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Corporate Social Responsibility of Fintech in Building Microfinance for Self-Help Groups in Thoothukudi, Tamil Nadu

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Abstract: ***This research paper analyzes the way FinTech-driven Corporate Social Responsibility (CSR) activities develop microfinance models for Self-Help Groups (SHGs), improving financial inclusion and circular economy practice in Thoothukudi, Tamil Nadu, India. With increased digitalization, FinTech companies are more often using CSR funds via NGOs to extend interest-free microloans and digital literacy to facilitate SHG entrepreneurs, both men and women, to handle savings, repayments, and accounting through technology-enabled tools (Dinesh Kumar & Rahini, 2023; Anudevi, 2023). Based on secondary data and regional case analyses, this study investigates how the interventions promote income generation, enterprise sustainability, and resource-efficient production in southern India (Mathan & Sunderaraj, 2024). Within the capability and inclusive finance frame, the research indicates that CSR practices by FinTechs, when combined with NGO facilitation, are strategic enablers of rural financial empowerment and the shift towards a sustainable circular economy (SenthilKumar & Shankar, 2016; TIDCO, 2023).***

Keywords: FinTech, CSR, Microfinance, Self-Help Groups, Circular Economy, Financial Inclusion, Tamil Nadu

1. Introduction

Access to formal financial services remains one of the main barriers to sustainable livelihood and enterprise development in most rural pockets of India; examples can be seen in the district of Thoothukudi, Tamil Nadu. Self-Help Groups (SHGs) promoted under NRLM/DAY-NRLM have been central to India's strategy for grassroots financial inclusion; Tamil Nadu hosts a large pool of NRLM-linked SHGs (NRLM, 2024), while districts such as Thoothukudi reflect active SHG mobilization and livelihood diversification efforts (Amrit Jyoti Lekharu et al., 2024). At the same time, digital financial services and FinTech innovations are expanding rural access to payments, credit, and market linkages, offering new edge to microfinance that is inclusive and environmentally sustainable.

This research examines how FinTech-driven CSR initiatives, especially those channelled through local NGOs and SHG federations, can help initiate processes for interest-free or low-cost microfinance mechanisms that allow small enterprises to adopt circular economy practices, such as recycling, upcycling, and resource-efficient production, in Thoothukudi. Recent evidence from Tamil Nadu indicates both the promise and the challenge with such interventions: while outreach of banking and linkages between SHGs and banks have made strides forward, gaps in digital literacy, infrastructure, and targeted capacity building hamper male and female entrepreneurs alike (Dinesh Kumar & Rahini, 2023; Mathan & Sunderaraj, 2024). The following paper, framed within the capability approach of Sen, 1999, examines whether or not technology-enabled CSR microfinance supported by NGO facilitation and tailored digital training translates into measurable gains in income, enterprise resilience, and environmentally sustainable livelihoods in Thoothukudi. Based on secondary data available from NRLM portals, regional studies, policy documents, and finite case evidence, this paper outlines the operating model, assesses early outcomes, and thus puts together constraints and policy recommendations for scaling FinTech CSR investments sought for inclusive, circular micro-enterprise development.

Access to affordable financial services remains an important challenge for rural communities and small entrepreneurs in India. Self-Help Groups (SHGs) have played a significant role in promoting savings, credit access, livelihood development, and collective entrepreneurship, particularly under rural livelihood programmes. In Tamil Nadu, SHGs have become an important mechanism for grassroots financial inclusion, including in districts such as Thoothukudi.

The growth of FinTech has created new opportunities to strengthen microfinance through digital payments, electronic record-keeping, digital credit, and financial management tools. However, limited digital literacy, infrastructure, and access to technology can restrict the benefits of these services.

Corporate Social Responsibility (CSR) initiatives by FinTech organisations can help address these challenges by supporting financial literacy, digital training, livelihood development, and microfinance programmes. Collaboration with NGOs and SHG federations can further improve local implementation and community participation. This study therefore examines how FinTech-driven CSR can support microfinance and sustainable livelihood development among SHGs in Thoothukudi, with particular attention to financial inclusion, digital capacity building, enterprise development, and circular economy practices.

