency of the instrument.

• **Statistical Tools and Techniques**

Descriptive statistics were used to summarise respondents’ perceptions across the Likert statements. Simple linear regression analysis was employed to test the null hypothesis and to examine the impact of microfinance on the economic development of tribal households. Regression analysis was appropriate as the study sought to assess the predictive effect of a single independent variable on a dependent variable.

**NULL HYPOTHESIS**

**H<sub>01</sub>: There is no significant impact of microfinance on the economic development of tribal households in the TSP areas of Southern Rajasthan.**

To examine the stated hypothesis, a simple linear regression analysis was conducted to assess the impact of microfinance on the economic development of tribal households in the TSP areas of Southern Rajasthan.

**Table 1.4: Model Summary**

R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Standard error of the estimate
0.61	0.38	0.37	0.71

The model summary indicates a moderately strong positive relationship between microfinance and economic development, as reflected by the correlation coefficient ( $R = 0.61$ ). The coefficient of determination ( $R^2 = 0.38$ ) suggests that microfinance explains 38 % of the variation in the economic development of tribal households.

**Table 1.5: ANOVA**

Model	df	F	p
Regression	1	106.65	<.001

The ANOVA results further indicate that the regression model is statistically significant,  $F(1, 106.65) = 106.65, p < .001$ , demonstrating that microfinance significantly contributes to explaining variations in the economic development of tribal households.

**Table 1.6: Coefficients**

Model	Unstandard. Coef. B	Standard. Coef. Beta	Std. Error	t	p
Constant	1.52		0.20	7.78	<.001
Microfinance Score	0.58	0.61	0.06	10.33	<.001

The coefficients table shows that microfinance has a positive and statistically significant effect on economic development. The unstandardised regression coefficient for microfinance is  $B = 0.58$ , with a corresponding  $t$  value of 10.33 ( $p < .001$ ), indicating that an increase in microfinance is associated with a

significant increase in the economic development of tribal households. Based on the unstandardised coefficients, the regression equation is expressed as:

$$\text{Economic Development} = 1.52 + 0.58 (\text{Microfinance})$$

Further, a one-unit increase in the microfinance score leads to an increase of 0.58 units in the economic development score of tribal households, highlighting the positive role of microfinance in enhancing economic conditions.

- **Decision**

Since the regression model and the microfinance coefficient are statistically significant ( $p < .001$ ), the null hypothesis ( $H_{01}$ ) is rejected.

- **Finding**

The findings clearly establish that microfinance has a significant and positive impact on the economic development of tribal households in the TSP areas of Southern Rajasthan. Microfinance interventions contribute meaningfully to improving income levels, financial security, and overall economic well-being of tribal households in the study area.

## CONCLUSION

The empirical results of the study provide clear evidence that microfinance has a significant and positive impact on the economic development of tribal households in the Tribal Sub Plan areas of Southern Rajasthan. Regression analysis confirms that microfinance explains a substantial proportion of variation in household economic development, while descriptive findings reveal improvements across income, savings, asset ownership, and economic resilience. The rejection of the null hypothesis reinforces the conclusion that access to microfinance services contributes meaningfully to enhancing household level economic outcomes. Collectively, the findings highlight the role of microfinance not only as a source of credit but also as a catalyst for improved financial behaviour and economic stability among tribal households.

## SUGGESTIONS

The following were the suggestions based on findings

1. Improving the design of microfinance services to better match the income patterns and economic activities of tribal households can enhance their overall developmental impact.
2. Adjusting interest rate structures and repayment schedules may improve affordability and reduce repayment pressure, particularly for households with irregular earnings.
3. Strengthening financial literacy and savings oriented training can consolidate the positive changes observed in household saving behaviour and financial discipline.
4. Ensuring consistent and effective delivery of training and guidance components can improve the uniformity of benefits derived from microfinance participation.
5. Promoting productive utilisation of microfinance loans can support stronger income generation and reduce the proportion of neutral outcomes observed among some households.
6. Encouraging asset focused lending can reinforce long term economic stability, building on reported improvements in asset creation.
7. Supporting education related expenditures through microfinance can contribute to sustained household development and human capital formation.
8. Integrating healthcare sensitive financial support mechanisms can reduce economic vulnerability associated with medical expenses.
9. Enhancing group based microfinance mechanisms can strengthen peer support, accountability, and confidence in financial decision making.

10. Establishing regular monitoring of household economic outcomes can help refine microfinance interventions and sustain their positive impact in Tribal Sub Plan areas.

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