International Academic Institute for Science and Technology

International Academic Journal of Science and Engineering
Vol. 13, No. 3, 2026, pp. 482-493.

ISSN 2454-3896

International Academic Journal of Science and Engineering

www.iaiest.com

Assessing the Socioeconomic Impact of Microfinance Models on Rural Development Indicators in Tamil Nadu

Dr.G. Meena Suguanthi [a*], Dr.C. Thiyagarajan [b], Dr.R. Geethalakshmi [c], Dr.R. Sudha [d], Dr.V. Venkatachalam [e]

[a] Assistant Professor, School of Management, Sri Krishna College of Engineering and Technology, Coimbatore, Tamil Nadu, India. E-mail: meenasuguanthi@gmail.com, Orcid: https://orcid.org/0000-0003-2295-8669*
[b] Associate Professor, Department of Computer Science, PSG College of Arts & Science, Coimbatore, Tamil Nadu, India. E-mail: pcthiyagu@gmail.com, Orcid: https://orcid.org/0009-0004-1980-5666
[c] Associate Professor & Head, Department of Commerce (Banking & Insurance), PSG College of Arts & Science, Coimbatore, Tamil Nadu, India. E-mail: rglpsgcas@gmail.com, Orcid: https://orcid.org/0000-0002-2197-5240
[d] Associate Professor & Head, Department of Computer Applications, PSG College of Arts & Science, Coimbatore, Tamil Nadu, India. E-mail: ramanujam.sudha@gmail.com, Orcid: https://orcid.org/0009-0005-2888-2011
[e] Assistant Professor, Department of Commerce Banking and Insurance, PSG College of Arts & Science, Coimbatore, Tamil Nadu, India. E-mail: venkatachalam@psgcas.ac.in, Orcid: https://orcid.org/0000-0002-9582-7208

Abstract

Microfinance offers an important means of achieving inclusive growth, reducing poverty, and empowering rural communities in developing economies. The microfinance program has played a vital role in increasing credit mobility among low-income households in India (especially Tamil Nadu) through various programs, including the Self-Help Group–Bank Linkage Program (SHG–BLP), Microfinance Institutions (MFIs), and NGOs. Although improvements have been made, several issues continue to contribute to the rural sector's lack of smoothness, including low incomes, high unemployment, limited access to credit, and low financial literacy. With such a background, the present study aims to evaluate the overall effect of microfinance on rural economic development in Tamil Nadu, with specific reference to income, savings, employment, and women's empowerment. This study is a descriptive study that used primary and secondary sources of data. Primary data were collected using a structured questionnaire and personal interviews from 170 respondents from 5 rural areas, namely Coimbatore, Madurai, Tirunelveli, Erode, and Salem. Secondary data was collected from secondary sources like NABARD, Government publications, Academic journals, and previous studies. The data analysis used percentage analysis, mean and standard deviation, chi-square tests, and correlation analysis. The findings reveal positive effects of microfinance on beneficiaries' income, savings, employment, and lives. Findings show a statistically significant increase in respondents' mean monthly income after availing microfinance (₹25,000 to ₹28,470; $t = 5.596$, $p < 0.001$), along with positive effects on savings, employment, and self-reported empowerment. For beneficiaries, the outcomes were increased financial and decision-making powers and improved social mobility. But the issues, like high-interest rates, few training opportunities, and market challenges, are still there. The study recommends that microfinance is one of the important instruments that help in sustainable rural development and enhance the economic sustainability of Tamil Nadu state.

Keywords: Microfinance, Self-Help Groups (SHGs), Rural Development, Women's Empowerment, Financial Inclusion, Tamil Nadu.

DOI: 10.71086/IAJSE/V13I3/IAJSE13130
Received: 24 June, 2026/Revised: 29 July 2026/Accepted: 30 August 2026/Published: 15 September 2026

Introduction

Microfinance is one of the most important financial innovations of the 20th century, which seeks to bring inclusive development and reduce poverty. It is about delivering financial services to those in poverty, in remote areas, on an informal scale through non-banking channels, such as microcredit, insurance, and savings. Microfinance's main goal is to enable economically disadvantaged groups, especially women and rural business owners, to become financially independent and to engage more actively in the economy. Microfinance became popular in India as early as the 1990s, especially following the launch of the Self-Help Group (SHG) – Bank Linkage Program by the National Bank for Agriculture and Rural Development. The initiative enhanced rural women's access to loans and financial inclusion by connecting them with the regular banking system. Microfinance Institutions (MFIs) became important intermediaries and producers of loans to encourage income-generating activities for rural households without collateral. The formal and semi-formal institutions include Non-Bank Financial Institutions (NBFC-MFIs), Cooperative Banks, Regional Rural Banks (RRBs), and Non-Governmental Organizations (NGOs), all of which are governed by the Reserve Bank of India (RBI). The sector has seen rapid growth in contribution. In the future, more and more financial institutions, especially private ones, will enter the market, with strong government support for small loans. Microfinance has immense relevance to the development of rural populations in Tamil Nadu. The state has many more active Self-Help Groups and MFIs than many other parts of the country. The Government of Tamil Nadu has introduced various schemes, such as the Tamil Nadu Women's Development Corporation (TWDC), Mahalir Thittam, and the Pudhu Vaazhvu Project, that have reinforced the microfinance ground-flooring frameworks in the state. These programs have enabled rural women to access financial opportunities to launch and develop petty enterprises such as food processing, household handicrafts, tailoring, and, especially, dairy farming. Apart from financial inclusion, microfinance also promotes employment generation, entrepreneurship, women's empowerment, and overall rural economic development. This has significantly improved the socio-economic condition of the poor rural population of Tamil Nadu by reducing dependence on informal moneylenders and increasing self-employment.

