



## Assessing the Role of Microfinance Institutions in Enhancing Women's Livelihoods: A Regional Study from Gujarat, India

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### KEYWORDS

*Microfinance ,Women's Empowerment, Economic Inclusion, Gujarat, Financial Literacy, Policy Interventions, Sustainable Development, Income Generation, Access Barriers, Mixed-Methods, SHGs, Gender Equity, Poverty Alleviation, Financial Inclusion, Resilience*

### ABSTRACT

Microfinance institutions (MFIs) have been enthusiastically propagated as instruments of poverty reduction and women economic empowerment and in the developing economy of India. The current paper explores how MFIs improve women livelihood in Gujarat, India, with regard to economic empowerment, challenges to access policy response. This study performed a mixed-methodology involving both quantitative and qualitative data, collecting feedback of 200 women who participated in the research about the services of microfinance. The outcomes show a moderate positive correlation between microfinance participation and women economic empowerment ( $R^2 = 0.098$ ,  $p < 0.001$ ). There still exists challenges linked to financial literacy and logistical barriers. All these challenges notwithstanding, women displayed strength in obtaining and leveraging microfinance services. The research findings indicate that MFIs do have a contribution to economic outcomes of women but the effectiveness should be improved with diversified financial products, capacity building programs, and gender-sensitive policies.

## 1. INTRODUCTION

The interest in microfinance institutions (MFIs) as important contributors to poverty relief and the empowerment of women economically, especially in developing economies has emerged in recent years (Morduch 1999; ArmendAriz and Morduch 2010). MFIs are designed to promote financial services among low-income groups by offering the small-scale services (e.g. insurance, savings, and credit) in order to increase the participation of marginalized communities in financial activities and entrepreneurship (Yunus 2007). With gender inequalities remained an issue in economic activities in India, the concept of microfinance has received extensive promotion to empower women through providing them with access to credit and self-employment (Kabeer 2005; Swain and Wallentin 2009). Gujarat, the state rapidly developing the microfinance industry, is an interesting case study on exploring the effectiveness of this kind of interventions to uplift the lives of women (Sarma 2012).

### 1.1 Microfinance and Women's Empowerment: Theoretical Underpinnings

The debate about microfinance and empowerment of women is a part of the greater picture of financial inclusion and gender equality (Mayoux 1999). Those in support of the idea claim that women can use credit to participate in income generating ventures and, in the process, raise their economic agency and decision-making power in the household (Hashemi et al. 1996). According to empirical researches in South Asia, there is evidence that, the participation in the microfinance would correlate with increased self-confidence, increased mobility, and increased social stature in women (Cheston and Kuhn 2002; Pitt et al. 2006). Critics would however have argued that the effects of microfinance are more often than not blown out of proportion with some research revealing matters like over-indebtedness, huge interest rates and lack of post consolidation income generation (Bateman 2010; Roodman 2012). Diversity of the evidence highlights the necessity of context-specific evaluations to define the question of whether microfinance changes livelihoods or is a kind of instant fixing (Banerjee et al. 2015).

## 1.2

### **Microfinance in the Indian Context**

Microfinance innovations in India have been on the agenda, and their approaches like Self-Help Groups (SHGs) and Joint Liability Groups (JLGs) have taken a central place in the financial inculcation (Desai and Joshi 2014). NABARD and SIDBI or Small Industries Development Bank of India have been instrumental in the promotion of microfinance as a poverty alleviation instrument especially among rural women (Kumar 2011). Nevertheless, regional inequalities still exist and some states have exhibited greater successes in empowerment than others as a result of the microfinance led empowerment (Shah et al. 2007). The case of Gujarat due to its vibrant entrepreneurial culture and presence of dynamic micro finance system is very interesting when it comes to determining the effects of institutional mechanisms of credit on the economic life cycle of women (Sarma 2012).

### **1.3 The Gujarat Scenario: Microfinance and Women's Livelihoods**

The landscape of the microfinance industry in Gujarat is unique and blends government-supported projects, non-governmental institutions (NGOs), and privately owned MFIs, so it presents an excellent environment in which to study financial inclusion (Desai and Joshi 2014). The presence of high labor force participation of females and an increasing trend towards women-owned businesses in the state offers a rare case of analyzing the performance of microfinance in the establishment of sustainable livelihoods (Kumar 2011). But the pressures of loan payment, low levels of financial literacy, and market saturability in the case of urban microfinance markets cast doubt upon the sustainability of these interventions in the long term (Karlan and Zinman 2011). This paper therefore aims at filling the existing gaps by providing an insight into how MFIs are helping women uplift their livelihoods in Gujarat, both academically and in policy-making debate, in regard to effectiveness of micro finance.

