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Impact of Microfinance in Delivering Financial Services– a Study in Reference to Rural India - Kolar District.

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Abstract

Financial service delivery reach to certain community of people in several economies of the world is yet left wanting, reasons sighted for this has been the extent of economic development of the region and the individual's income all being relatively low. Research supports this point that economically developed economies of the world has more access to formal financial institutions and financial services are highly used while it is in the underdeveloped or moderately developed economies that have only less than half the population enrolled in the formal financial institution with an accessible account (UNCTAD - World Bank's Global Findex Database).

Encouraging larger acceptance of financial services through formal financial institutions would mean implementing financial inclusion - which is explained as programme for providing financial products that is accessible economically - to all under-privileged communities. Mode of extending these financial services can be achieved with multiple financial products. In today's disruptive technology driven financial market there are several product options. Inclusivity features of any financial products should be its ease of accessibility and flexible mode of financing. One such financial product that has gained acceptance across developing economy is microfinance. Microfinance- the community model of financing a group of eligible individuals for small loans and insurance. This inclusive financial product aims to foster self-sufficiency drive community and upliftment of household economically. Micro-finance, through Self-Help Groups (SHGs) and Microfinance Institutions (MFIs), has emerged as one of the key financial products to advance financial inclusion. This study investigates the impact of microfinance on promoting financial inclusion in Kolar district, Karnataka. Primary data were collected from 312 respondents SHG members and MFI clients through a structured questionnaire. Descriptive research design was adopted, and data were analysed using the F-Test, MANOVA (Box's M and multivariate tests), Exploratory Factor Analysis, and one-way ANOVA. Findings reveal that 84.9% of respondents are associated with a microfinance institution or SHG, primarily from lower-to-middle income households. Statistical tests confirm that SHG membership significantly improves financial outcomes (F-Test $p < 0.05$; Wilks' Lambda = 0.962; F = 3.001), and ANOVA results (F = 3.982; p = 0.047) indicate that SHG members demonstrate greater income management capability. Factor analysis identified seven dimensions of financial inclusion: formal banking access, credit availability, digitisation, locality, savings behaviour, product variety, and financial education, collectively explaining 54.07% of total variability. The study concludes that microfinance meaningfully advances financial inclusion and reaches financial services to rural parts of India as in Kolar district and supports enhanced financial literacy and broader digital financial service adoption.

Keywords: Microfinance, Financial services, Financial Inclusion, Self-Help Groups (SHGs), Kolar District, SHG-Bank Linkage, MANOVA, Factor Analysis, Karnataka

Introduction

Access to a financial services delivery system is defined today with varied financial products and financial services as the delivery of financial services is transforming and is vibrant with the adoption of the new technological disruptions. This new technology adoption has brought in two major changes in the financial service which has been adopted or has created a major positive change - like providing customised products like alternative data-based lending, digital payments and insurance to especially the underserved groups of people secondly, creating financial literacy and policy changes that speeded the digitisation taking the literacy rate to 27% of the Indian population as this gave access to them for various financial products through websites and apps that were accessible 24/7.

Market of financial products and services is growing as it is led by the fin-tech market globally and is poised to expand the value chain at a compound annual growth rate (CAGR) of 31%. This growth is anticipated based on the inherent advantage of using disruptive new-age technology to provide innovations in business models and develop products like embedded finance, the ESG based products.

Considering growth prospectus of financial products and financial services, every economy, needs to get the majority of the population to participate in it to gain a larger benefit of developing the economy. The means to get majority of the population to participate in the formal financial eco system, is by ensuring individuals' economic independence to participate in the ecosystems as access to affordable finance is associated with innovation, job creation and growth. Financial inclusion programmes are the means to ensure accessibility to formal financial institutions.

In India as per RBI Financial Inclusion Index (FI-index) which was first published in 2021, India stands at 64%on the index which measures inclusiveness based on the extent of - usage, ease of access and quality of these facilities of every financial product showing that to achieve a cent percent inclusivity India needs to make available more such financial services to all section of the society.

