



Digital Tools are Boosting Women’s Economic Power through SHGS in Jharkhand

Tipu Kumar

Assistant Professor, University Department of Commerce, Sido Kanhu Murmu University, Dumka,
Jharkhand, Email Id- tipukumar829114@gmail.com

DOI : <https://doi.org/10.5281/zenodo.18268107>

ARTICLE DETAILS

Research Paper

Accepted: 31-12-2025

Published: 10-01-2026

Keywords:

*Digital Empowerment,
Rural Innovation,
Economic Inclusion,
Grassroots Leadership,
Women-led Development,
Self-Help Groups.*

ABSTRACT

The adoption of digital technologies has played a pivotal role in advancing women’s economic empowerment, especially in rural areas where social and economic challenges remain prevalent. This research investigates how digital solutions contribute to boosting the economic engagement and decision-making power of women involved in Self-Help Groups (SHGs) in Jharkhand, India. SHGs have proven to be a game-changing mechanism for promoting financial inclusion, enhancing skills, and encouraging entrepreneurship among women. Despite the progress, several obstacles hinder full-scale adoption, including poor digital literacy, lack of proper infrastructure, and deep-rooted cultural norms. The research emphasizes the importance of focused actions, like skill-building sessions and supportive policy measures, to bridge the technology gap and fully harness digital opportunities for women’s financial empowerment. By drawing on on-the-ground evidence and specific examples, the study showcases the game-changing role of digitalization in supporting women-led initiatives.

INTRODUCTION

Women’s economic empowerment is a key pillar of inclusive growth, and in rural India, Self-Help Groups (SHGs) have become instrumental in driving this progress. Jharkhand—one of the country’s most economically disadvantaged states—offers a compelling context to explore how digital technologies are



transforming women's access to economic opportunities through SHGs. Originally established to promote financial inclusion, entrepreneurship, and skill-building, these collectives have helped women challenge deep-rooted socio-economic barriers.

The integration of digital tools such as mobile banking, e-commerce platforms, and digital literacy initiatives has significantly expanded the reach and effectiveness of SHGs. These technologies simplify financial transactions, improve access to broader markets, and support capacity-building efforts, empowering women to scale up income-generating activities and gain financial independence. For example, mobile wallets and digital payment systems enable women to manage money securely and autonomously, while online platforms help them showcase and sell their products beyond local boundaries. In addition, digital training enhances entrepreneurial know-how and fosters collaboration among SHG members, facilitating shared growth and advocacy.

Nonetheless, significant obstacles remain. Limited digital literacy, poor infrastructure, cultural norms, and concerns over cybersecurity hinder widespread adoption. Overcoming these challenges will require coordinated efforts from governments, NGOs, and private entities to strengthen digital infrastructure, make technology affordable, and roll out targeted digital education programs.

By examining the nexus of SHGs and digital innovation in Jharkhand, this study reveals a powerful trajectory for advancing women's economic agency and promoting sustainable rural development.

LITERATURE REVIEW

Mayoux (2001) highlights how SHGs and microfinance schemes serve as tools for both social and economic empowerment. The study argues that when financial inclusion is paired with skill-building, it can challenge entrenched patriarchal norms. It also underscores the role of collective agency in sustaining economic gains—a concept that has found renewed significance in the digital era.

Sarumathi & Mohan (2011) offer an empirical investigation into the impact of microfinance on enhancing women's autonomy, specifically in Tamil Nadu. The research supports the view that improved financial literacy and stronger market linkages empower SHG members—insights that are highly applicable to Jharkhand, especially with the integration of digital technologies.

Devi & Reddy (2017) focus on the empowering potential of digital tools in narrowing gender disparities, particularly within rural India. Their study assesses government-led digital literacy drives and technology



accessibility programs, affirming the importance of institutional support in fostering digital inclusion among women and reinforcing the effectiveness of SHGs.