### **1.4 Aim and Significance of the study**

The aim of the proposed study is to critically evaluate the role of micro finance institutions (MFIs) in advancing the livelihoods of women in Gujarat, India by analyzing the economic, social and psychological impact which they have. As much as microfinance has gained momentum among women empowerment tools, little has been agreed upon on its success in the long run, especially where the aspects of socio-economic and culture are of particular concern in regional contexts (Banerjee et al. 2015; Duvendack et al. 2011). This study places an additional emphasis on Gujarat, one of the Indian states with an advanced microfinance market and significant gender inequality (Bateman 2010; Roodman 2012), to offer evidence-based information regarding the actual effects of MFIs on the improvement of sustainable livelihoods or the productive cycle of debt (Bateman 2010; Roodman 2012). The results will have implications on policy formulations, the development practice and financial institutions on how to design more accessible and workable microfinance programs that are completely related to the needs and the local economic settings of the women.

### **1.5 Research Contributions**

The current study will have three important contributions to the existing body. To begin with, it provides area-wise estimate of effect of microfinance in Gujarat, which lacks localized evidences on women financial inclusion (Desai and Joshi 2014; Sarma 2012). Second, it considers more than the conventional economic indicators, as it includes the indicators of social empowerment, in particular, the independence in decision-making, mobility, and self-confidence (Hashemi et al. 1996; Kabeer 2005). Third, the use of not only borrower and but also MFI stakeholder voices make the study more holistic in the sense that it gives vivid insights towards the challenges and opportunities that exist in the microfinance ecosystem of Gujarat (Karlan and Zinman 2011). This study contributes to the literature on gender-responsive financial interventions on several levels because it makes scholarly discussions of the topic reach theoretical and empirical levels, as well as informs policymaking towards sustainable development.

## **1. Review of Literature and Hypothesis Development**

Empirical studies done in the recent past (2020–2025) have validated the fact that participation in microfinance has considerable positive impacts in enhancing the economic empowerment of women especially in relation to increased engagement in income generating activities. A study of rural India (Kaur et al., 2021) revealed that when women received microloans, the number of households with higher incomes increased by 27 per cent, with most of the investments going to small-scale businesses in tailoring, rearing, and retail businesses. Similar conclusions have been reached in a longitudinal study in South Asia by Afzal and Khan (2022) which proves that microfinance beneficiaries possess an increased financial independence, where 63 percent of study respondents confirm that their decision-making power concerning household expenses have increased. The results correspond to the larger discussion of the financial inclusion domain, in which access to credit has been connected with growth in entrepreneurship and poverty alleviation (Mader, 2023). Nonetheless, as Noreen and Ibrahim (2023) indicate in contrasting evidence the effect of microfinancing on the economy is usually modulated by socio-cultural hurdles, which in turn include gender-based gender role constraints hindering the mobility and access to market of women. Their analysis in Pakistan and it is shown that microfinance, although on the one hand encouraged savings on the part of women, on the other hand the women could only use 38 per cent of those savings to build

scalable enterprises given their patriarchal limitations. Moreover, the meta-analysis carried out by Gupta and Patel (2024) reported that there were regional differences, where it was stated that the effect of microfinance is dependent on other reinforcing structures, such as vocational training and market linkages. In their absence, economic benefits are rather small and limited to the short term. Therefore, although microfinance definitely plays a positive role in empowering women economically, it can rarely work in full capacity without structural interventions in the matter of gender inequities (Deshpande & Singh, 2025).

Digital financial inclusion has also been used to check the correlation between microfinance and income generating activity. Recent reports stress the fact that mobile banking and integration of financial technologies in the models of microfinance (e.g., Jain & Sharma, 2023) have increased the power of women to trace cash flows and profit reinvestment. Patel et al. (2024) found that in Gujarat, women groups using digital lending facilities as SHGs took 40 percent less time to get the loan, which can be used to leverage time-specific economic opportunities. On the contrary, Rahman and Akter (2023) warn that exclusions may be heightened by digital divides, which include the low literacy in the use of smartphones among rural women, thus restricting the penetration of microfinance. There is also a question mark over the effectiveness of the interest rates; a cross-country analysis done by Chen et al. (2025) showed that high-interest microloans usually depreciate the profit margins, pushing women into debt instead of viable businesses. These criticisms serve as indicators on the necessity of hitting regulatory systems that limit interest rates and enhance financial literacy (OECD, 2023). The literature as a whole confirms that microfinance can promote economic empowerment, although policies suggested to maximize the impact should focus on digital, cultural and structural barriers.

*H1: There is a statistically significant impact of microfinance participation on women's economic empowerment and income-generating activities.*

Recent studies (2020–2025) report on an efficient linkage between structural impediments and the comparative accessibility and usage of microfinance services to women. A study of Kabir et al. (2022) in Bangladesh concluded that logistics, including the distances to MFI branch, decreased the women participation level by 22%, especially in the rural sector where the transportation infrastructure is poor. This coincides with the evidences of Ethiopia (Tesfaye & Gebre, 2023), where culture does not allow women to travel anywhere autonomously which further limited women to access loan meeting or training programs. Moreover, bureaucratic barriers, including excessive demand of collaterals, indisproportionately limit access of females who do not own assets formally (Agarwal & Lenka, 2024). Such structural barriers are further aggravated by the intra-household dynamics; a study by Farooq and Naz (2023) provided the evidence that male family members tend to misuse the loans of women; to pursue non-income-generating purposes that undercut the desired economic impacts. Microfinance encountering such challenges illuminates the distinction between the presumed ideal and the reality of microfinance in patriarchal cultures (World Bank, 2023).