Micro finance is one such financial product which has been accessible and is having ease of use making it one of the popular inclusive financial tool for the developing economies. Microfinance refers to the provision of very small-scale financial services especially credit, savings, insurance and remittances – to low-income households that lack access to conventional banking. By design, microfinance targets poor and marginalized groups (particularly women in rural and urban slums), offering collateral-free loans and basic savings accounts through specialized channels. In India, two primary delivery models have emerged: Self-Help Groups (SHGs) – typically rural women's groups that pool small savings and obtain group loans – and Microfinance Institutions (MFIs) (including NBFC-MFIs and "social banks") that directly lend to micro-entrepreneurs. The model relies on group solidarity and local promoters; for example, NABARD's SHG–Bank Linkage Programme (1992 onwards) formalized community groups into bank credit programs. Overall, microfinance is aimed at enabling the poor to save safely, borrow for livelihood activities, and gradually build assets and income.

Financial inclusion is the broader goal of ensuring that all individuals and businesses – especially the poor and underserved – have access to and use formal financial services. In practice, inclusion means that low-income people can open bank accounts, save and make payments digitally, obtain affordable credit and insurance, and participate in other financial activities. Key services include basic deposit accounts (with no/low minimum balance), small loans, payment and remittance systems, micro-insurance and pension products. Financial inclusion is widely viewed as essential for empowering poor households: it integrates them into the economy, provides safety nets (e.g. insurance/pensions), and supports income-generating activity. In sum, microfinance is one of the principal strategies for advancing financial inclusion by connecting poor clients with formal finance.

In this context, there is a thriving SHG microfinance eco-system in Kolar district, where both governmental and banking institutions have been involved in such activities. As per the guidelines laid out under the Karnataka scheme on Sanjeevini or KSRLPS program, financial inclusion is the key concern with regards to women SHGs, livelihood promotion and enterprise development. The KSRLPS document shows Kolar being targeted with 531 women for EDP and skill training and 133 women for performance-improvement training, highlighting the ongoing mission focus on livelihood development via SHGs.

A local case study would be Grameena Mahila Okkuta, a federation of 330 rural women SHGs from 170 villages across Mulbagal, Kolar, Srinivaspur, and Bangarpet taluks, which reflects the existing SHG movement within Kolar district. On the banking front, the Kolar & Chikaballapura District Cooperative Central Bank Ltd. offers SHG loans as an essential district-level financial intermediary in microfinance lending. In addition, the Cent SHG Bank Linkage Scheme, as advertised on the website of the KOLAR branch of Central Bank of India, provides further evidence of bank SHG linkage in the district.At the national level, NABARD remains the key institution behind India's SHG-Bank Linkage Programme. NABARD states that the SHG-BLP began as a pilot with about 500 SHGs in 1992–93 and has since become the largest microfinance programme in the world; NABARD also works with banks, DCCBs, RRBs, SHG federations, and other institutions to expand financial access to rural households.

Evolution of Microfinance in India

The Indian microfinance sector started growing quickly from the 1990s onwards. This was when the National Bank for Agriculture and Rural Development (NABARD) rolled out the SHG-Bank Linkage Program (SHG-BLP) in 1992. This followed experiments conducted in the late 1980s. With SHG-BLP, banks started giving small, collateral-free loans to SHGs (mainly women's groups) after savings collection for a period of six months to one year.

The initiative was successful; initially, the SHG pilot groups achieved 100% repayment success rate, thereby proving that women in poverty are capable of managing credit. The growth of SHG-BLP continued rapidly: from linking about 500 SHGs in 1992-1993 to more than 12 million SHGs as of 2023, with loans amounting to more than ₹1.5 lakh crore. About 90% of the SHGs linked under the scheme are women's groups, emphasizing its gender focus. By the mid-2010s, the Indian SHG-banking linkage scheme became the largest microfinance program globally.

Apart from the SHG approach, there was also an emergence of a parallel microfinance institution movement. During the late 1990s and early 2000s, non-governmental organizations started setting up microfinance institutions (such as SKS Microfinance, Bandhan, and Equitas) using the Grameen joint liability system or group lending model and providing credit services to poor communities at interest rates. As of 2010, MFIs and banks combined had become able to serve tens of millions of customers. An industry report shows that as of March 2023, micro-lending institutions consisting of NBFC-MFIs and small finance banks served 6.60 crore people with an aggregate loan portfolio of ₹3.48 lakh crore. (This includes the difficulties faced during and post the 2010 repayment crisis of Andhra Pradesh, which forced MFIs to reorient their business model and face strict regulation, yet the sector recovered from 2018 onwards.)