Das & Mili (2020) explore how technology-driven initiatives within SHGs contribute to financial inclusion and entrepreneurial advancement. Their research acknowledges persistent obstacles, such as low digital literacy and inadequate infrastructure, but emphasizes that targeted policy interventions can substantially enhance the benefits of digital adoption for rural women.

WOMEN, SHGS, AND ECONOMIC EMPOWERMENT IN JHARKHAND

Jharkhand, one of India's most populous yet economically challenged states, has witnessed robust participation of women in Self-Help Groups (SHGs), particularly through initiatives like the National Rural Livelihoods Mission (NRLM). These SHGs function as grassroots collectives that foster financial inclusion, skill development, and community support. Women contribute regular savings, access microloans, and engage in joint economic ventures—laying the foundation for social and economic empowerment.

Despite these advances, longstanding barriers—including restricted mobility, low levels of literacy, and deeply rooted socio-cultural norms—continue to limit the full potential of SHG initiatives. The growing penetration of digital technologies, however, presents new possibilities for transformation. Mobile phones, internet access, and online platforms can simplify financial processes, strengthen market linkages, and support capacity-building efforts. In Jharkhand, where rural infrastructure is gradually improving, the integration of digital tools into SHG operations is becoming increasingly practical and promising.

THE POTENTIAL OF DIGITAL TECHNOLOGIES IN EMPOWERING WOMEN

- 1) **Advancing Financial Inclusion:** The use of digital banking services and mobile wallets empowers women to manage their finances autonomously. In rural Jharkhand —where formal banking infrastructure is limited—these technologies bridge critical access gaps and significantly reduce transaction costs.
- 2) **Broadening Market Opportunities:** E-commerce platforms and online marketplaces enable SHG members to market and sell their goods beyond local boundaries. Women involved in traditional crafts, agriculture, or food processing can now tap into broader consumer networks, increasing their income potential.



- 3) **Enabling Capacity Development:** Digital learning platforms and mobile applications facilitate remote training in key areas such as financial literacy, entrepreneurship, and technical skills. These tools help overcome geographical and logistical challenges, equipping women with the knowledge needed to sustain and grow their enterprises.
- 4) **Fostering Networking and Collective Voice:** Digital platforms create spaces for women to connect, exchange experiences, and engage in collective advocacy. Through participation in online forums and networks, SHG members can amplify their voices, share best practices, and build partnerships with a variety of stakeholders.

CHALLENGES IN ADOPTING DIGITAL TECHNOLOGIES:

Despite the transformative potential of digital empowerment, several persistent challenges limit its impact on SHG women in Jharkhand:

Low Levels of Digital Literacy: A significant number of women lack the foundational skills needed to effectively navigate digital tools. Existing training programs often fall short in scope and reach, leaving many without the confidence or competence to engage meaningfully with technology.

Infrastructural Limitations: Unreliable internet connectivity, inconsistent electricity supply, and the high cost of smartphones or digital devices continue to impede digital access—particularly in remote rural areas.

Socio-Cultural Constraints: Deeply entrenched gender norms and restricted mobility still limit women's ability to independently access digital resources or attend training programs. Resistance from family or community members further hampers participation.

Trust and Cybersecurity Concerns: Fear of online fraud, lack of awareness about data protection, and general mistrust of digital financial systems discourage adoption among women who are already risk-averse due to economic vulnerability.

THE ROLE OF POLICY AND STAKEHOLDERS

To fully leverage the potential of digital technologies in empowering women through Self-Help Groups (SHGs), a collaborative approach involving multiple stakeholders is essential. Government policy should prioritize the enhancement of rural digital infrastructure, offer subsidies for digital devices, and roll out digital literacy programs specifically tailored for women. NGOs and private-sector entities can contribute by designing intuitive digital tools and ensuring they are accessible and relevant to SHG members.



Meanwhile, SHG federations themselves can play a transformative role through peer learning and mentoring, helping members adapt to and adopt digital innovations.

