

A Systematic Review of the Gender Gap in Digital Financial Inclusion in India Using PRISMA

Prachi Nagar

National Public School, Koramangala

80 Feet Rd, National Games Village Complex, Rajendra Nagar, Koramangala, Bengaluru, Karnataka
560047

prachi25nagar@gmail.com

Abstract

India has moved towards a near-universal bank account penetration, while the Unified Payments Interface (UPI) has enabled billions of transactions to take place each month. But the evidence indicates that the gender gap in financial inclusion has widened, from having an account to using one. In this review, the literature on the adoption and usage of digital financial services (DFS) by women in India, factors influencing the adoption gap and structural, socio-cultural and institutional barriers that still remain are discussed. Sixty-three records from the Scopus database were selected and a systematic review was performed, using the PRISMA methodology, followed by a thematic synthesis analysis. The studies were grouped into five themes and thirteen sub-themes: Gender gap in access and usage; Digital payments infrastructure, FinTech and policy; Drivers of adoption and usage; Digital finance in women's livelihoods; and Structural barriers and field mapping. The 63 studies included are quantitative (25), qualitative (30), or mixed-methods (8). The results reveal that education, employment, income and digital access are always found to be important factors in explaining much of the difference, with a significant unaccountable factor remaining, indicating norms and control of accounts in the household. The enablers of use are digital and financial literacy, trust and government support. The literature, however, is fairly recent (49 of 63 studies have been published in 2025-2026) and focused on account-level indicators, with little gender-specific or UPI-specific transaction evidence. The review emphasizes the importance of usage-centred measurement and a gender-oriented design of digital payment systems, such as the creation of an interface in vernacular languages which reduces the threshold for using the system.

Keywords: Digital financial inclusion, gender gap, Unified Payments Interface, women's empowerment, financial literacy, India

Introduction

Financial inclusion is broadly considered as an enabler of poverty alleviation, gender equality and inclusive growth, and is directly related with a number of SDGs, such as SDG 5 on gender equality (Tripathi & Rajeev, 2023). The National Financial Inclusion Strategy (NFIS) 2019-2024, introduced in India, established policy goals for financial inclusion, aligning with the SDGs (Ahluwalia & Khurana, 2025). India's financial inclusion has been achieved in different phases, starting from social banking following the nationalisation of banks to a technologically-enabled phase since 2005, which introduced new concepts such as Pradhan Mantri Jan Dhan Yojana (PMJDY), Unified Payments Interface (UPI) and small finance banks, with the impact seen in almost every household getting bank accounts and significant advances in digital payments, however, there continues to be gaps in the form of usage of the bank account, formal credit and gender and regional gaps, all of which remained unsolved (Ghosh & Chavan, 2026). The most apparent aspect of this change is UPI. As of December 2023 it has handled more than 9 billion transactions per month, and by August 2025 it had been up to 20 billion transactions per month (Parwez, 2026). Recent evidence

shows that the gender gap now lies between access and usage in India. Using Global Findex 2021 data, Kamble and Mehta (2026) find no significant gender gap in account ownership or borrowing, but significant gaps in card ownership, digital access, card use and mobile money. Previous research has indicated that women were less financially included, with lower employment rates accounting for lower financial inclusion rates in terms of formal accounts and lower education accounting for lower financial inclusion in terms of digital service use (Ghosh & Chaudhury, 2019). Data from Pooled Findex (2017–2021) indicates that digital transactions increased significantly following the COVID-19 pandemic, but the gender gap in the use of digital financial services (DFS) widened. The factors that contribute to this gap are less understood. Others focus on human-capital endowments like education and income; others to trust, social influence, norms and infrastructure in the household. The purpose of this study is to systematically review this literature to discover what causes the usage gap, how it can be measured, and where evidence is lacking. The first objective was to

Importance of the Study

The existing reviews of financial inclusion of women are either global or access-oriented. Roy and Patro (2022) point out that research on financial inclusion of women is not coherent and their systematic review tackles the factors that underlie the gender gap in access to finance. Goel (2023) provides a review of the trends and reforms in financial inclusion in India, which has identified various factors that cause financial exclusion such as the gender gap, lack of financial knowledge and lack of access to financial services in isolated areas and cultural barriers. Both focus on the use of digital payments, where the Indian gap is now focused (Kamble & Mehta, 2026).