Key Government Initiatives for Microfinance and Inclusion

The Indian government and RBI have launched several programs to promote microfinance and financial inclusion. The Pradhan Mantri Jan Dhan Yojana (PMJDY) (2014) aimed to provide every adult with a basic bank account. It is now the world's largest inclusion campaign: as of 2025, over 56.16 crore PMJDY accounts have been opened, with total deposits around ₹2.67 lakh crore. Notably, 56% of these accounts belong to women, and about two-thirds are in rural/semi-urban areas, demonstrating deep rural outreach. PMJDY accounts offer RuPay cards with transaction insurance, and basic overdraft facilities, directly linking the unbanked into the financial system.

The Deendayal Antyodaya Yojana – National Rural Livelihoods Mission (DAY-NRLM) (launched 2011, renamed in 2014) builds on the SHG model to develop livelihoods. NRLM's goal is to mobilize rural poor households (particularly women) into SHGs and provide ongoing support (training, credit linkages, market access). By late 2021, DAY-NRLM had organized over 8.01 crore women into 73.19 lakh SHGs across 706 districts, extending group-based financial access nationwide. The mission also deploys SHG-linked Business Correspondents (BC Sakhi) for last-mile banking services, and provides revolving funds and capacity-building. These efforts strengthen the SHG infrastructure and deepen inclusion.

The Pradhan Mantri MUDRA Yojana (PMMY) (2015) targets micro-enterprises by providing collateral-free loans up to ₹10 lakh under categories of Shishu/Kishor/Tarun. MUDRA has "funded the unfunded" at massive scale: in its first decade (2015–2025) it sanctioned over 52 crore loans totalling ₹32.61 lakh crore. Roughly two-thirds of Mudra beneficiaries are women. The scheme channels credit to thousands of small traders, artisans and entrepreneurs, often those who lack traditional collateral. Combined with other initiatives (e.g. Kisan Credit Cards, small savings programs, and financial literacy drives), these programs have significantly expanded formal access. Together, PMJDY, NRLM (Aajeevika) and PMMY represent a coordinated push by the government to bring rural and informal-sector populations into the financial mainstream.

Microfinance and Financial Inclusion in Karnataka

Karnataka has been one of the leading states in microfinance and SHG development. It was a pioneer of the SHG model: Karnataka's NGO, MYRADA, became one of the early adopters of the SHG approach (mid-1980s) when they created the first women's SHGs in India. The government of Karnataka launched the "Stree Shakti" scheme in 2000 to create more such women's SHGs in the State for livelihood and financial gains. Statistical records indicate that southern Indian states such as Andhra Pradesh, Karnataka, and Tamil Nadu contribute to a disproportionately high percentage of the total number of SHG-bank linkages in India. Even now, Karnataka's countryside still features numerous cooperative societies and SHGs that funnel money into poor families. For instance, by early 2025, Karnataka came in third place after Tamil Nadu and Uttar Pradesh with respect to the total value of disbursements under PM Mudra Loans. Furthermore, all major Indian MFIs (including NBFCs and small finance banks) are well-established in the districts of Karnataka where they provide loans to microentrepreneurs in villages. Therefore, Karnataka is a suitable location for researching microfinance outcomes due to its well-developed inclusion system.

Review of literature

Microfinance has become a significant tool for advancing financial inclusion in rural India, especially for financially weaker segments and women. Many researchers have explored the impact of microfinance and self-help groups in Karnataka to understand its significance in promoting access to financial services and improving socio-economic well-being. For instance, a study done by Sarvamangala and Deepika (2014) in Kolar district indicated that microfinance played a vital role in empowering women, generating income, and improving their living conditions. The findings indicated that through SHG membership, rural women were able to gain access to the formal financial system and avoid being trapped in the informal financial system. Likewise, a study carried out by Ayyappan and Shivashankarachar (2019) in Bangalore Rural district confirmed the positive influence of microfinance on women's income and employment decisions.