Social-psychological elements, such as financial literacy and self-efficacy also make an impact on induction into microfinance services. In a randomized control trial conducted by Buvinic et al. (2024) found basic financial training made women 35 percent more likely than their untrained peers to invest the money on loans fruitfully. On the other hand, a lack of financial literacy increases vulnerabilities such as over-indebtedness as experienced in Nigeria with almost 41 percent of female borrowers acquiring additional loans in order to pay back their previous loans (Adesina & Ogunleye, 2025). Digital exclusion is another urgent issue already solved with mobile banking: it makes a part of the unbanked population become banked; yet, in India, research (Mehrotra & Parikh, 2023) has revealed and reported only 29 percent of rural female borrowers could manage loan apps themselves: they had to resort to male middlemen. This is used to entrench inequalities in financial control by gender (GSMA, 2024). Also, the profit maximising interest of MFIs in the provision of loans tends to supersede consideration of the welfare of the borrower personnel, resulting in harsh recovery behaviour that repels poor women applicants (Karim & Mohamed, 2025). These results point to the importance of gender-sensitive policies by MFIs to respond not only to access barriers but also utilization constraints by means of education and technology modification as well as regulatory services (UNCDF, 2023).

*H2: There is a statistically significant relationship between the challenges faced and the level of access to and utilization of microfinance services among women.*

Recent scholars (2020–2025) underline that the structural as well as operational inefficiencies that undermine the microfinance institutions (MFIs) operations can be alleviated through proper policy interventions and hence enhance their role in promoting sustainable development of women. As an example, a policy experiment in Rajasthan (Sharma & Reddy, 2023) revealed that the effect of incorporating gender-sensitive credit scoring (by acknowledging that women have an informal source of income) resulted in the fact that the loans approval rates increased by 18% in a manner that did not increase default rates. On the same note, loan guarantees with the backing of governments have been observed to alleviate the risk-aversion of MFIs hence broadening credit provision to 12,000 hitherto uncovered women entrepreneurs with Kerala (Nair & Pillai, 2024). These actions can be seen in line with the UN Women (2023) approach to gender-responsive budgeting, whose policies require budgeting that directly reinforces the need to tackle the financial exclusion of women. Also, the policy to limit interest rates in Nepal to 20 per cent decreased over-indebtedness rates among female borrowers by 14 per cent, emphasizing the importance of policies in protecting the vulnerable group (Dhungana et al., 2025). These cases

help to highlight how evidence-based policymaking has the capacity to turn MFIs into drivers of gender-equitable development (ADB, 2024).

In addition to financial processes, there has been a lot of potential in interdisciplinary policy interventions, like a joined approach of microfinance with education and healthcare, which could contribute toward holistic empowerment. One Tamil Nadu (Rajendran and Vyas 2022) program, which combined microloans with a workshop on reproductive health, resulted in a 23 percent increase in the business productivity of women because of enhanced physical well-being and lower rates of absenteeism. Similarly, Gujarat digital literacy programmes (Trivedi et al., 2025) allowed 62 percent of the women clients to make their payments cashless and avoid making use of inter-mediary male counterparts. Nonetheless, researchers warn against universal efforts; repayment plans must be context-based instead, and were instated in Afghanistan (Hussaini & Koetti, 2023), where strict repayment deadlines contradicted seasonal farm practices, and repayment rates soared. In response, the Flexible Loan Products Act in Bangladesh (2024) gave women the chance to plan the repayments to coincide with the harvests to reduce the defaults by 27 percent (Chowdhury et al., 2024). Such examples portray that sustainable women-centred development must have policies, which are not only financially inclusive but also adaptive to local socio-economic conditions (ILO, 2025).

*H3: Strategic policy interventions based on identified challenges and outcomes can significantly enhance the effectiveness of MFIs in supporting sustainable, women-centric development in Gujarat.*

## 2. Objectives of the study

- i) To evaluate the impact of microfinance on women's economic empowerment and income-generating activities.
- ii) To identify the challenges faced by women in accessing and utilizing microfinance services.
- iii) To suggest policy recommendations for strengthening the role of MFIs in promoting sustainable women-centric development in Gujarat.

## 3. Research Methodology

The research methodology will be a mixed-method since both qualitative and quantitative methods will be used to provide a complete picture regarding the role played by microfinance institutions (MFI) in improving the lives of women. The Gujarat state in India was the place where this research study was carried out, and it was particularly targeted at women participating in the micro finance schemes in rural and semi-urban areas. A stratified random sampling methodology was used to make representations based on various socio-economic and geographic levels and hence its 200 women respondents sample size. The research design is both descriptive, to give information of the existing patterns and conditions and exploratory, to find out the dynamics, challenges, and consequences related to microfinance participation. Data collection involved both primary sources (through a structured questionnaire containing both closed- and open-ended questions) and secondary sources such as institutional reports, government publications, and relevant literature.