There are three reasons why this is important. One first consideration is that the inclusion of the child is overstated by using account-based indicators. For national statistics, a woman may have an account that she does not operate (Parwez, 2026). Second, decomposition analysis reveals that a significant proportion of the discrepancy cannot be attributed to education or income/employment, indicating that equally talented women do not convert these attributes to financial outcomes at the same rate as males (Kamble & Mehta, 2026). A residual that is not closed by policy which targets only human capital. Third, digital finance is now rapidly engrained in the government transfers, wage payments during the pandemic and the benefits rely on complementary infrastructure which is unevenly distributed (Chatterjee, 2024; Parwez, 2026).

The conceptual framework of this review applies the capability and gender and development perspectives adopted in the studies included in the review such that access to financial services is followed by financial service use and financial empowerment (Agrawal et al., 2025; Garg & Ahuja, 2026). It combines quantitative decomposition research, adoption-model surveys and qualitative fieldwork and policy analysis in one framework based on PRISMA. The objectives of this review are to (i) identify the way in which the gender gap in digital financial inclusion is measured and explained, (ii) highlight the socioeconomic factors that influence the adoption and use of digital financial services, and (iii) highlight structural and institutional gaps that remain and how they impact the gender responsive design of digital payment systems in India.

Materials and Methods

The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) are followed when conducting the review (Page et al., 2021). Given the diversity of studies, in terms of design, outcome measures, and context, a thematic, domain-based synthesis was selected rather than using a meta-analysis.

The search was conducted in the Scopus database on 01/03/2026 with a search term of “digital payments OR financial inclusion AND gender gap”. The Scopus database was searched using the string “(Digital Payments or Financial inclusion) and Gender Gap”, which returned 198 records. Records were then filtered by country (India), which removed 135 records, and by language (English), which removed none, leaving 63 records. Studies were selected if they discussed financial inclusion, digital finance or financial literacy with gender dimension and study context India or main case of comparison as India. The studies were first screened at the title and abstract level for the focus on a gendered financial-inclusion outcome. Sixty-three records were retained after screening: 29 articles, 21 book chapters, 7 conference papers, 4 reviews and 2 books.

Thematic synthesis was carried out in three stages: coding of each abstract according to their focus, method and principal findings, grouping of codes into descriptive sub-themes and their aggregation into five analytic themes. Also studies were categorized by research approach (quantitative, qualitative or mixed methodology) and whether the principal method stated in the study was a literature review (systematic, structured, narrative or bibliometric reviews). Each study was allotted a single theme.