Further studies in the districts of Karnataka confirm the significance of microfinance in fostering financial inclusion. As noted in Kumar and Ramesh (2018), who studied Mysuru district, SHGs are instrumental in helping gain access to financial institutions such as banks as well as encouraging savings behaviors. Similarly, Raghavendra & Lokesh (2020) indicated that SHG-bank linkage schemes in Tumakuru district greatly increased financial accessibility and improved the socio-economic status of the female participants. According to Nagaraj & Chandrashekar (2017), microfinance institutions in Karnataka helped improve financial outreach through the provision of credit facilities for marginalized groups, thereby fostering financial inclusion. Moreover, Shivakumar and Lakshmi (2021) indicated that microfinance helps enhance credit accessibility and promote financial literacy among the rural population in Karnataka; however, there remain issues such as high-interest rates and poor financial literacy. Lastly, Prakash and Gowda (2016) confirm that SHGs in Mandya district contribute positively to poverty reduction and saving practices.

According to Renjith and Sindoora (2024), MFIs can be used to include the marginalized social groups in the banking process. This has been accomplished through the use of questionnaire-based data gathering methods where they have evaluated the availability of banking services and the saving behavior of individuals accessing MFI services. It was evident that MFI can be used as an effective tool to enhance the availability of banking services and awareness among individuals who have been excluded from the banking process. Nevertheless, lack of knowledge and awareness of financial services has also been noted.

Fatima (2024) has also evaluated the significance of microfinance for facilitating financial inclusion and development within the Indian setting, particularly in relation to the rural and poor regions of the country. Specifically, the importance of MFI in providing loan services without collateral for individuals deprived of banking services has been recognized. Moreover, it was revealed that microfinance has a significant effect on enhancing financial inclusion; however, it can also support savings and insurance schemes.

At the national level, institutional reports and empirical research offer strong evidence on the effectiveness of microfinance in fostering financial inclusion. The NABARD (2022) reports show that there have been remarkable achievements in terms of SHG-bank linkage programs in India, resulting in enhanced access to financial services and credit among rural communities. Similarly, the RBI (2021) highlights that microfinance institutions act as a complement to the formal banking system in India, providing financial services to those who are financially underserved. The Government of Karnataka (2020) reports on improvements in financial inclusion measures owing to microfinance interventions and digital finance solutions.

Further, empirical research from other states in India provides similar insights. For instance, the work of Patel and Patel (2020) proves that microfinance is an effective tool for women's empowerment and financial independence in Gujarat. Similarly, Yadav et al. (2021) note that microfinance in Uttar Pradesh has resulted in higher income, financial literacy, and access to formal credit. However, socio-cultural challenges have constrained its full potential. Finally, Saurabh and Behera (2022) show the effectiveness of SHG-linked programs in Bihar in promoting financial inclusion and household well-being. Similarly, Mukherjee and Banerjee (2023) concluded that microfinance plays a vital role in enhancing financial literacy and inclusion among rural populations in West Bengal.

The literature is replete with microfinance studies that have been carried out in various districts of Karnataka, but there appears to be a lack of research on the topic in the district of Kolar. Either these microfinance studies have taken place at a state-wide or nationwide level, or they have been conducted in other districts of Karnataka. Hence, there seems to be a paucity of empirical research that looks at the effects of microfinance on financial service access and usage in the Kolar district.

Research methodology

Research Gap

The above literature highlights the fact that much has been written about microfinance in India, but only very little has been devoted specifically to Karnataka districts, let alone to Kolar district. In Karnataka, all available studies deal with other areas or with impacts statewide. Currently, no academic study assesses the impacts of microfinance in Kolar district. Only one paper focusing on Kolar could be found, which is Sarvamangala & Deepika (2014), but the study is already out of date. Furthermore, even state-level or national-level analyses do not take into account heterogeneity within states or districts. Hence, there is a gap in conducting a micro-level analysis, i.e., an empirical assessment of impacts of microfinance on financial inclusion specifically in Kolar.