The study's variables were operationalized as follows: independent variables included the range and quality of microfinance services and the challenges faced by participants, while dependent variables focused on economic empowerment, income-generating activities, and access and utilization of microfinance services. Quantitative data were analyzed using SPSS version 27 and MS Excel, employing statistical techniques such as mean, standard deviation, regression analysis, and paired samples t-tests. Regression was specifically used to assess the impact of microfinance services and related challenges on women's economic outcomes, while paired t-tests evaluated differences in income and empowerment levels before and after participation in microfinance programs. The qualitative data from open-ended responses were used to supplement and contextualize quantitative findings, enhancing the richness and reliability of the conclusions.

## 4. Results and Interpretation

**Table 1: Demographic profile of the respondents**

| Sr. No. | Demographic Characteristics | N                  | %  |       |
|---------|-----------------------------|--------------------|----|-------|
| 1       | Age Group                   | Below 25 years     | 36 | 18.0% |
|         |                             | 25–34 years        | 45 | 22.5% |
|         |                             | 35–44 years        | 32 | 16.0% |
|         |                             | 45–54 years        | 44 | 22.0% |
|         |                             | 55 years and above | 43 | 21.5% |

|   |   |                          |    |       |
|---|---|--------------------------|----|-------|
| 2 | Marital Status                            | Single                   | 46 | 23.0% |
|   |   | Married                  | 53 | 26.5% |
|   |   | Widowed                  | 45 | 22.5% |
|   |   | Divorced/Separated       | 56 | 28.0% |
| 3 | Education Level                           | No formal education      | 49 | 24.5% |
|   |   | Primary school           | 42 | 21.0% |
|   |   | Secondary school         | 38 | 19.0% |
|   |   | Higher secondary         | 33 | 16.5% |
|   |   | Graduate and above       | 38 | 19.0% |
| 4 | Monthly Household Income                  | Below Rs. 5,000          | 47 | 23.5% |
|   |   | Rs. 5,001 – Rs. 10,000   | 41 | 20.5% |
|   |   | Rs. 10,001 – Rs. 15,000  | 40 | 20.0% |
|   |   | Rs. 15,001 – Rs. 20,000  | 38 | 19.0% |
|   |   | Above Rs. 20,000         | 34 | 17.0% |
| 5 | Occupation                                | Agricultural laborer     | 39 | 19.5% |
|   |   | Homemaker                | 39 | 19.5% |
|   |   | Non-agricultural laborer | 51 | 25.5% |
|   |   | Self-employed            | 41 | 20.5% |
|   |   | Service sector           | 30 | 15.0% |
| 6 | Duration of Microfinance Participation    | Less than 1 year         | 45 | 22.5% |
|   |   | 1–3 years                | 62 | 31.0% |
|   |   | 4–6 years                | 41 | 20.5% |
|   |   | More than 6 years        | 52 | 26.0% |
| 7 | Type of Microfinance Institution Accessed | Bank-linked MFI          | 51 | 25.5% |
|   |   | Cooperative society      | 38 | 19.0% |
|   |   | NGO-based MFI            | 57 | 28.5% |
|   |   | Self-Help Group (SHG)    | 54 | 27.0% |