OBJECTIVES OF THE STUDY

- 1) To investigate how digital technologies contribute to financial inclusion among women participating in SHGs in Jharkhand.
- 2) To assess the influence of digital tools on entrepreneurship and income generation within SHG ecosystems.
- 3) To evaluate digital literacy levels and their impact on the adoption and effective use of digital technologies by SHG members.
- 4) To identify major challenges and barriers faced by women in adopting and integrating digital solutions within their SHG activities.
- 5) To examine how digital platforms help expand market access for products and services offered by SHG members.
- 6) To develop actionable recommendations for integrating digital technologies to maximize women's economic empowerment through SHGs.

RESEARCH METHODOLOGY

This study adopts a mixed-methods research design to examine the impact of digital technologies on women's economic empowerment through Self-Help Groups (SHGs) in Jharkhand. Primary data is obtained through structured surveys and semi-structured interviews conducted with SHG members, focusing on their access to digital tools, involvement in economic activities, and the challenges they encounter.

Secondary data is drawn from government publications, academic literature, and documented case studies, offering contextual depth and supporting the interpretation of field data. A purposive sampling approach is employed to select SHGs from a cross-section of Jharkhand's districts, ensuring the inclusion of rural, semi-urban, and socioeconomically marginalized communities.

Quantitative data is analyzed using statistical methods to uncover patterns and correlations, while qualitative responses are subjected to thematic analysis to extract insights into individual and collective experiences. This integrative approach provides a comprehensive understanding of how digital technologies shape financial inclusion, entrepreneurship, and market access for women, while also illuminating persistent barriers and potential strategies for inclusive development.

**DATA ANALYSIS**

A. The information was gathered from 200 SHG members in four districts (Hazaribag, Ranchi, Bokaro, Dhanbad) of Jharkhand using surveys and interviews. This information was studied to understand how digital technology is influencing their lives. The key results are shown in the table below:

Table 1: Effects of Digital Technology on Self-Help Group Members in Jharkhand

Assessment criteria	No. of respondent	Percentage
Ownership and usage of mobile devices	190	95%
Adoption of smartphone-based banking services	110	55%
Participation in digital money transfers	90	45%
Enrolment in tech skill-building courses	110	55%
Selling products through online marketplaces	60	30%
Growth in earnings via digital solutions	90	45%
Limited tech skills / Inadequate digital knowledge	150	75%
Unstable or weak access to internet services	110	55%
Concerns about security or lack of trust in technology	100	50%

KEY INSIGHTS

- Widespread Mobile Device Use:
 - 95% of respondents own and use mobile devices.
 - This shows mobile technology has penetrated deeply into daily life.
- Digital Financial Engagement:
 - 55% have adopted smartphone-based banking.
 - 45% use digital money transfers.
 - This reflects growing trust in digital transactions but also room for expansion.
- Tech Skill Development:
 - 55% enrolled in tech skill-building courses—suggests efforts to increase digital literacy.



➤ E-Commerce Participation:

- Only 30% sell products online—an area with growth potential.

➤ Economic Impact:

- 45% reported earnings growth through digital tools—indicative of digital benefits.

➤ Barriers to Digital Adoption:

- 75% cite limited tech skills or inadequate knowledge.
- 55% face unstable internet access.
- 50% have security concerns or lack trust in technology.

Digital tools are making a meaningful impact, especially in financial inclusion and skill development, but significant obstacles remain. To fully harness technology, these groups may need more training, infrastructure improvements, and trust-building initiatives.

FINDINGS

The study reveals a significant shift in the digital engagement of Self-Help Group (SHG) members in Jharkhand, driven largely by the widespread use of mobile devices—an impressive 95% of respondents own and use them. This strong foundation has enabled many to explore digital financial tools, with 55% accessing smartphone-based banking and 45% adopting digital money transfers, pointing to rising financial inclusion. Additionally, 55% have enrolled in tech skill-building programs, which suggests growing awareness and interest in digital literacy. However, only 30% of members sell products online, indicating that e-commerce adoption is still in its early stages. On the brighter side, 45% of participants have experienced income growth through digital platforms, underscoring the economic potential of technology. Yet, several barriers continue to hinder broader adoption—75% struggle with limited digital skills or knowledge, 55% report poor internet connectivity, and half express concerns over online security and trust. Overall, while digital technology is positively influencing financial and skill-based empowerment among SHG members, challenges related to access, literacy, and trust must be addressed to unlock its full transformative impact.