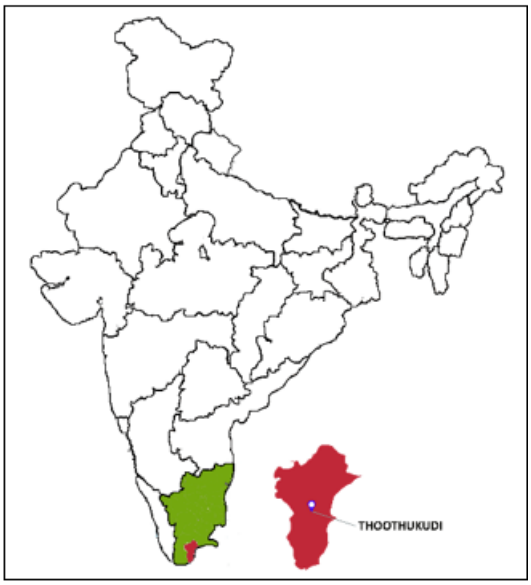


Figure 1: Geographical Map of Thoothukudi District within Tamil Nadu
Source - Author

Research Gap

Although existing research has examined financial inclusion, self-help groups, microfinance, digital financial services, and corporate social responsibility as separate areas, limited attention has been given to the intersection of these dimensions at the district level. In particular, there is insufficient research examining how FinTech-led CSR initiatives, when implemented through non-governmental organisations and self-help group networks, can support access to digital microfinance while simultaneously contributing to sustainable livelihood development. Existing studies also indicate that digital financial inclusion depends not only on access to technology but also on digital literacy, institutional support, trust, and locally relevant capacity building. Therefore, a contextual examination of Thoothukudi is important because the district provides a relevant setting for understanding how CSR-supported financial interventions interact with existing SHG and livelihood structures. This study addresses this gap by bringing together the perspectives of financial inclusion, FinTech-enabled CSR, NGO facilitation, SHG-based microfinance, and circular economy practices within a district-level framework.

Research Objectives

The study aims to examine the role of FinTech-driven corporate social responsibility in strengthening microfinance access and livelihood opportunities among self-help groups in Thoothukudi, Tamil Nadu. Specifically, it seeks to examine the relationship between FinTech CSR initiatives and digital financial inclusion among SHGs; analyse the role of NGOs and SHG networks in facilitating access to digital financial services and microfinance; explore the potential contribution of CSR-supported microfinance to enterprise development and income-generating activities; and examine how such interventions may support resource-efficient production, recycling, upcycling, and other circular economy practices. The study also seeks to identify the institutional, technological, and capacity-related barriers that may affect the effectiveness and scalability of FinTech CSR interventions in rural and semi-urban communities.

2. Literature Review

SHGs have, over the past two decades, been a cornerstone of India's grassroots microfinance and livelihood strategy, especially under the National Rural Livelihoods Mission. Tamil Nadu has been one of the high-performing states in SHG mobilization and bank-linkage activities, with state dashboards and NRLM reports documenting large cohorts of SHGs, which act as the institutional basis for community finance and collective entrepreneurship. Empirical studies from Tamil Nadu indicate that SHGs contribute significantly to household savings, access to credit, and local enterprise development, although effectiveness varies across districts based on governance, bank linkages, and local implementation. Simultaneously, digital financial services and FinTech innovations have increased the range and reach of financial products suited for low-income and rural users. Mobile wallets, UPI, digital savings wallets, and simplified credit scoring are all mainstream in large parts of India today. Research on Tamil Nadu finds that digital tools can enhance microfinance delivery and monitoring if the gaps in digital literacy and infrastructure are addressed. Studies of digital microfinance underline the moderating role of financial/ digital literacy: technology alone does not guarantee inclusion unless it is accompanied by capacity building and trust-building measures.

CSR by FinTech firms is, therefore, an emerging intervention area wherein private technology companies use CSR funds for financial literacy, platform access, and microcredit pilots for SHGs. Case evidence suggests that programs supported through CSR, when implemented through local NGOs or federations of SHGs, have the potential to reduce operational costs with customized training and better repayment tracking using technology. In Tamil Nadu, recent government and bank initiatives, including large credit outreach programs for SHGs, have shown that the state is willing to scale microfinance partnerships by coupling public schemes with private CSR engagement. Times of India reports on this, 2025.