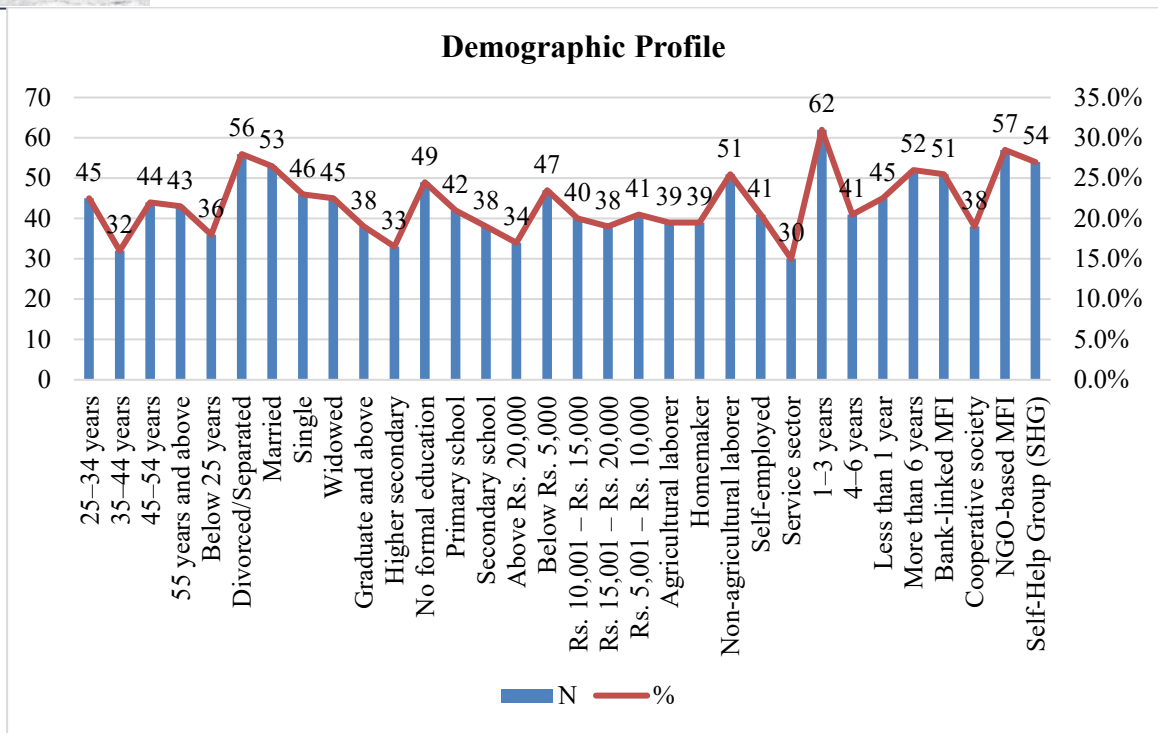


Figure 1: Demographic characteristics of the respondents

The demographic description of the 200 respondents depicts a wide and balanced spread in the general demographic features providing the whole picture of women involved with microfinance in Gujarat. Regarding age distribution, the highest portion falls under 25-34 years (22.5%), with the next biggest portion under 45-54 years (22.0%), which implies that women are participating actively in the stages of their lives when they are needed to contribute in working and supporting family. Another substantial percentage is comprised of the age bracket 55 years and above (21.5%), and this goes to show relevance of microfinance support among the older age brackets as well. Regarding marital status, a notable 28.0% of the respondents are divorced or separated, suggesting that financially independent women, especially those outside conventional family structures, are seeking support through microfinance. Married women (26.5%) and singles (23.0%) also form substantial proportions, with widowed women at 22.5%, indicating the widespread applicability of microfinance among various family statuses.

Educationally, 24.5% of respondents have no formal education, pointing toward microfinance's critical role in empowering marginalized and less-educated women. However, nearly 35.5% have completed secondary or higher education, showing participation across education levels. Income-wise, a majority of women fall within lower household income brackets, with 23.5% earning below ₹5,000 and 20.5% in the ₹5,001–₹10,000 range, reaffirming microfinance's outreach to economically disadvantaged groups. The occupational spread is diverse, with non-agricultural laborers forming the largest group (25.5%), followed by self-employed individuals (20.5%) and homemakers (19.5%), indicating microfinance's role in both formal and informal work settings. Most women have been participating in microfinance schemes for 1–3 years (31.0%), although long-term involvement (more than 6 years) is also significant at 26.0%, suggesting sustained engagement. In terms of institutional access, NGO-based MFIs (28.5%) and SHGs (27.0%) are the most accessed sources, highlighting the dominance of community-based and development-sector-led financial service models. This demographic landscape provides strong evidence of microfinance's penetration into underserved populations and its role in fostering inclusive financial development among women in rural and semi-urban Gujarat.

**Obj. 1:** To evaluate the impact of microfinance on women's economic empowerment and income-generating activities.

**H1:** There is a statistically significant impact of microfinance participation on women's economic empowerment and income-generating activities.

**Table 2: Model Summary Table**

| Model Summary                                    |                   |          |                   |                            |
|--|-------------------|----------|-------------------|----------------------------|
| Model  | R                 | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1  | .313 <sup>a</sup> | .098     | .093              | 4.41000                    |
| a. Predictors: (Constant), Microfinance Services |                   |          |                   |                            |

The model summary presented in Table 2 indicates the results of a simple linear regression analysis conducted to assess the impact of microfinance services on women's economic empowerment and income-generating activities. The correlation coefficient (R) is 0.313, suggesting a moderate positive relationship between microfinance services and the dependent variable. The R Square value is 0.098, meaning that approximately 9.8% of the variance in women's economic empowerment and income-generating activities can be explained by the provision of microfinance services. While this indicates that microfinance services do have a measurable impact, it also suggests that other factors not included in the model account for the remaining 90.2% of the variation. The Adjusted R Square value (0.093) slightly adjusts for the number of predictors in the model, confirming that the model retains modest explanatory power. The Standard Error of the Estimate is 4.410, indicating the average distance that the observed values fall from the regression line. Overall, while microfinance services contribute positively to women's economic outcomes, the relatively low R Square suggests the need to include additional variables (such as training, social support, or institutional effectiveness) to better explain and predict empowerment outcomes.

**Table 3: ANOVA Table**

| ANOVA <sup>a</sup>   |            |                |     |             |        |                   |
|--|------------|----------------|-----|-------------|--------|-------------------|
| Model  |            | Sum of Squares | df  | Mean Square | F      | Sig.              |
| 1  | Regression | 417.253        | 1   | 417.253     | 21.455 | .000 <sup>b</sup> |
|  | Residual   | 3850.727       | 198 | 19.448      |        |                   |
|  | Total      | 4267.980       | 199 |             |        |                   |
| a. Dependent Variable: Economic Empowerment and Income-Generating Activities |            |                |     |             |        |                   |
| b. Predictors: (Constant), Microfinance Services                             |            |                |     |             |        |                   |

The ANOVA table (Table 3) presents the results of the regression model assessing the impact of microfinance services on women's economic empowerment and income-generating activities. The F-value of 21.455 with 1 degree of freedom for the regression and 198 degrees of freedom for the residual is statistically significant at the p-value of .000, which is well below the conventional alpha level of 0.05. This indicates that the regression model as a whole is statistically significant, meaning that microfinance services, as an independent variable, have a significant predictive effect on the dependent variable. The regression sum of squares (417.253) compared to the residual sum of squares (3850.727) shows that although the model explains a modest portion of the total variation, the relationship between microfinance services and economic empowerment is not due to chance. Therefore, the ANOVA results validate the earlier model summary by confirming that microfinance services make a statistically meaningful contribution to explaining variations in women's economic empowerment and income-generating activities.