Evolution of Microfinance in India. The following stages can be used to understand the evolution of microfinance in India: 1. Pre-Independence Period: Pre-independence, credit was available mainly in the form of informal credit, such as moneylenders and chit funds, in rural areas. This credit was largely given at very high interest rates; consequently, farmers and small artisans were highly indebted. 2. Post-Independence Phase (1950s-1970s): Post-Independence Phase (1950s-1970s): The government established the Cooperative Banks, a Land Development Bank, and the Regional Rural Banks as credit institutions. However, other financial institutions, such as formal institutions, excluded many low-income families based on their strict credit-stability and collateral requirements. 3. The establishment of the SHG Movement in the 1990s was a significant development with the introduction of the SHG–Bank Linkage Program by the National Bank for Agriculture and Rural Development (NABARD) in 1992. This program greatly improved access to money in rural areas. It paved the way for the present-day microfinance industry in India, where women were called to come together in small groups and avail bank loans. 4. Rapid growth of organized MFIs (2000s): In the early 2000s, organized Microfinance Institutions (MFIs) such as Spandana Sphoorty Financial, Bandhan Bank, and SKS Microfinance grew at a rapid rate. These were institutions that began to professionalize micro-lending and spread it to millions of poor borrowers across the country. 5. The Reserve Bank of India has laid out detailed rules over the years based on technological advancements (2010-Several Years), aimed at making the processes more transparent and fair and protecting the borrowers. Moreover, the uptake of fintech solutions, mobile banking, and digital technology has expanded, improving service delivery. In recent years, Tamil Nadu, with government initiatives such as Mahalir Thittam (Tamil Nadu Corporation for Development of Women) and various NGO-supported schemes, has emerged as a leader in microfinance distribution.

The impact on rural economic development is multifaceted: It promotes entrepreneurship by providing startup capital for small enterprises like dairy farms, tailors, and petty shops. It helps reduce poverty by providing some income to rural households so that not dependent on moneylenders anymore. It empowers women through SHGs in terms of involvement in financial decision-making and community leadership. It is conducive to employment generation, thereby curtailing rural migration to urban centers. It brings the rural poor into the formal financial sector, thus enhancing their savings habits and improving credit discipline. It helps in enhancing social development by generating income, improving education, increasing health access, and raising social awareness. Microfinance has played a vital role in promoting sustainable livelihoods in Tamil Nadu, primarily among women, small farmers, and artisans, thereby strengthening the state's rural economy. Making sense of borrower behavior: Understanding the behavioral aspects of MFPs is crucial for their success. Key behavioral factors include: Savings and Spending Patterns: Beneficiaries tend to develop disciplined savings habits after joining SHGs or MFIs.

Group-based lending promotes mutual trust, cooperation, and collective responsibility, leading to community cohesion. • Attitude Change: It gradually builds up and steers the borrowers towards entrepreneurial activities and away from subsistence-oriented activities, as the group members rely on each other, which makes them feel responsible for one another's growth. The behavioral changes have the added advantage of empowering the people as well as improving the socio-economic development of the rural people. Although it is beneficial, the sector of microfinance has also encountered several problems: 1. Over-indebtedness: It may result in pressure on the clients to repay loans borrowed from more than one MFI. 2. High Interest Rates: Microfinance loans come with high interest rate/loan costs compared to bank loans. 3. Regulatory Issues: Policies that do not keep up with the international domain effectively and uniform regulations, which are not consistent among states, impede smooth functioning. 4. Loan Utilization — In some instances, loans are spent on consumption instead of productive uses, thus limiting overall economic benefits. 5. Lack of Financial Knowledge: Many rural borrowers do not have financial knowledge, which is a problem as they don't understand the terms of the borrowed money, how it can be repaid, where the money can go if it is not repaid, etc. 6. Relying on group pressure: Models based on groups may generate peer conflict or tension in the group. 7. Operational risks: Credit risk, access to funding, and inadequate administrative personnel at MFIs. The MFI sector can be made more sustainable by tackling these issues through better regulation, borrower education, and innovative digital solutions.

This research, titled 'Impact of Microfinance on Rural Economic Development with Reference to Tamil Nadu ', is aimed at analyzing the role of microfinance and understanding the impact of microfinance on securing the social and economic development of the rural population in Tamil Nadu. The study seeks to gain a better understanding of the effectiveness of microfinance programs, their ability to improve incomes, and their impact on empowerment and poverty reduction. Overall, the study seeks to analyze the effects of microfinance on the livelihoods, employment, and savings habits of rural people, and their entrepreneurial status. Furthermore, it attempts to detect the issues that institutions and borrowers have prior to implementing the institution, so that the service of microfinance is sustainable. In specific rural areas of Tamil Nadu where microfinance is being carried out, primary and secondary data were collected.

Primary data have been gathered from the Members of the Self-Help Groups (SHGs), the beneficiaries of Microfinance Institutions (MFIs), and Local Field Coordinators who implement the microfinance programs. Secondary data have been provided via reports, journals, and official publications. This project is also intended to inform policy formulation by highlighting the critical elements that have worked well in microfinance and those that need improvement. The analysis of the socio-economic impact of microfinance, along with the recommendations suggested in this study, helps improve microfinance institutions' outreach, effectiveness, and sustainability in Tamil Nadu.

Microfinance remains an important contributor to providing financial resources to rural households through SHGs, MFIs, and NGOs. It aims to empower women in rural communities by improving their income, employment, and savings. There is no clear evidence of microfinance's efficiency in developing rural economies, even in Tamil Nadu, where microfinance use is widespread. Loan beneficiaries have varied profiles in terms of loan use, income growth, and social empowerment. Thus, this study aims to assess microfinance's overall contribution to rural development and whether it has significantly improved the economic and social circumstances of rural households.

Research Questions

1. Does participation in microfinance significantly improve the income, savings, and employment status of rural households in Tamil Nadu?
2. Does microfinance participation significantly enhance women's empowerment and their role in household decision-making?
3. What challenges do rural beneficiaries continue to face in accessing and using microfinance services, and what improvements do they recommend?

Objectives of the Study

- To assess the effect of microfinance participation on the income, savings, and employment of rural households in Tamil Nadu.
- To evaluate the socio-economic and behavioral changes particularly women's empowerment and decision-making capacity — associated with microfinance participation.
- To identify the key challenges faced by microfinance beneficiaries and to suggest measures for improving the outreach and sustainability of microfinance services.