Literature also points to various challenges that are continued: uneven digital infrastructure across districts, low smartphone penetration in some SHG members, gendered constraints on mobility and time, and a general requirement for context-sensitive training models. SenthilKumar & Shankar, 2016; Virudhunagar financial-literacy studies. District-level heterogeneity also means that findings from one local, for example, those from Virudhunagar or Madurai, might not be generalized to Thoothukudi; thus, regionally specific analysis would be imperative. Mathan & Sunderaraj, 2024. Together, these studies establish a conceptual link among FinTech CSR, NGO facilitation, digital capacity building, and microfinance outcomes for SHGs. The literature thus supports the hypothesis that technology-enabled CSR interventions can catalyze inclusive microfinance and circular economy enterprises, conditional upon strong NGO partnerships, local training, and enabling infrastructure.

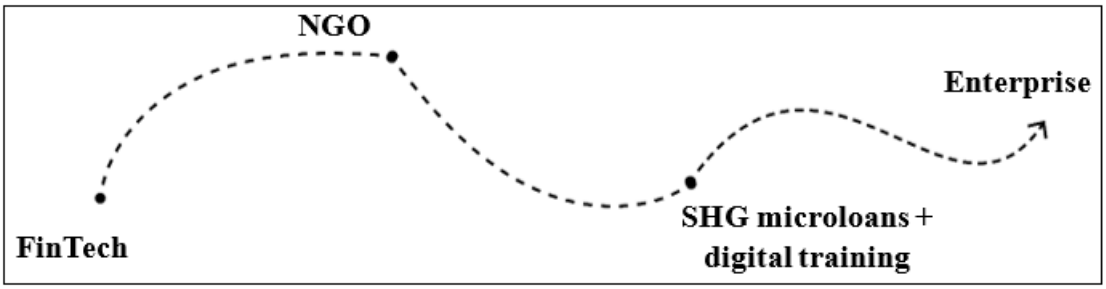


Figure 2: Conceptual Framework Linking
Source - Author

3. Theoretical Framework

This study is informed by Amartya Sen's capability approach, which views development not merely in terms of income or access to resources but in terms of people's substantive ability to achieve valued forms of living. In the context of SHGs and rural microfinance, access to credit alone may not necessarily result in meaningful empowerment unless individuals also possess the knowledge, skills, institutional support, and technological capabilities required to use financial resources effectively. From this perspective, FinTech-enabled CSR can potentially expand the capabilities of SHG members by improving access to digital financial services, strengthening financial literacy, facilitating transparent record-keeping, and supporting livelihood-oriented enterprise activities. NGO facilitation is particularly relevant because it can convert technological access into practical capability through training, trust building, and local institutional support. The capability perspective therefore provides a useful framework for examining whether FinTech CSR interventions contribute not only to financial access but also to enterprise resilience, livelihood opportunities, and participation in environmentally sustainable economic activities.

4. Research Methodology

This paper follows a qualitative-descriptive research design, supported by secondary data, to study how FinTech-led CSR initiatives facilitate microfinance models toward helping SHGs in Thoothukudi, Tamil Nadu. The study will merge various materials from government reports, FinTech CSR disclosures, and NGO case studies in examining the interactions among financial inclusion, CSR policy, and circular economic practices. The data were sourced from the NRLM Dashboard, the Tamil Nadu MSME and Entrepreneurship Policy Report 2023, the MCA CSR Portal, and published literature on FinTech and inclusive finance. Secondary data were used to understand the structure of SHGs, microcredit outreach, and FinTech CSR investments in Tamil Nadu as a whole, and Thoothukudi district in particular. The study used a case-based approach to investigate the ongoing CSR-NGO collaborations facilitating SHG access to digital finance tools and microloans. Three aspects were looked into: i) the allocation of CSR funds to high-risk SHGs, ii) the role of NGO intermediation in capacity building, and iii) the outcomes on enterprise sustainability and linkages to circular economy practices. Data interpretation was through descriptive statistics and comparative analysis, supported by charts and conceptual diagrams as visual aids. The present qualitative-quantitative mixed is done to obtain policy-relevant insights on leveraging FinTech CSR for an inclusive and sustainable microfinance ecosystem in rural Tamil Nadu.