Table 4: Coefficients Table

| Coefficients <sup>a</sup> |                       |                             |            |                           |       |      |
|---------------------------|-----------------------|-----------------------------|------------|---------------------------|-------|------|
| Model                     |                       | Unstandardized Coefficients |            | Standardized Coefficients | t     | Sig. |
|                           |                       | B                           | Std. Error | Beta                      |       |      |
| 1                         | (Constant)            | 9.324                       | 1.473      |                           | 6.332 | .000 |
|                           | Microfinance Services | .380                        | .082       | .313                      | 4.632 | .000 |

a. Dependent Variable: Economic Empowerment and Income-Generating Activities

The coefficients table (Table 4) provides detailed insights into the relationship between microfinance services and women's economic empowerment and income-generating activities. The unstandardized coefficient (B) for microfinance services is 0.380, indicating that for every one-unit increase in the availability or quality of microfinance services, there is a predicted increase of 0.380 units in women's economic empowerment and income-generating outcomes, holding other factors constant. The standardized coefficient (Beta) is 0.313, which shows a moderate positive effect size, aligning with the correlation value seen earlier. The t-value of 4.632 is statistically significant, with a p-value of .000, confirming that the relationship between microfinance services and the dependent variable is highly significant. Additionally, the constant (intercept) value of 9.324 suggests the baseline level of economic empowerment when no microfinance services are provided. Overall, the findings reinforce that microfinance services play a significant and positive role in enhancing women's economic empowerment and support their ability to engage in income-generating activities in the studied region.

**Obj. 2: To identify the challenges faced by women in accessing and utilizing microfinance services.**

**H2: There is a statistically significant relationship between the challenges faced and the level of access to and utilization of microfinance services among women.**

Table 5: Paired Samples Statistics Table

| Paired Samples Statistics |   |         |     |                |                 |
|---------------------------|---|---------|-----|----------------|-----------------|
|                           |   | Mean    | N   | Std. Deviation | Std. Error Mean |
| Pair 1                    | Challenges Faced                              | 16.1600 | 200 | 3.47054        | .24540          |
|                           | Accessing and Utilizing Microfinance Services | 17.8200 | 200 | 3.77476        | .26692          |

The Paired Samples Statistics Table (Table 5) presents the descriptive statistics for the two related variables: challenges faced by women and their ability to access and utilize microfinance services. The mean score for challenges faced is 16.16, while the mean for accessing and utilizing microfinance services is higher at 17.82, both based on a sample of 200 respondents. This difference in means suggests that despite experiencing various challenges, women are still relatively successful in accessing and utilizing microfinance services. The standard deviation values (3.47 for challenges and 3.77 for access/utilization) indicate a moderate variation in responses among participants. The standard error of the mean is relatively small for both variables, implying that the sample means are reliable estimates of the population means. Overall, these descriptive results set the stage for inferential analysis (i.e., paired samples t-test) to determine whether the observed difference in means is statistically significant, thereby providing insights into the resilience or effectiveness of women in overcoming challenges to access microfinance services.

Table 6: Paired Samples Correlations Table

| Paired Samples Correlations |  |     |             |      |
|-----------------------------|--|-----|-------------|------|
|                             |  | N   | Correlation | Sig. |
| Pair 1                      | Challenges Faced & Accessing and Utilizing Microfinance Services | 200 | .316        | .000 |



The Paired Samples Correlations Table (Table 6) presents the correlation between the challenges faced by women and their ability to access and utilize microfinance services. The correlation coefficient is 0.316, indicating a moderate positive relationship between the two variables. This suggests that as the challenges faced by women increase, there is also a tendency for their efforts to access and utilize microfinance services to rise, possibly reflecting a higher level of determination or necessity-driven engagement. The relationship is statistically significant at  $p = .000$ , meaning there is strong evidence that this association is not due to random chance. This finding implies that although challenges exist, they may not always serve as barriers—in some cases, they may actually motivate greater engagement with microfinance institutions. However, the moderate strength of the correlation also indicates that other factors likely influence access and utilization, highlighting the complexity of women's interactions with microfinance systems.