The remainder of this paper is organized as follows. Section 2 reviews the existing literature on microfinance and rural development. Section 3 presents the research design, hypotheses, sampling method, and statistical tools used. Section 4 reports the data analysis and interpretation, covering percentage analysis, weighted average scores, chi-square tests, the paired t-test, and factor analysis. Section 5 concludes with a summary of findings, policy implications, and recommendations.

Review of Literature

A literature review is an attempt to understand the research work done in a specific field. It aids in recognizing research gaps and establishing a theoretical framework for the research. In the following section, a comprehensive review of Indian studies on the impact and role of microfinance in rural economic development and women's empowerment, particularly in Tamil Nadu, is provided, with a specific focus on the states of the Indian subcontinent (Sagar & Gangwar, 2025; Selvi & Uthira, 2026; Patel et al., 2018).

The Self-Help Group (SHG) – Bank Linkage Program had its pioneering study done by the National Bank for Agriculture and Rural Development. It was emphasized that microfinance has turned out to be an important source of access to formal credit for people with low incomes. It further identified the positive influences of the SHG model on rural women's behavior in saving, decision-making, and self-reliance. This report served as a basis for policy efforts on the delivery of rural credit. Their study titled "Economic and Social Empowerment of Rural Poor through SHGs in India" has evaluated the overall economic and social effect of SHGs in the context of the NABARD linkage scheme in 2000. The authors discovered from survey results across several states that significant income and savings growth, employment creation, and a decrease in the debt burden on moneylenders were reported as results of SHG experiences. The study highlighted that, in addition to improvements in women's financial status, it has also made women feel more confident and more willing to participate in society. Karmakar, K. G. In 2002, Karmakar published his book titled "Rural Credit and Self-Help Groups: Microfinance Needs and Concepts in India", which gave an analytical overview of the changing microfinance system in India. The writer suggests that microfinance can be a catalyst for rural development and financial inclusion, particularly for small farmers, rural entrepreneurs, and others (Gan et al., 2017). He noted that the sustainability of SHGs is linked to financial literacy training, capacity-building interventions, and an active institutional development process with banks and NGOs. In her study, "Microfinance Self Help Groups in India: Living up to their Promise?" Sinha has conducted extensive fieldwork to assess the developmental outcomes of SHGs (Khan et al., 2023). It was found that the members of the SHG improved their income, social status, and mobility. But the study highlighted that not all SHGs worked equally due to a lack of management practices and imbalanced skill and resource sharing.

The World Bank study "Microfinance in India: Emerging Issues and Implications" in 2007 examined the functioning and policy framework of microfinance institutions (MFIs) (Devi et al., 2011; Khan & Gulati, 2022; Guérin et al., 2018). The authors discovered that, in their experience, microfinance contributed to poverty alleviation, improved credit availability for rural people, and provided self-employment opportunities for women. They also identified barriers, including the localization of MFIs and the lack of client regulation and protection.

EDA Rural Systems & APMAS conducted a study titled “Self Help Groups in India: A Study of the SHG Movement”, together, providing a good analysis of the activities of SHGs in different states. It revealed that SHGs played a significant role in fostering a sense of community, promoting savings, and enabling access to credit to pursue income-generating activities. However, problems such as unequal SHG quality, limited market access, and a lack of skill development hindered their potential.

Studied rural areas in the south of Tamil Nadu in his study on Microfinance and Poverty reduction in Tamil Nadu. The study findings showed that the direct impact of microfinance on poverty reduction was greatest in income generation, livelihood diversity, and women's empowerment (Taylor, 2011). The study emphasized the achievement of SHG-Bank linkage models to improve socio-economic welfare and modestly alleviate household financial vulnerabilities.

The research conducted an empirical study based on data from South India titled “Does Self Help Group Participation Lead to Asset Creation?” (2009). The findings indicated that households benefited from more productive assets, a better consumption index, and enhanced investment in children's education and health, all of which were associated with SHG activity. The research confirmed a positive link between microfinance participation and economic resilience in rural areas.

In their paper "Microfinance in India: Banyan Tree and Bonsai", the authors addressed the conundrum of both the quick expansion and a small social base within the microfinance sector in India. The authors highlighted that the

growth of the large MFIs was phenomenal, but the role played by the SHGs in inclusive growth was significant. Reinforcement of regulation and a balance between profitability and social goals were among the recommendations.

Srinivasan made an annual assessment of the microfinance sector in India in the "Microfinance India: State of the Sector Report (Khan & Gulati, 2022; Singh & Singh, 2017; Das et al., 2025). The study assessed the efficiency/performance of the MFIs, SHGs, and banks in providing rural credit. It noted that the sector was growing rapidly, with potential challenges related to over-indebtedness and governance issues. Ethical lending and borrowers' education are needed to promote the study's sustainability. Ramesh's study "Impact of Microfinance on Empowerment of Women in Rural Tamil Nadu" was based on primary data collected from SHG members in Erode district (Bhattacharyya, 2019; Basuvaraj, 2026). It concluded that participation in SHGs significantly improved women's decision-making power, savings behavior, and social confidence. The study also highlighted that women began to participate actively in household financial planning and local governance activities.

In her work that has inspired many, i.e., her piece entitled Microfinance and Women Empowerment: Reflections on India, Kabeer explored the effects of access to credit on gender relations (Kaur et al., 2020). Her observations showed that microfinance improves women's bargaining power, social mobility, and self-esteem. Nevertheless, she added that the empowerment process is contextual and indispensable to the development of favorable social and institutional support structures. Their article was titled 'Impact of microfinance programs on Coimbatore and Madurai districts' and was noted as an 'Assessment of the effectiveness of microfinance programs in Coimbatore and Madurai districts'. The research indicated that SHGs boosted household savings, enhanced entrepreneurship, and improved women's socio-economic status. It suggested these should include more training support and financial literacy programs to maintain SHG activities.