Research Design

A descriptive research design was adopted; wherein primary data were obtained from the recipients of microfinance services. Data were collected through the use of a structured survey instrument that could be answered online using Google Forms. The survey instrument had portions concerning demographic/background data and financial access/usage (e.g., credit utilization, savings, insurance, payment behavior). All items in the questionnaire were close-ended or Likert scale for easy quantification. Since the study focuses on real-life microfinance recipients (SHG members, MFI clients) in Kolar, the study was able to determine the extent of the correlation between microfinance experience and formal financial access. Purposive sampling was employed to select respondents who are beneficiaries of microfinance in Kolar. Respondents were identified through SHG networks or local MFI branch lists, focusing on those who have taken microloans or used micro-savings. The collected data was analyzed using the following statistical tools: F-Test Two-Sample for Variances to compare financial outcomes between SHG members and non-members; Box's M Test and MANOVA (Multivariate Analysis of Variance) to assess the simultaneous effect of SHG membership on multiple financial dimensions; Exploratory Factor Analysis (EFA) to identify underlying dimensions of financial inclusion; and one-way ANOVA to examine income management capabilities between groups.

Research Hypotheses

H_0: Microfinance has no significant impact on financial inclusion in Kolar district.

H_0: Microfinance beneficiaries of Kolar district are not always benefiting from financial services.

H_0: Microfinance usage is not significantly impacted by the determining factors of choosing any financial services.

H_0: Microfinance beneficiaries of Kolar district are not always getting income from the investment.

.**Data analysis and interpretation**

Demographic Profile

The demographic analysis of the respondents reveals that out of the total 312 respondents, the gender-wise analysis indicates that 50.3% of the respondents were female, while 49.4% were male. With respect to the age group of the respondents, it has been found that 36.2% of the respondents fall in the age group of 36-45 years, followed by

23.5% in the age group of 26-35 years. With respect to the educational qualification of the respondents, it has been found that 39.1% have undergone secondary education, followed by 26.0% graduates and 20.8% respondents having undergone primary education. With respect to the occupation of the respondents, 38.8% are from the private sector, followed by 26.3% daily wage workers and 18.6% self-employed respondents. Income distribution shows that 45.5% earn between ₹10,001–₹20,000 per month, followed by 28.2% in the ₹20,001–₹30,000 range, with only 16.0% earning above ₹30,000, confirming that microfinance primarily serves lower-to-middle income households.

Microfinance Association and Usage Pattern

Association with microfinance institutions is high, as 84.9% of the respondents are currently associated with a microfinance institution or Self-Help Group (SHG), while only 15.1% are not. Duration of association shows that 40.1% have been associated for 1–3 years followed by 36.5% for 3–5 years, indicating that a majority of respondents have a reasonably long-standing relationship with microfinance services. With respect to loan purpose, 39.7% of respondents availed microfinance primarily for education expenses, followed by 25.6% for agriculture-related activities and 19.6% for household consumption, indicating education financing as the predominant driver of borrowing. Usage pattern of services shows that micro loans were availed by 44.2% of respondents, financial literacy or training by 39.1%, savings facility by 36.2%, and insurance services by 24.4%, indicating that microfinance institutions serve as multi-service providers beyond credit delivery.

The results show that most respondents are associated with microfinance for 1–5 years, indicating regular and sustained engagement. Education is the primary loan purpose, reflecting that microfinance is being used to meet social development needs beyond just business or agriculture. The multi-service usage pattern spanning loans, savings, insurance, and financial literacy shows that microfinance institutions play a comprehensive role in financial empowerment in Kolar district.

Financial Access and Behaviour

The data indicates that SHG membership positively influences financial access and behaviour. Members report improved access to formal banking, regular savings habits, greater confidence in managing finances, and increased usage of formal credit. Non-members, by contrast, show lower engagement with formal financial services. The combination of microfinance services with financial literacy programmes has particularly strengthened members' understanding of savings, online payments, and borrowing practices.

The findings show that factors like SHG membership, duration of association, and access to financial literacy programmes play a major role in improving financial behaviour. When microfinance services are combined with financial education and product diversity, the impact on financial inclusion becomes even stronger. This underscores that microfinance alone is not sufficient – service quality, outreach, and literacy together drive meaningful financial inclusion.