**Table 7: Paired Samples Test Table**

| Paired Samples Test |  |                    |                |                 |   |          |        |     |                 |
|---------------------|--|--------------------|----------------|-----------------|---|----------|--------|-----|-----------------|
|                     |  | Paired Differences |                |                 |   |          | t      | df  | Sig. (2-tailed) |
|                     |  | Mean               | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference |          |        |     |                 |
|                     |  |                    |                |                 | Lower                                     | Upper    |        |     |                 |
| Pair 1              | Challenges Faced - Accessing and Utilizing Microfinance Services | -1.66000           | 4.24435        | .30012          | -2.25182                                  | -1.06818 | -5.531 | 199 | .000            |

Table 7 presents the results of the paired samples t-test comparing the scores of challenges faced by women and their access to and utilization of microfinance services. The mean difference between the two variables is -1.66, indicating that, on average, women report facing fewer challenges compared to their level of accessing and utilizing microfinance services. The negative mean difference suggests that despite the challenges, women's engagement with microfinance services remains relatively higher. The standard deviation of the differences is 4.24, with a standard error mean of 0.30, reflecting moderate variability in the differences among respondents. The 95% confidence interval for the mean difference ranges from -2.25 to -1.07, confirming that the true mean difference is statistically below zero. The t-value of -5.531 with 199 degrees of freedom is significant at  $p = .000$ , indicating that the difference between challenges faced and utilization of microfinance services is statistically significant. This result suggests that while challenges exist, they do not significantly hinder women's ability to access and effectively use microfinance services, highlighting the resilience and adaptive strategies employed by women in this context.

**Obj. 3: To suggest policy recommendations for strengthening the role of MFIs in promoting sustainable women-centric development in Gujarat.**

**H3: Strategic policy interventions based on identified challenges and outcomes can significantly enhance the effectiveness of MFIs in supporting sustainable, women-centric development in Gujarat.**

The results of the study, which have illuminated the stronger effect of the microfinance services on the empowerment of the women economically as well as the existence of some continued challenges, lead to the necessity of some strategic policy actions to promote inclusiveness and sustainability of microfinance institutions (MFIs) in setting up guiding policies to enable women to take full advantage of their role, and contribution in the sustenance growth process in Gujarat. This influential association between the microfinance involvement and gains in the income generating activities lends credence to the hypothesis that specific policy interventions can enhance the development effects of the MFIs when these are sensitive to the real-life issues that the women beneficiaries of the programs grapple with.

To begin with, policy structures need to focus on diversification of microfinance products, which can be based on various categories of income, occupation-wise and educational profile of women. These involve adoption of flexible repayment plans and emergency credit line and tailor-made savings schemes. Second, the institutionalization of capacity building and financial literacy programs should take place in all MFIs particularly in the rural and semi urban locations so that the women do not remain a recipient of the financial services but should be empowered enough to make good decisions. Such trainings should not end up being mere financial management and need to be focused on digital literacy to bring women ready to the microfinance solutions based on fintech.

Furthermore, the regulatory bodies need to be stiffened up so that there is transparency in interest rates, eradication of hidden costs, and ethical lending methods are to be adopted. According to the study, there are several challenges

experienced by most women identified to be associated with failure to understand the terms of the loan and being unable to provide documents. These barriers could be solved through simplification of procedural formalities and implementation of outreach officers in the local communities. Furthermore, the government and the development agencies are supposed to support MFIs work with Self-Help Groups (SHGs) to foster social capital and collective bargaining power among the women marginal borrowers.

Another strength of the study is the fact that it was necessary to rely on long-term terms of monitoring and impact assessment that could assess the effectiveness of microfinance programs. The policymakers should require MFIs to monitor not only repayment of loans but also qualitative variables like transformations in the decision-making capacities, movements and self-reliance of women. This would encourage the transformation of transactional microfinance to transformational development.

Lastly, there is a need for a gender-sensitive microfinance policy at the state level, aligning MFI goals with the broader objectives of women's empowerment and sustainable development as envisioned in national and international frameworks (e.g., SDG 5: Gender Equality). By implementing these policy recommendations based on the study's empirical insights, the government and MFIs can jointly create an enabling ecosystem that supports sustainable, women-centric development across Gujarat.