The authors in Self-Help help groups: A keystone of microfinance in India -Women Empowerment and Social Security emphasized the role of SHGs as social forums that develop a sense of collective identity among women in their rural communities (Pandhare et al., 2024). The researchers discovered that members of SHGs had better access to credit, greatly reduced their reliance on informal financial sources, and the group savings plan provided these groups with social security benefits. Sriram's research, "Commercialization of Microfinance in India: Dilemmas and Solutions", analyzed the growing commercialization of MFIs (Navin & Sinha, 2019). The paper addressed the microfinance crisis in Andhra Pradesh and stressed the need to implement ethical lending practices. It suggested a compromise between financial sustainability and social outreach as a preventive step to mission drift in the microfinance industry.

Research on households in Andhra Pradesh and Tamil Nadu in his work titled Microfinance and Income Diversification in Rural India (Sharma & Sharma, 2020). The results showed that microfinance led to income diversification beyond agriculture, enabling rural families to manage risk more effectively. The macro-level paper on the role of microfinance in closing the financial inclusion gap was presented by Bansal in his paper titled Impact of Microfinance on Financial Inclusion in India. This research found that microfinance institutions played a significant role in expanding access to formal financial services for low-income populations. It also indicated that the implementation of digital banking and microfinance might be effective in terms of outreach.

Conducted a study to determine how microcredit can affect the business activities of women members of SHGs in India. The authors discovered that microfinance stimulated women to engage in micro-enterprises, acquire financial management skills, and be respected by their community. It showed a positive relationship between financial inclusion and entrepreneurship (Roy & Ramachandran, 2024). In a study conducted by Raman, Digital Microfinance and Rural Development in Tamil Nadu investigated the role of technology in transforming microfinance operations. In the study, mobile-based financial transactions were found to be more transparent, more efficient in repayment, and more participatory among younger rural women. It elevated digital microfinance as a means of transforming the rural credit system into a more modern one. Their field research, Impact of Microfinance on the Livelihood of Rural Women in Tirunelveli District, focused on the Tirunelveli district (Rajasekhar et al., 2017). The results showed that income levels increased, moneylenders' borrowing decreased, and women's social networks improved as a result of participation in microfinance services. The research concluded that microfinance is a driver of the greater good of livelihoods (Butcher & Galbraith, 2019).

In this study, Microfinance Institutions and Inclusive Growth in India, Raghavan used secondary data to gain insights into the role of MFIs in national development. The paper concluded that microfinance plays an important role by contributing to inclusive growth through stimulating entrepreneurship, small-scale business development, and employment generation in rural areas.

Research Design

A descriptive research design is used in the study. The descriptive research design is suitable because the study aims to describe the existing situation and the relationships between the factors of participation in microfinance and socio-economic outcomes. The design will consist of gathering primary data using structured questionnaires and applying descriptive and inferential statistical tools. The research paper does not seek to establish direct causality but examines the relationships and effects based on respondents' experiences.

Study Area

The study was conducted across five rural districts of Tamil Nadu Coimbatore, Madurai, Tirunelveli, Erode, and Salem selected to represent the western, southern, and central agro-economic zones of the state, where SHG and MFI activity is well established. These districts were purposively chosen because of their high density of active Self-Help Groups and Microfinance Institution branches, as documented in NABARD's district-wise SHG-linkage data.

Sources of Data

Primary Data: A standardized questionnaire was used to gather primary data from microfinance recipients. These questionnaires comprised questions that covered: Demographic information, loan amount and use of the loan amount, Income before and after the loan, Savings pattern, and employment status. Personal interviews were used to clarify and ensure the accuracy of responses. Secondary data was used to understand the broader picture of microfinance in Tamil Nadu.

Sampling Technique and Frame

Convenience Sampling Method was used in the study due to time and accessibility limitations. The sampling frame consisted of registered SHG members and MFI borrowers accessed through the field offices of participating NGOs and MFI branches in the five study districts; respondents were approached at SHG group meetings and MFI branch visits until the target sample size was reached. Sampling Size Formula (Item -Respondent Ratio): N = Q x R, where: N = required sample size; Q = number of questionnaire items (questions); R = number of respondents to each item (usually 5 to 10). A total of 170 respondents were selected from rural areas across the districts. 3.6.3 Sampling Unit The sampling unit comprised: SHG (Self-Help Group) members and MFI (Microfinance Institution) borrowers.

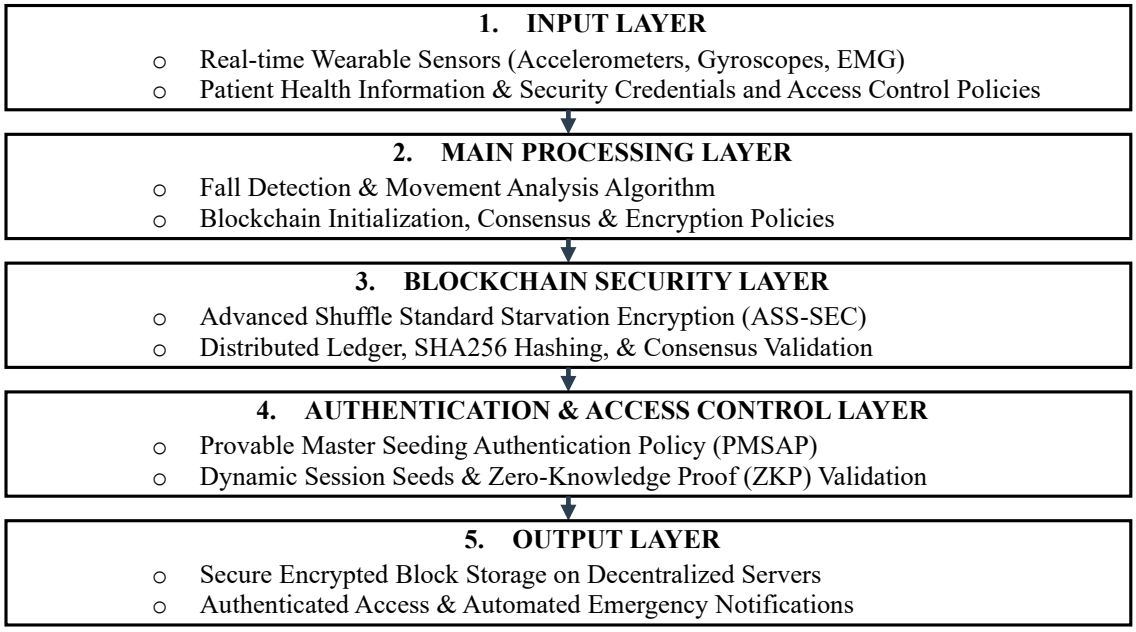

Fig. 1: Multi-Layer Architecture of the LWSBS-PMSAP Framework

Fig 1 illustrates the comprehensive multi-layer methodology used for secure Parkinson's disease fall detection and data processing. It systematically flows from the input layer capturing real-time sensor data through the main processing layer for movement analysis and blockchain initialization. It then integrates a robust blockchain security layer utilizing advanced encryption and a specialized authentication layer with zero-knowledge proofs, ultimately culminating in an output layer for secure block storage and instant emergency notifications.