B. According to the National Rural Livelihoods Mission (NRLM), Jharkhand has promoted a total of 291,417 Self-Help Groups (SHGs) across its 24 districts as of January 2024. District-wise data shown in the table below:

Table 2: Promoted Self-Help Groups

District	SHGs Formed	Total Members
Ranchi	22,155	266,293
Giridih	19,584	240,788
Palamu	18,457	222,255
Hazaribag	16,820	215,344
East Singhbhum	16,343	190,673
Dumka	15,432	190,517
West Singhbhum	14,497	180,062
Bokaro	14,708	181,121
Garhwa	12,993	146,422
Godda	12,109	149,910
Deoghar	12,026	142,396
Dhanbad	11,179	142,611
Gumla	11,296	147,817
Sahebganj	11,297	138,225
Pakur	10,818	134,022
Chatra	11,339	143,488
Ramgarh	7,771	96,396
Saraikela Kharsawan	9,706	120,071
Simdega	7,067	87,483
Jamtara	7,400	90,375
Khunti	7,155	92,011
Koderma	6,928	87,885



District	SHGs Formed	Total Members
Lohardaga	5,314	69,023
Latehar	9,023	111,724

FINDINGS

These numbers reflect the scale of SHG mobilization efforts under DAY-NRLM, aimed at empowering rural households—especially women—through collective action and livelihood support. The data highlights the extent of Self-Help Group (SHG) promotion across four key districts in Jharkhand under the National Rural Livelihoods Mission (NRLM). Ranchi leads with the formation of 22,155 SHGs and a remarkable 266,293 members, indicating strong community mobilization and active participation in livelihood initiatives. Hazaribag follows with 16,820 groups and 215,344 members, while Bokaro shows impressive figures with 14,708 SHGs and 181,121 members. Dhanbad, though comparatively lower, still demonstrates substantial engagement, with 11,179 groups involving 142,611 members. These figures underscore the growing presence of organized, women-led groups aimed at fostering financial self-reliance, social empowerment, and community development. The concentration of SHGs in these districts points to effective implementation of NRLM strategies and reveals opportunities for scaling impact in other regions with similar socio-economic profiles.

IMPORTANCE OF THE STUDY

This study is vital in understanding the evolving role of digital technology in empowering Self-Help Group (SHG) members in Jharkhand. By highlighting high mobile device usage and growing adoption of digital financial services, it showcases how technology is bridging financial gaps and fostering independence. The fact that over half the respondents are investing in tech skill-building illustrates a shift toward self-reliance and digital literacy. Despite these positives, the study reveals critical barriers—poor connectivity, limited skills, and security concerns—that hinder deeper digital integration. These insights help policymakers, NGOs, and development agencies identify where to focus training, infrastructure upgrades, and trust-building efforts. Moreover, the potential for income generation through digital platforms—though underutilized—indicates a promising avenue for economic upliftment. Overall, the study underscores the importance of inclusive digital access and capacity building to ensure technology serves as a tool for social and economic transformation among rural women.



CONCLUSION

The study concludes that digital technology has begun to significantly influence the lives of Self-Help Group (SHG) members in Jharkhand, especially in areas like financial inclusion, skill development, and income generation. With 95% mobile phone usage and increasing adoption of digital banking and training initiatives, there is clear momentum toward digital empowerment. However, challenges such as low e-commerce participation, inadequate digital literacy, unstable internet access, and widespread trust issues persist, hindering deeper integration. These findings underscore the urgent need for targeted interventions—improved infrastructure, customized digital education, and stronger cybersecurity measures—to ensure that technology becomes a transformative force for SHG members. The study emphasizes the potential of digital tools in reshaping rural economic landscapes, but also highlights that inclusive progress demands bridging current gaps. Overall, it calls for a collaborative effort from governments, NGOs, and private stakeholders to build an ecosystem where digital inclusion truly benefits every member of the community.