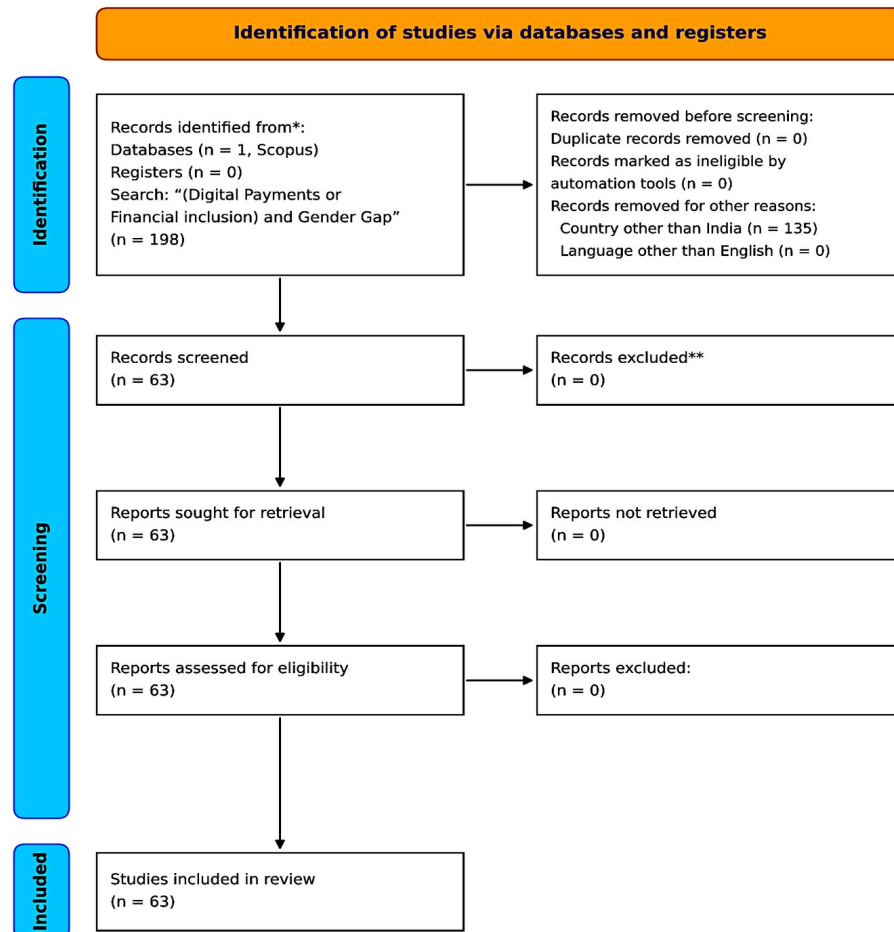


Fig. 1 PRISMA based selection process

The frequency distribution of studies by theme is presented in Table 1. The studies are organized by the following themes: Gender gap from access to usage (12 studies); Digital payments infrastructure, FinTech

and policy (16); determinants of adoption and use (14); digital finance in women's livelihoods (11); structural barriers and field mapping (10). The policy and barrier studies are mainly qualitative, while quantitative work focuses in Theme 1 where all studies of the gap are India-specific.

Table 1

Distribution of Included Studies by Theme, Sub-Theme and Research Approach

Theme / sub-theme	Total	Quantitative	Qualitative	Mixed	Review
Theme 1: From access to usage: the gender gap	12	11	1	0	1
1.1 Measuring the gap: cross-country and index-based evidence	5	4	1	0	1
1.2 India: decomposing the access-to-usage gap	7	7	0	0	0
Theme 2: Digital payments infrastructure, FinTech and policy	16	3	12	1	4
2.1 UPI, PMJDY and India's policy architecture	5	0	4	1	2
2.2 FinTech platforms and products reaching women	6	1	5	0	1
2.3 Emerging technologies: AI, blockchain and ML	5	2	3	0	1
Theme 3: Determinants of adoption and use	14	5	6	3	3
3.1 Trust, security and behavioural intention	2	2	0	0	0
3.2 Digital and financial literacy as enablers	8	3	4	1	1
3.3 Digital divide and ICT access	4	0	2	2	2
Theme 4: Digital finance in women's livelihoods	11	3	6	2	2
4.1 Women entrepreneurs and access to formal credit	5	1	4	0	1
4.2 Microfinance, SHGs and microinsurance	3	1	1	1	1
4.3 Rural, agricultural and sectoral livelihoods	3	1	1	1	0
Theme 5: Structural barriers and field mapping	10	3	5	2	4
5.1 Socio-cultural and structural barriers	6	0	5	1	0
5.2 Bibliometric mapping of the field	4	3	0	1	4
Total	63	25	30	8	14

Note. $N = 63$ studies retrieved from Scopus. Each study was assigned to one primary sub-theme. Review = studies whose principal method is a systematic, structured, narrative or bibliometric review; review studies are also counted under their research approach.