Statistical Tools were Used in Conducting the Analysis, and Included the Following:

1. Percentage Analysis: Perhaps the simplest method to present the distribution of answers is through percentage analysis. It helps compare categories such as savings patterns, income levels, and loan amounts. The results are usually presented in tables and charts. In this method, the interpretation can be simple and meaningful.
2. Weighted Average Score: The weighted average score under the ranking of various factors is based on the opinions of respondents. It gives weights to answers and obtains an overall average score. This can be used to determine the factors of greatest importance in rural development. It is mainly used for Likert-scale questions.
3. Chi-Square Test: A statistical test used to determine whether two categorical variables are connected is the chi-square test. It is also often utilized to examine correlations, such as the one between the extent of business expansion and the loan volume. The null hypothesis is rejected if the calculated Chi-square is statistically significant, and, as a result, the relationship between the variables is statistically significant. However, this test does not demonstrate cause-and-effect; it only shows that a relationship exists.
4. A paired t-test is applied when comparing two related things, e.g., incomes before taking a microloan and afterward. The test will use the difference between the means of the two sets of observations to determine whether the difference is statistically significant. A p-value below 0.05 is strong evidence of a large difference. The paired t-test is particularly useful when estimating the impacts of interventions.

Factor Analysis: A multivariate statistical technique used to identify underlying dimensions in a large collection of variables. It simplifies the information by classifying related variables into larger, meaningful variables. For example, it can help categorize variables into broader groups, such as social and economic impact. Statistical tools used: To ensure accurate computation and interpretation of the results, Microsoft Excel and SPSS were used to analyze the obtained data.

Data Analysis and Interpretation

This chapter examines how microfinance affects rural economic development in Tamil Nadu by analyzing and interpreting data that was gathered from respondents. Beneficiaries of microfinance institutions and Self-Help Groups (SHGs) completed a structured questionnaire to provide the data needed for the study. This chapter's main goal is to comprehend the social and economic effects of microfinance services by methodically analyzing the replies and interpreting the results. The gathered data have been meaningfully and scientifically analyzed using a variety of statistical tools. One of the techniques used in the analysis includes Percentage Analysis, Weighted Average Score, Mean Analysis, Chi-square Test, Paired t-test, Standard Deviation, and Factor Analysis. Percentage analysis has been used to describe the respondents' microfinance information and demographic profile. To gauge respondents' perceptions of the impact of microfinance, mean score and weighted average techniques were used. The pre- and post-element of income difference between the pre- and post-use of microfinance services has been analyzed using a paired t-test. The chi-square test has been employed to find the correlation between specific variables. The key factors influencing rural economic development were identified using factor analysis, and the standard deviation was used to quantify response diversity. The analysis's findings are presented in tables and discussed in detail to yield meaningful conclusions. In this chapter, there is a clear picture of how microfinance helps improve income, savings, social empowerment, and overall development in rural areas.

Demographic Profile Analysis

Table 1: Age Group of the Respondents

Age Group	No. of Respondents	Percentage
Below 25	86	51%
26 – 35	53	31%
36 – 45	20	12%
Above 45	11	6%
Total	170	100%

Table 1 provides information on the age distribution of the 170 surveyed participants. It is quite evident from the table that 51% of the surveyed population is under 25 years, which is the overwhelming majority of the young generation. In addition to this, 31% are between 26 and 35 years, 12% are between 36 and 45 years, while 6% are over 45 years, highlighting a predominantly youthful demographic participating in the study.

Table 2: Educational Qualification of the Respondents

Educational Qualification	No. of Respondents	Percentage
Illiterate	6	3%
Primary	23	14%
Secondary	25	15%
Graduate	116	68%
Total	170	100%

Table 2 gives an overview of the education levels attained by the 170 respondents. A large majority, making up 68%, have attained the graduation level, 15% attained their education at the secondary level, and 14% at the primary level. The 3% who fall under the category of illiterates indicate that the sample has relatively high education levels.

Table 3: Occupation of the Respondents

Occupation	No. of Respondents	Percentage
Agriculture	47	28%
Small Business	39	23%
Self Employed	38	22%
Private Employee	37	22%
Government Employee	9	5%
Total	170	100%

Table 3 shows the occupation structure of the respondents. The occupation of agriculture is the largest, comprising 28% of the respondents, while small businessmen occupy 23% of the total sample size. Self-employed and private sector workers comprise 22% each, while the least number of workers belong to government employees, which is 5%, reflecting a diverse mix of rural and commercial livelihoods.

Income Profile Analysis

Table 4: Monthly Income Before Microfinance

Monthly Income (Before Microfinance)	No. of Respondents	Percentage
Below ₹10,000	16	10%
₹10,000 – ₹20,000	21	12%
₹20,000 – ₹30,000	80	47%
Above ₹30,000	53	31%
Total	170	100%

Table 4 represents the income levels of respondents before receiving microfinancing. Almost half of the respondents had an income level ranging from ₹20,000 to ₹30,000 (47%), while 31% of the total respondents were earning more than ₹30,000. Income levels lower than these two categories had a comparatively lower percentage, such as 12% having ₹10,000–₹20,000 and 10% earning under ₹10,000.