H_0: Microfinance has no significant impact on financial inclusion in Kolar district.

Results of F test of variances

F-Test Two-Sample for Variances		
Mean	1.849359	3.855769
Variance	0.12836	1.146333
Observations	312	312
df	311	311
F	0.111974	
P(F<=f) one-tail	0	
F Critical one-tail	0.829587	

The F-Test was conducted to examine whether the two groups SHG members and non-members differ in the consistency of their responses. We observed a definite and substantial distinction between the two groups. The non-member group had a mean value of 1.85 and very small variance 0.128, while the other group SHG members had a mean of 3.86 and relatively larger variance of 1.146. The value of our F statistic is less than 0.112, whereas the critical value of F statistic was 0.830 and its p-value was almost nil (less than 0.05). These strong evidences suggest that there is a definite difference between the two groups in terms of homogeneity of responses, and therefore, we can safely reject the null hypothesis.

Beneficiaries the extent of benefits they have got from the financial services as microfinance

H_0: Microfinance beneficiaries of Kolar district are not always benefiting from financial services.

Box's Test of Equality of Covariance Matrices[a]

Box's M	19.303
F	1.868
df1	10
df2	29423.947
Sig.	.045

The MANOVA test was applied to assess whether SHG participation impacts several aspects of financial status concurrently. The test revealed that the box's test was 0.045, which implied a moderate violation of the assumption of equality of covariance matrices. Nevertheless, this violation did not undermine the validity of the findings, considering the sample size was fairly high (312 participants).

Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df
Intercept	Pillai's Trace	.960	1838.195[b]	4.000	307.000
	Wilks' Lambda	.040	1838.195[b]	4.000	307.000
	Hotelling's Trace	23.950	1838.195[b]	4.000	307.000
	Roy's Largest Root	23.950	1838.195[b]	4.000	307.000
@6. AreyouamemberofmicrofinanceorselfhelpgroupSHG	Pillai's Trace	.038	3.001[b]	4.000	307.000
	Wilks' Lambda	.962	3.001[b]	4.000	307.000
	Hotelling's Trace	.039	3.001[b]	4.000	307.000
	Roy's Largest Root	.039	3.001[b]	4.000	307.000

The multivariate results using Pillai's Trace, Wilks' Lambda, Hotelling's Trace, and Roy's Largest Root have the same F-value of 3.001, demonstrating a statistically significant overall effect of being an SHG member on financial performance. In addition, the result from Wilks' Lambda of 0.962 indicates that being an SHG member accounts for a variance of 3.8% of financial performance. Thus, the null hypothesis is rejected based on the results obtained indicating that there is moderate benefit and reach of microfinance products among the beneficiaries of Kolar district.

Factors that impact the choice of financial servicesH_0: Microfinance usage is not significantly impacted by the determining factors of choosing any financial services

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.760
Bartlett's Test of Sphericity	Approx. Chi-Square	1114.756
	df	231
	Sig.	.000

The value of KMO, 0.760, suggests that the sample is sufficient enough to perform factor analysis and that the data is adequate. The test by Bartlett is highly significant (p-value = 0.000), implying that there is correlation among the variables, meaning that they are not independent of each other. Hence, it is possible to extract factors out of the data set.