Across the four districts of Ranchi, Hazaribag, Bokaro, and Dhanbad, the data highlights a notable variation in the promotion and reach of Self-Help Groups (SHGs). Ranchi emerges as the leading district, with the highest number of SHGs (22,155) and the largest membership count (266,293), indicating a robust community mobilization and effective outreach efforts. Hazaribag follows with a substantial presence, while Bokaro and Dhanbad show comparatively lower figures, with Dhanbad at the bottom in both SHG numbers and member count. Overall, the data reflects a strong and expanding SHG network across all four districts, with Ranchi clearly excelling in both scale and impact.

Ultimately, the insights from this research offer valuable guidance for policymakers and practitioners seeking to scale digital empowerment across similar socio-economic settings ensuring that even the most marginalized women have the tools and support to thrive.

REFERENCES:

1. Bhagat, R. B., & Kumar, S. (2015). Economic empowerment of rural women through SHGs in India. *International Journal of Management and Social Sciences Research*, 4(8), 21–28.
2. Chatterjee, M., & Dutta, A. (2019). Digital financial inclusion in India: A study of women's empowerment. *Journal of Financial Inclusion*, 7(1), 56–68.
3. Das, P., & Mili, B. (2020). Role of self-help groups in economic empowerment of rural women in India. *Journal of Rural Development*, 39(2), 230–2345.



4. Devi, K. S., & Reddy, N. M. (2017). Digital India: Bridging the gender divide through technology in rural areas. *International Journal of Advanced Research in Computer Science*, 8(9), 1345–1351.
5. Government of India. (2015). National Digital Literacy Mission (NDLM). Ministry of Electronics and Information Technology.
6. Gupta, N., & Agarwal, M. (2021). Digital India: Empowering women entrepreneurs in rural areas. *Journal of Rural Entrepreneurship*, 12(4), 95–110.
7. Kabeer, N. (1999). Resources, agency, and achievements: Reflections on the measurement of women's empowerment. *Development and Change*, 30(3), 435–464.
8. Khan, S., & Tripathi, N. (2017). Women's economic empowerment through digital financial inclusion in rural India. *Journal of Digital Banking*, 2(3), 243–257.
9. Mayoux, L. (2001). Tackling the downside: Social capital, women's empowerment, and micro-finance. *Development and Change*, 32(3), 467–487.
10. Mehra, R. (2020). Exploring the role of mobile banking in women's financial empowerment in rural India. *Journal of Development Economics*, 11(2), 151–165.
11. Mehta, P., & Singh, N. (2018). Digital empowerment of women in rural India: Challenges and opportunities. *International Journal of Information Technology*, 10(2), 127–138.
12. Sarumathi, S., & Mohan, K. (2011). Role of microfinance in women's empowerment: An empirical study in Tamil Nadu. *International Journal of Research in Commerce, Economics and Management*, 1(4), 1–9.
13. Srinivasan, V. (2018). E-commerce and rural women: A study on the role of technology in women's empowerment. *Indian Journal of Commerce and Management Studies*, 9(2), 35–44.
14. United Nations Development Programme. (2019). The role of technology in advancing women's economic empowerment in South Asia. UNDP Report.
15. World Bank. (2016). The role of digital technologies in women's empowerment: A global perspective. Washington D.C.: World Bank.

Website

- [http:// www.nrlm.com](http://www.nrlm.com)
- <http:// www.Bokaro.nic.in>
- <http:// www.Bokaro.nic.in>
- <http://www.onefivenine.com>
- <http:// www.wikipedia>