Table 5: Monthly Income After Microfinance

Monthly Income (After Microfinance)	No. of Respondents	Percentage
Below ₹10,000	10	6%
₹10,000 – ₹20,000	19	11%
₹20,000 – ₹30,000	43	25%
Above ₹30,000	98	58%
Total	170	100%

Table 5 shows how much money each respondent earned in a month after joining microfinance. A major change can be seen as 58 percent of respondents earn more than Rs. 30,000 and 25 percent earn from Rs. 20,000 to Rs. 30,000 a month. At the same time, smaller income segments have decreased, proving that microfinance helps economic development.

Microfinance Usage & Loan Characteristics Analysis

Table 6 shows the routes through which people acquired information regarding the microfinance schemes. Friends are the main source of information, accounting for 33%, while NGOs account for 21% and Self-Help Groups (SHGs) account for 18%. Banks and advertisements were 17% and 11%, respectively, highlighting the dominance of peer networks and community organizations in information dissemination.

Table 6: Source of Awareness about Microfinance

Source of Awareness	No. of Respondents	Percentage
Friends	56	33%
SHG	31	18%
NGO	35	21%
Banks	29	17%
Advertisement	19	11%
Total	170	100%

Table 7: Purpose of Availing Microfinance Loan

Purpose of Loan	No. of Respondents	Percentage
Business / Entrepreneurship	44	26%
Education	34	20%
Consumption	33	19%
Housing	30	18%
Medical	29	17%
Total	170	100%

Table 7 highlights the major purposes for which the microfinance loan was used by the respondents. The purpose of business/entrepreneurship occupies a 26% share, followed by 20% for education and 19% for consumption. Housing and healthcare take up 18% and 17%, respectively, showing how money has been used for income generation as well as basic household necessities.

Weighted Average Analysis

Table 8: Weighted Average of Economic and Social Impact

Economic and Social Impact	5	4	3	2	1	Wtd. Avg.	Rank
Income improved after microfinance	60	74	19	13	4	4.018	6
Started or expanded business	74	60	17	16	3	4.094	2
Savings increased	66	70	18	12	4	4.071	4
Improved access to health care and education	70	54	23	20	3	3.988	7
Financial confidence improved	63	65	21	15	6	3.965	8
Participation in decision-making	71	64	19	10	6	4.082	3
Adequate guidance and training	70	69	16	11	4	4.118	1
Facing challenges	63	70	23	9	5	4.041	5

Table 8 gives the weighted mean ratings for the socio-economic effects of microfinance. All rated factors have shown results much higher than the neutral point of 3.0, which indicates that a positive impact has been made. The highest rating was received by proper guidance and training, which got a 4.118 rating, followed by business growth with a 4.094 rating and better involvement in decision-making with a 4.082 rating, confirming broad perceptual endorsement across various benefit dimensions.

Chi-Square Test Analysis

Table 9: Monthly Income Before vs After Microfinance

Income Before \ After	₹10,000–20,000	₹20,000–30,000	Above ₹30,000	Below ₹10,000	Total
₹10,000 – 20,000	5	12	2	2	21
₹20,000 – 30,000	5	28	46	1	80
Above ₹30,000	3	1	48	1	53
Below ₹10,000	6	2	2	6	16
Total	19	43	98	10	170

Table 9 depicts the cross-tabulation of pre- and post-microfinance monthly incomes. The chi-square test of 96.1 ($p<0.001$, $df=9$) with a value of Cramer's V of 0.434 clearly demonstrates a statistically significant relationship. This is empirical evidence of significant upward economic movement, in which most of the respondents fall under higher income categories after receiving microfinance services.

Paired t-Test Analysis

Table 10: Paired t-Test of Income Before vs After Microfinance

Particulars	Income Before (₹)	Income After (₹)
Mean	25,000	28,470
N	170	170
Std. Deviation	7,850	8,420
Std. Error	602.3	645.8

Table 10 presents the outcomes of the paired t-test of average monthly incomes both before and after the introduction of microfinance. There was a significant increase in the average income from ₹25,000 to ₹28,470, with an average gain of ₹3,470, corresponding to a t-statistic of 5.596 ($p<0.001$). The high positive correlation ($r=0.742$) further proves that microfinance participation is systematically linked to consistent earnings growth.

Factor Analysis

Table 11: Exploratory Factor Analysis of Impact of Microfinance

Item	Loading	Uniqueness
Income has improved after availing microfinance	0.773	0.403
Able to start/expand business using microfinance funds	0.773	0.403
Savings increased after joining microfinance	0.750	0.438
Improved access to health care and education	0.650	0.577
More confident in financial decision-making	0.702	0.507
Enhanced participation in household/community decisions	0.616	0.620
MFIs provide adequate guidance and training	0.621	0.614
Faces challenges (interest rates, repayment pressure, training gaps)	0.641	0.590

Table 11 demonstrates results of the exploratory factor analysis conducted on items measuring microfinance impact. Only one common factor explained 48.1% of the total variance with high sampling adequacy (KMO = 0.901; Bartlett's $p<0.001$). All factors have loadings greater than 0.60, creating a strong construct of socio-economic empowerment, including income, entrepreneurship, savings, and decision-making.