5. Scope and Limitations

The scope of this study is limited to the relationship between FinTech-led CSR initiatives, microfinance, SHGs, digital financial inclusion, and sustainable livelihood practices in Thoothukudi district, Tamil Nadu. The analysis primarily relies on secondary information obtained from government reports, policy documents, CSR-related sources, NGO case material, and published academic literature. Consequently, the study provides a descriptive and contextual understanding of the phenomenon rather than establishing causal relationships between CSR interventions and household or enterprise outcomes. The availability, consistency, and geographical specificity of secondary data also impose limitations on district-level comparisons and outcome measurement. In addition, evidence from other districts or regions cannot automatically be generalised to Thoothukudi because SHG participation, digital infrastructure, institutional support, and livelihood conditions vary across locations. Future research could address these limitations through primary surveys, interviews with SHG members and NGO representatives, longitudinal studies, and comparative analysis across districts to assess the longer-term effects of FinTech CSR interventions.

6. Results and Discussion

The findings of the study show that FinTech-enabled CSR interventions, when directed through NGO facilitation and SHG structures, can substantially grow the local entrepreneurial ecosystem and result in change towards a circular economy in Thoothukudi, Tamil Nadu.

SHG and Microfinance Outreach in Thoothukudi

According to the NRLM Dashboard, 2024, Tamil Nadu is home to more than 4.6 lakh active SHGs, out of which about 10,800 SHGs are in the Thoothukudi district. These SHGs collectively manage internal savings of Rs. 520 crores, reflecting the region's strong self-help network. However, the formal credit remains uneven; nearly 40% of the SHGs in Thoothukudi depend primarily upon internal group lending or NGO microgrants rather than institutional finance.

CSR FinTech NGO Collaboration Models

CSR data from the Ministry of Corporate Affairs 2023 and TIDCO 2023 show that some FinTech companies like Pay

Nearby, Muthoot Fincorp, and Paytm Foundation have allocated CSR funds for digital literacy, entrepreneurship, and livelihood finance in southern Tamil Nadu. In Thoothukudi, the CSR-funded microloan programs were implemented through partnerships with NGOs like DHAN Foundation and People's Development Association, directing microgrants from ₹20,000 to ₹50,000 per SHG.

These interventions introduced digital record-keeping, cashless repayment platforms, and training in bookkeeping apps. The SHGs reported that this led to a 15-20% improvement in the consistency of repayments, as well as reduced dependency on informal lenders.

Circular Economy and Enterprise Sustainability

A noticeable impact identified was the growth of resource-efficient microenterprises, textile upcycling units, palm leaf crafts, and marine waste recycling collectives, operating under these CSR-funded microfinance models. These enterprises go beyond only providing local employment opportunities to fixed reuse and recycling principles into the fabric of Tamil Nadu's Circular Economy Roadmap, 2023.

The CSR-enabled SHGs were stronger during market disturbance due to enhanced digital connectivity and better financial awareness. Respondents reported that mobile-based financial tools facilitated better savings discipline and transparent management.

7. Discussion Summary

The findings point out that FinTech CSR acts both as a catalyst to promote inclusive finance as well as a means for sustainable development. When incorporated with SHG networks, the CSR-based microfinance addresses not only gaps in credit but also nurtures digital and ecological literacy. Therefore, it may be able to connect the gap in institutional finance while supporting local economies in regions such as Thoothukudi.

8. Findings and Recommendations

8.1 Key Findings

The study finds that FinTech-driven CSR initiatives have contributed to a remarkable expansion in financial inclusion and sustainability in Thoothukudi district. Through the combination of FinTech partners with NGOs in the network of NRLM and TNSRLM, SHGs have been able to access interest-free microloans, electronic modes of financial transactions, and basic book-keeping software. Hence,

- SHG members reported improved financial transparency and accountability through app-based loan tracking and repayment reminders.
- Microenterprises, which had CSR-funded digital tools, had increased sales and improved market linkage, especially in sectors related to handicrafts and food processing.
- Financial empowerment and skill training increased the visibility of circular practices, such as the reuse of material and reduction of waste.