The analysis shows that there are 7 components with eigenvalues greater than 1; thus, they are considered important. The 7 factors together account for 54.07% of the total variability, which is reasonable and provides considerable information about the dataset. After applying rotation, the variance is evenly distributed, improving the interpretation. Although the first factor accounts for the maximum variability, the model still presents a reasonable reflection of the data since it captures seven different dimensions of influence: Access to Formal Banking, Credit Availability, Digitization, Locality, Behaviour Shifts (Savings), Product Variety, and Financial Education. In summary, although the basic access to banking and credit facilities are the key factors that drive changes, digitization, locality, and financial education are significant aspects of the same process.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.574	16.246	16.246	3.574	16.246	16.246
2	2.385	10.840	27.085	2.385	10.840	27.085
3	1.506	6.844	33.929	1.506	6.844	33.929
4	1.185	5.385	39.314	1.185	5.385	39.314
5	1.114	5.062	44.376	1.114	5.062	44.376
6	1.106	5.026	49.402	1.106	5.026	49.402
7	1.027	4.669	54.071	1.027	4.669	54.071
8	.970	4.410	58.482			
9	.935	4.250	62.731			
10	.887	4.033	66.765			
11	.859	3.902	70.667			
12	.795	3.615	74.281			
13	.734	3.336	77.618			
14	.719	3.266	80.884			
15	.695	3.161	84.045			
16	.667	3.030	87.075			
17	.598	2.719	89.794			
18	.558	2.537	92.332			
19	.509	2.314	94.645			
20	.467	2.123	96.768			
21	.445	2.022	98.790			
22	.266	1.210	100.000			

Component Transformation Matrix

Component	1	2	3	4	5	6	7
1	.839	-.170	.161	-.395	-.160	-.125	-.209
2	.376	.534	-.150	-.011	.478	.456	.338
3	-.084	-.178	.889	.067	.271	.306	-.025
4	.286	-.446	-.113	.588	-.334	.345	.361
5	.130	.615	.367	.368	-.413	-.376	.149
6	.095	-.277	.037	.061	.473	-.632	.535
7	.200	.005	-.114	.595	.409	-.152	-.634

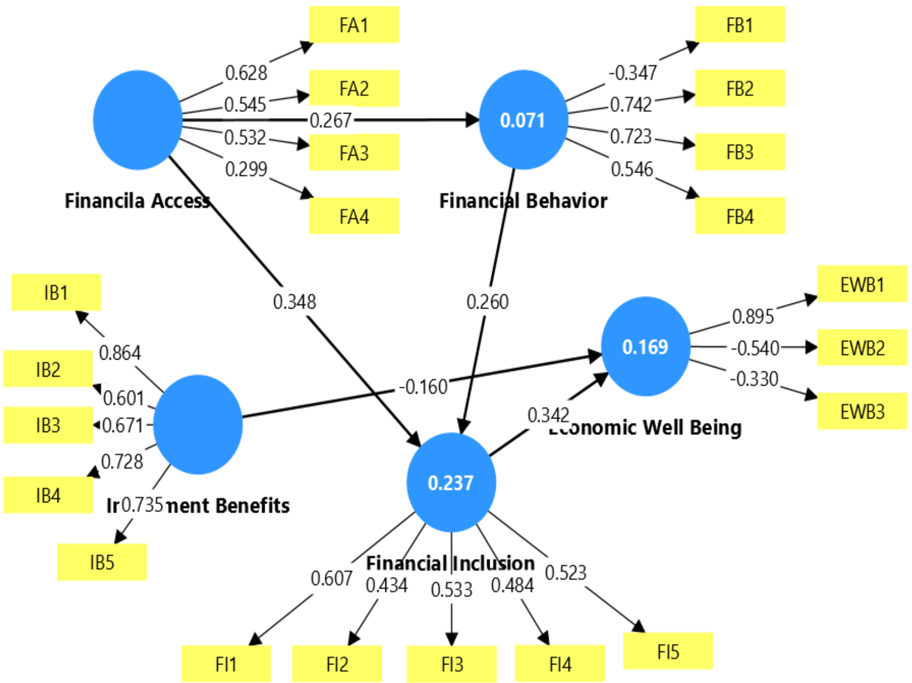
Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

Factor transformation is achieved by applying the factor transformation matrix to achieve rotational optimization. Factor transformation matrix shows the rotation needed for factors to get an optimum structure. The matrix also shows that the factors do not correlate within themselves; this implies that the factors are independent of each other. Avoiding correlation helps to achieve unique representation for each factor.

The factors obtained from the exploratory factor analysis was used to further suggest a model that that establishes the significant relation between the identified factors determining the choice of financial products.