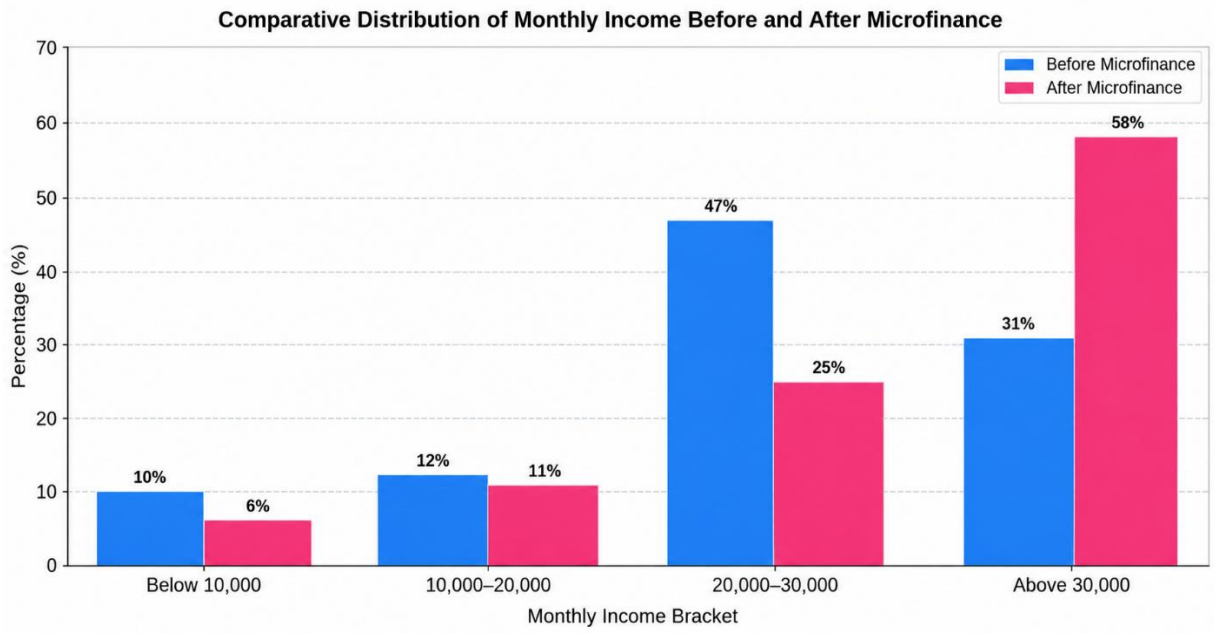

Fig. 2: Comparative Distribution of Monthly Income Before and After Microfinance

Fig 2 depicts the income shift among respondents before and after the intervention program. This figure clearly reflects the reduction in low-income segments and the increase in the highest segment (₹30,000+) from 31% to 58%, indicating economic development due to microfinance support.

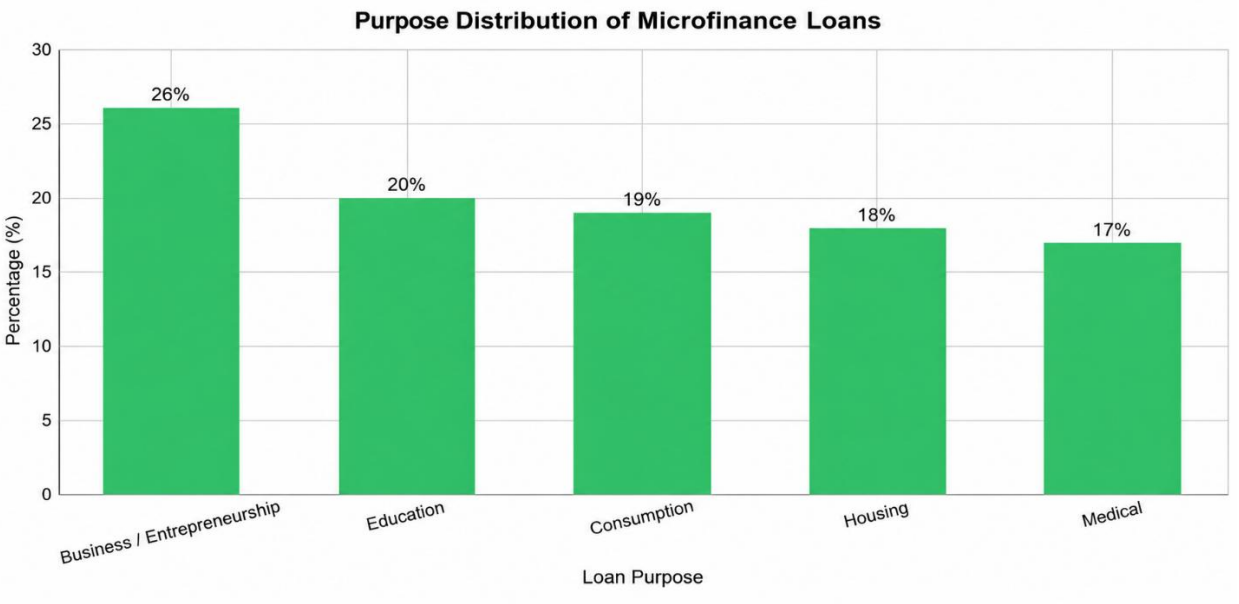

Fig. 3: Purpose Distribution of Microfinance Loans

Fig 3 shows how people have distributed the money from loans into various sectors. Entrepreneurship was found to be the number one priority at 26%, followed by education, consumption, housing, and medical expenses, showing that microfinance addresses both earning purposes and basic livelihood requirements.

Limitations of the Study

Despite the numerous benefits of the research conducted regarding the socio-economic effects of microfinancing, there are certain limitations that should be mentioned. First of all, the sample used by the researchers consists only of 170 respondents, thus being statistically sufficient to perform certain tests but not sufficient enough to generalize the results to wider regions or even countries. Secondly, the use of self-reporting surveys makes the results subject to certain biases like social desirability one or lack of accuracy regarding the level of income before the intervention program. Finally, the cross-sectional research design makes it impossible to observe the results for a long time period since most of the membership lasted less than 5 years, meaning the long-term sustainability of these economic gains remains an area for future longitudinal research.

Conclusion

Microfinance can greatly help improve the socio-economic status of rural living households through economic development in rural areas. The current paper discussed the effects of microfinance on rural development in Tamil Nadu by studying the reactions of the beneficiaries of microfinance, such as members of Self-Help Groups, borrowers of the Microfinance Institution, and beneficiaries of the NGO. The work has found that access to financial services is made easier for rural people as a result of microfinance, which has made it easier to access and use financial services. The paired t-test shows a statistically significant increase in mean monthly income, from ₹25,000 to ₹28,470 ($t = 5.596$, $p < 0.001$), and chi-square tests confirm significant associations between microfinance participation and both income mobility ($\chi^2 = 96.1$, $p < .001$) and business expansion ($\chi^2 = 24.2$, $p = 0.019$). Under microfinance, most of the beneficiaries were in a position to start small businesses, expand their agricultural activities, and engage in other income-generating activities. The results show microfinance has contributed to an increase in income and financial stability of the respondents. It has also promoted savings and financial management among rural people. Besides economic gains, microfinance programs also help in social empowerment in the sense of confidence, ability to make decisions, and participation in economic activities. Nevertheless, the research also found that there were some difficulties, such as high interest rates, complicated procedures to acquire a loan, and strict repayment programs. Beneficiaries indicated their desire to see advancements by having lower interest rates and eased loan application processes; more financial education efforts should be conducted, and more flexible loan repayment systems should be implemented. In general, the future research arrives at the conclusion that microfinance exerts its positive effect on rural economic growth. Through enhancing access to credit, entrepreneurship, and financial inclusion, microfinance plays a role in the overall development of the rural population in Tamil Nadu. Microfinance may have additional

strength to play a more influential part in ensuring sustainable rural development with better policies, better training programs, and better institutional support.