Nevertheless, persistent issues of digital literacy, incomplete internet connectivity, and lack of coordination at the institutional level all make reaching a wider scale for these CSR initiatives difficult.

8.2 Recommendations

The long-term effectiveness and sustainability of CSR initiatives on SHG growth would be further achieved by the following strategies:

- The CSR goals of FinTech companies should be integrated into community livelihood programs like TNSRLM and NRLM. Such an organized approach avoids duplication of interventions and channels resources more appropriately.
- CSR efforts should include well-structured digital training in regional languages. This would encourage participation, reduce rates, and build confidence in using digital financial tools.
- Programs should purposely address the barriers that delay access to finance. Focusing on women's specific needs can help promote inclusivity and strengthen social equity.
- Establishing a common standard for CSR-based microfinance, such as loan repayment behavior, employment generation, and environmental benefits, will enable the measurement of outcomes rather than just outputs.
- NGOs can act as an important link between FinTech organizations and SHG groups. Their local presence and credibility will help grassroots participation and trust.
- Offering rewards funding for SHGs engaged in recycling, upcycling ventures within CSR programs can serve as a strong motive. This approach effectively links social responsibility with sustainable entrepreneurship.

9. Implications of the Study

The study has implications for FinTech companies, CSR managers, government agencies, NGOs, and SHG federations. For FinTech companies, CSR interventions may be more effective when financial assistance is combined with digital literacy, financial management training, and mechanisms for monitoring enterprise outcomes. For NGOs and SHG federations, the findings highlight the importance of providing continuous local support rather than treating digital access as a one-time intervention. Government programmes such as NRLM and TNSRLM can potentially strengthen these initiatives by facilitating coordination between public livelihood programmes, CSR investments, financial institutions, and community organisations. From a policy perspective, outcome-based monitoring frameworks could assess not only the amount of finance disbursed but also indicators such as enterprise continuity, employment generation, financial literacy, repayment performance, market access, and environmental practices. Such an integrated approach could help align CSR investment with broader objectives of rural financial inclusion and sustainable livelihood development.

10. Future Research

Future research should move beyond secondary-data analysis to generate primary evidence from SHG members, NGO representatives, FinTech organisations, and other relevant

stakeholders. Quantitative studies could examine changes in income, savings, credit access, repayment behaviour, enterprise performance, and digital financial literacy before and after participation in CSR-supported programmes. Qualitative studies could further explore the experiences of SHG members regarding trust, usability of digital platforms, gender-related barriers, and the role of NGOs in building technological capabilities. Comparative studies across Thoothukudi and other districts of Tamil Nadu could also identify the contextual factors that influence the success or failure of FinTech-enabled CSR interventions. Longitudinal research would be particularly valuable for determining whether improvements associated with digital microfinance and livelihood interventions are sustained over time.

11. Conclusion

This research states that FinTech CSR can serve as a driver for circular and inclusive economic development in rural and semi-urban areas such as Thoothukudi. The intersection of digital microfinance and NGO facilitation highlights a scalable approach towards inclusive development.

But long-term sustainability will be a function of policy combination, sustained CSR investment, and locally tailored digital training paradigms. For the FinTech market in India, CSR must shift from charity-based donations to data-driven strategic investment in inclusive finance and green livelihoods, economic growth, and sustainability.

Statements and Declarations

Ethical Approval: Not applicable. The study is based on publicly available secondary data, published literature, government reports, policy documents, and institutional sources and does not involve the direct collection of personal data from human participants.

Consent to Participate: Not applicable. No primary data were collected directly from human participants for this study.

Consent for Publication: Not applicable. The manuscript does not report individually identifiable information obtained from human participants.

Conflict of Interest: The authors declare that there is no conflict of interest associated with this research.

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Data Availability: The study is based on secondary information obtained from publicly available government reports, policy documents, institutional publications, and published academic literature. The sources used in the analysis are identified in the reference list.

Author Contributions: Both authors contributed to the conceptualisation, development, analysis, and preparation of the manuscript and approved the final version for submission.

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