PLS- SEM Model -Path coefficients

Mean, STDEV, T values, p values	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
Financial Behavior -> Financial Inclusion	0.260	0.254	0.086	3.035	0.002
Financial Inclusion -> Economic Well Being	0.342	0.285	0.197	1.733	0.083
Financila Access -> Financial Behavior	0.267	0.280	0.080	3.324	0.001
Financila Access -> Financial Inclusion	0.348	0.358	0.103	3.395	0.001



The PLS-SEM Model results show that the main factors influencing financial service choice have a real impact on microfinance usage. Financial access significantly improves financial behavior ($\beta = 0.267$, $p = 0.001$) and financial inclusion ($\beta = 0.348$, $p = 0.001$), while financial behavior also significantly increases financial inclusion ($\beta = 0.260$, $p = 0.002$). Since all these p-values are less than 0.05, the relationships are statistically significant and not due to chance.

Because of this, the null hypothesis (that microfinance usage is not significantly impacted) is rejected, and the alternative hypothesis is accepted. In simple terms, this means that people's use of microfinance services is clearly influenced by factors like access to financial services and their financial habits.

However, even though these factors increase financial inclusion, their effect on economic well-being is weak and not significant ($\beta = 0.342$, $p = 0.083$; $\beta = -0.160$, $p = 0.332$). This shows that while more people are using financial services, it does not necessarily lead to a clear improvement in their overall economic condition.

Findings of the Study

From the response and analysis, it was discovered that there are several key observations on the role played by microfinance in financial inclusion in the district of Kolar.

First, it was discovered that most of the respondents were connected with microfinance institutes or Self-Help Groups (SHGs). This proves that the services provided by microfinance are well-known among the residents of the district and that they can access them. Most of the respondents had incomes ranging between ₹10,001 and ₹20,000 per month. This proves that the benefits of microfinance mostly reach financially weaker people.

Also, it was discovered that education became the main goal when applying for microfinance loans. Most of the respondents took loans in order to pay for their education, followed by agriculture and other household purposes. This proves that people are not using microfinance for commercial activities only.

Moreover, the results indicated that microfinance provides more services other than loans to its clients. The majority of the participants utilized financial skills gained from microfinance literacy programs and enjoyed insurance facilities and savings opportunities offered by the financial organizations.

Statistical significance showed that members of SHG experienced different financial situations compared to non-members. According to the results, membership in SHG had a positive impact on their financial lives as members saved better and accessed credit more efficiently.

Factor that influences the choice of financial products is identified with seven significant dimensions contributing to financial inclusion. These include formal banking access, credit availability, digitization, proximity to services, savings performance, product diversity, and financial literacy. The combination of all of the factors explained the variability in financial inclusion among participants significantly.

In addition, the research demonstrated that people involved in microfinance activities managed their finances better compared to those not participating in the programs. Participants reported better management of income and expenses in comparison with non-members. Additionally, many respondents had been associated with microfinance programs for several years, indicating that long-term participation strengthens financial knowledge and confidence.

Overall, the findings clearly indicate that microfinance has played a meaningful role in improving financial access and financial behaviour among the people of Kolar district.

Conclusion

This study shows that microfinance plays an important role in the financial inclusion of communities in Kolar district. The findings indicate that most respondents – especially from lower-income households – regularly engage with microfinance services, which means microfinance has become an integral part of financial life in the district. Microfinance, through SHGs and MFIs, has become the preferred route to formal financial services because it is accessible, inclusive, and multi-dimensional. Respondents are generally satisfied with their microfinance experience, and they feel that it has made managing finances, accessing credit, and building savings easier and more structured.

At the same time, the study highlights that microfinance alone cannot address all aspects of financial inclusion. While SHG membership significantly improves financial outcomes, the factor analysis results show that digitization, financial literacy, locality, and product diversity are equally important dimensions. This means that even though microfinance recipients have a positive experience, other factors such as digital financial service adoption, geographic accessibility, and the breadth of financial products available play a critical role in deepening inclusion.

Therefore, it can be concluded that microfinance acts as a foundational enabler that improves access to formal finance and builds financial capability, but the best results are achieved when it is combined with financial literacy, digital inclusion, and comprehensive product offerings. Microfinance institutions and policymakers in Kolar district should focus on improving both financial service delivery and financial education to achieve higher levels of financial inclusion, economic empowerment, and long-term household welfare.

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