References

Sagar, R., & Gangwar, D. R. (2025). Evaluating the Socio-Economic Impact of Microfinance on Rural Development in Uttar Pradesh. *The Voice of Creative Research*, *7*(4), 1-12. https://doi.org/10.53032/tvcr/2025.v7n4.01

Selvi, S. S., & Uthira, D. (2026). From Credit to Choice: Evaluating the Impact of Microfinance on Women's Empowerment in India. *International Journal of Research in Entrepreneurship & Business Studies*, *7*(1), 1-12. https://doi.org/10.47259/ijrebs.2026.712

Devi, K. S., Prabakar, C., & Ponnarasi, T. (2011). Impact of microfinance innovation in pushing back rural poverty in Tamil Nadu. *Indian Journal of Agricultural Economics*, *66*(3). https://doi.org/10.22004/ag.econ.204766

Khan, A., & Gulati, R. (2022). Productivity growth, catching-up and technology innovation in microfinance institutions in India: evidence using a bootstrap Malmquist Index approach. *Benchmarking: An International Journal*, *29*(3), 878-904. https://doi.org/10.1108/BIJ-10-2020-0535

Guérin, I., Roesch, M., Kumar, S., Venkatasubramanian, G., & Sangare, M. (2018). Microfinance and the dynamics of financial vulnerability. In *Microfinance in India* (pp. 114-141). Routledge India.

Butcher, W., & Galbraith, J. (2019, January). Microfinance control fraud in Latin America. In *Forum for Social Economics* (Vol. 48, No. 1, pp. 98-120). Routledge. https://doi.org/10.1080/07360932.2015.1056203

Roy, N. C., & Ramachandran, N. (2024). Enhancing microfinance efficacy for socio-economic development: A fuzzy logic approach to Pradhan Mantri Mudra Yojana. *International Journal of Financial Engineering*, *11*(03), 2443003. https://doi.org/10.1142/S2424786324430035

Kaur, S., Kaur, H., & Kaur, N. (2020). Empowering women through micro finance in India. *Globus-An International Journal of Management and IT*, *12*(1), 1-5. http://dx.doi.org/10.46360/globus.mgt.120202001

Singh, S., & Singh, C. (2017). Growth of non-performing assets in microfinance institutions: An evidence from India. *IOSR Journal of Business and Management*, 14-22. https://doi.org/10.9790/487X-1906061422

Rajasekhar, D., Manjula, R., & Suchitra, J. Y. (2017). Can microfinance promote livelihoods and reduce vulnerability among Adivasis? A study of some NGO interventions from Karnataka and Tamil Nadu. *Social Change*, *47*(1), 65-80. https://doi.org/10.1177/0049085716683101

Pandhare, A., Bellampalli, P. N., & Yadava, N. (2024). Transforming rural women's lives in India: the impact of microfinance and entrepreneurship on empowerment in Self-Help Groups. *Journal of Innovation and Entrepreneurship*, *13*(1), 62. https://doi.org/10.1186/s13731-024-00419-y

Khan, S. T., Bhat, M. A., & Sangmi, M. U. D. (2023). Impact of microfinance on economic, social, political and psychological empowerment: Evidence from women's self-help groups in Kashmir Valley, India. *FIIB Business Review*, *12*(1), 58-73. https://doi.org/10.1177/2319714520972905

Das, R. P., Jha, M. K., & Jha, A. P. (2025). Evaluating financial efficiency of microfinance institutions: Evidence from India. *Managerial and Decision Economics*, *46*(5), 2968-2985. https://doi.org/10.1002/mde.4510

Gan, C., Nartea, G. V., & Xia, J. L. (2017). An overview of microfinance. *Microfinance in asia*, 1-22. https://doi.org/10.1142/9789813147959_0001

Patel, R., Patel, M., & Patel, N. (2018). Impact of microfinance on women empowerment: A study of rural Gujarat. *Indian Journal of Finance*, 22-35. https://doi.org/10.17010/ijf/2018/v12i8/130742

Bhattacharyya, R. (2019). Microfinance: A tool for empowering women in India. In *Handbook of research on microfinancial impacts on women empowerment, poverty, and inequality* (pp. 23-51). IGI Global Scientific Publishing. https://doi.org/10.4018/978-1-5225-5240-6.ch002

Navin, N., & Sinha, P. (2019). Market structure and competition in the Indian microfinance sector. *Vikalpa*, *44*(4), 167-181. https://doi.org/10.1177/0256090919896641

Sharma, A., & Sharma, J. K. (2020). Evolving landscape of microfinance in India: Challenges & revival strategies. *Asian Journal of Research in Banking and Finance*, *10*(9), 17-29. http://dx.doi.org/10.5958/2249-7323.2020.00009.7

Taylor, M. (2011). 'Freedom from poverty is not for free': rural development and the microfinance crisis in Andhra Pradesh, India. *Journal of Agrarian Change*, *11*(4), 484-504. https://doi.org/10.1111/j.1471-0366.2011.00330.x

Basuvaraj, M. (2026). Empowering Rural and Tribal Women in Tamil Nadu: A Regression Analysis of Banking Schemes and Socio-Economic Development. *International Journal of Scientific Research and Technology*, *4*(02), 148-158. https://doi.org/10.5281/zenodo.18927844