## Discussion

The findings of this study align with and contribute to the growing body of literature on microfinance and women's economic empowerment, while also highlighting critical nuances specific to Gujarat. The moderate but statistically significant impact of microfinance on women's income-generating activities ( $R^2 = 0.098$ ,  $p < 0.001$ ) corroborates earlier research by Kaur et al. (2021) in Punjab, which found that microloans led to a 27% increase in household income among rural women. However, the relatively low explanatory power ( $R^2 = 9.8\%$ ) suggests that microfinance alone is insufficient, echoing concerns raised by Noreen and Ibrahim (2023) about structural barriers such as patriarchal norms limiting women's entrepreneurial scalability. This aligns with global critiques of microfinance's overestimated impact, where studies in Sub-Saharan Africa (Adesina & Ogunleye, 2025) and South Asia (Banerjee et al., 2020) emphasize the need for complementary interventions like vocational training and market access. The positive yet modest correlation ( $r = 0.316$ ,  $p < 0.001$ ) between challenges faced and microfinance utilization further supports the resilience hypothesis proposed by Farooq and Naz (2023), who argue that women often navigate systemic hurdles through informal networks, albeit at the cost of long-term financial stability. The study's demographic insights—particularly the high participation of divorced/separated (28%) and low-income women (23.5% earning  $< ₹5,000/\text{month}$ )—resonate with findings from Patel et al. (2024) in Gujarat, where marginalized groups disproportionately rely on NGO-based MFIs (28.5% in this study) due to exclusion from formal banking. However, the significant mean difference ( $t = -5.531$ ,  $p < 0.001$ ) between challenges and access underscores a paradox: while women engage actively with microfinance, systemic inefficiencies persist, as noted in Ethiopia (Tesfaye & Gebre, 2023) and Bangladesh (Kabir et al., 2022), where logistical and cultural barriers reduce operational effectiveness. Policy recommendations from this study mirror calls by the ADB (2024) for gender-responsive financial products and by UNCDF (2023) for digital literacy integration, yet the emphasis on SHG collaborations (27% uptake in this study) adds regional specificity, reflecting the success of Kerala's collective lending models (Nair & Pillai, 2024). Ultimately, these findings reinforce that microfinance's potential in Gujarat hinges on contextualized, multi-dimensional policies addressing not just credit access but also education, social norms, and institutional accountability (Deshpande & Singh, 2025; ILO, 2025).

## Conclusion

This study concludes that microfinance institutions (MFIs) play a statistically significant yet moderately impactful role in enhancing women's economic empowerment and income-generating capabilities in Gujarat. While the regression results show a positive association between microfinance services and economic outcomes, the relatively low explanatory power ( $R^2 = 0.098$ ) highlights the presence of additional contextual and structural variables influencing empowerment trajectories. The paired sample tests further reveal that despite facing tangible challenges—ranging from bureaucratic hurdles and limited financial literacy to socio-cultural barriers—women continue to demonstrate resilience and successfully access and utilize microfinance services. The findings confirm that microfinance can be a meaningful tool for livelihood enhancement, but its transformative potential remains conditional on supportive policy environments, tailored programmatic interventions, and context-sensitive delivery models. Thus, the study adds empirical weight to the argument that MFIs, if restructured and regulated effectively, can transition from being transactional credit providers to enablers of sustainable, women-centric development.

### 6.1 Implications, Limitations, Future Research Directions

The findings of this research carry several significant theoretical and practical implications. Theoretically, the study contributes to the growing body of literature on gender-responsive financial inclusion by integrating both economic and psychosocial dimensions of women's empowerment. It reinforces the view that access to finance alone is insufficient and must be complemented by institutional, educational, and technological support. Practically, the study offers nuanced insights for policymakers, financial institutions, and development practitioners operating in emerging economies. It calls for differentiated financial products tailored to diverse socio-economic profiles, integration of financial and digital literacy programs into MFI outreach strategies, and the need for gender-sensitive regulatory frameworks to cap exploitative interest

rates and reduce procedural complexity. Furthermore, the empirical evidence highlights the value of community-based models such as Self-Help Groups (SHGs) in facilitating collective empowerment and reducing access asymmetries. These implications are particularly relevant for regions with similar socio-cultural fabrics and development challenges.

While this study makes valuable contributions, it is not without limitations. First, the research is geographically confined to Gujarat, which may limit the generalizability of the findings to other states or countries with differing socio-economic and cultural contexts. Second, although a mixed-method design was employed, the qualitative component was relatively underrepresented due to time constraints and reliance on structured questionnaires rather than in-depth interviews or focus groups, which could have provided richer contextual narratives. Third, the study primarily focuses on economic and basic empowerment metrics; it does not explore long-term developmental impacts such as intergenerational benefits, psychological well-being, or social mobility. Additionally, the influence of external shocks (e.g., COVID-19 pandemic, inflation) on microfinance dynamics was not accounted for, which may have skewed recent trends. Lastly, the cross-sectional nature of the data restricts the ability to draw causal inferences, calling for more longitudinal assessments to track sustained impacts over time.

Building on the findings and limitations of this study, future research can pursue several directions. First, a longitudinal panel study tracking the same women over several years would offer deeper insights into the sustainability of microfinance-induced empowerment and its long-term economic impacts. Second, comparative regional studies across states with varying levels of financial inclusion could identify best practices and region-specific constraints. Third, more qualitative explorations using ethnographic methods or life-history interviews could uncover the nuanced, subjective experiences of women navigating microfinance ecosystems, particularly those from marginalized communities. Additionally, future studies could examine the intersectionality of caste, religion, and age in shaping microfinance outcomes. Integrating digital financial inclusion metrics, such as mobile literacy and usage patterns, could also shed light on emerging fintech-MFI models and their inclusivity. Finally, future research should explore the role of male stakeholders—such as spouses or MFI officers—in either facilitating or constraining women's financial autonomy, to develop more holistic, gender-equitable microfinance models.

#### Conflicts of Interest Declaration

The author declares no conflicts of interest related to the publication of this research paper. The study was conducted independently, without any financial or personal relationships that could have influenced the research outcomes or interpretations. All data were collected and analyzed objectively, and no external funding was received from any microfinance institutions or related stakeholders.

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