Literature Review

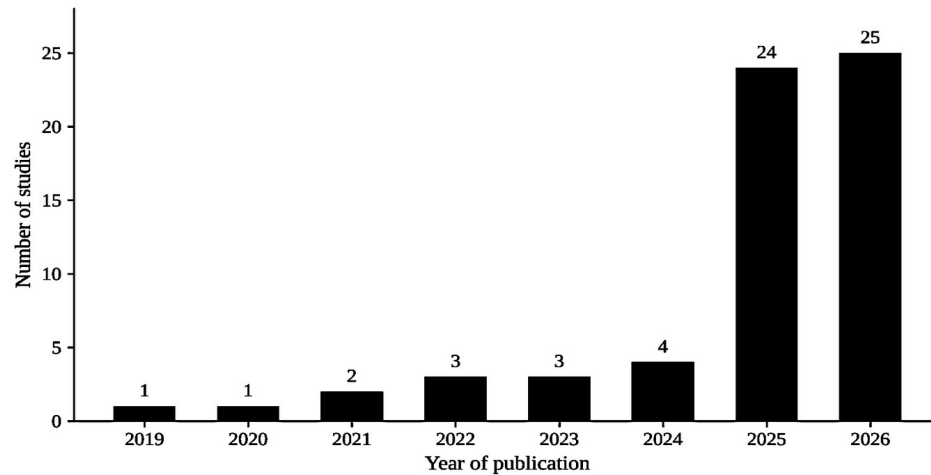
The literature reviewed for this study is very recent. Of the 63 included studies, 49 were published in 2025 or 2026, and only 14 appeared between 2019 and 2024 (Fig. 2). Bibliometric work on the wider microfinance field traces the same shift, from access to credit and group lending as the founding theme to digital financial inclusion, gender empowerment and FinTech integration as emerging ones (Prameela & Kanniammal, 2025).

Initial studies (2019-2021) focused on the inclusion of women at all. Ghosh and Chaudhury (2019) have used Global Findex 2017 to determine that women were much less likely to be financially included in India than men and the socio-economic differences accounted for the majority of this distinction. Kulkarni and Ghosh (2021) concluded that the relationship between the level of economic development and digital financial inclusion (DFI) gender gap was not significant, and that digitalisation could further enhance women's social and financial autonomy. This is the time when financial literacy was mostly investigated as an independent discipline (Goyal & Kumar, 2021).

During the middle period (2022-2024), it delved into the fields of digital finance and measurement. Ghosh and Hom Chaudhury (2022) conducted a study to assess if the gender gap in digital finance was reduced prior to and after the demonetisation of the currency. Tripathi and Rajeev (2023) created a gender financial inclusion index for 109 countries, distinguishing between the use of digital and conventional services.

Chatterjee (2024) demonstrated that digital wage transfers can increase the propensity to transact digitally among women, but only when ICT infrastructure is available. During this period, reviews were conducted that summarized the access literature (Roy & Patro, 2022; Goel, 2023).

Figure 2
Number of Included Studies by Year of Publication



Note. $N = 63$ studies retrieved from Scopus. Data for 2026 cover publications indexed up to the search date.

The latest (2025-2026) studies are on Usage, Adoption and Technology. Zeeshan et al., (2026) and Kamble & Mehta, (2026) have done the decomposition of Findex 2021 data into access and use. The survey studies use technology adoption models in the context of women entrepreneurs and informal workers (Chauhan et al., 2026; Maria Vijay et al., 2026). Increasingly, a number of chapters focus on finance access for women using AI and blockchain, although the majority of these are conceptual (Ismaeil et al., 2026; Kaur & Shah, 2026).

Analysis

Theme 1. From access to usage: the gender gap in digital financial inclusion

This theme brings together studies that measure the gender gap in financial inclusion and explain where it lies. Its 12 studies are almost all quantitative and draw heavily on Global Findex data; together they show the gap moving from account ownership to account use.

1.1 Measuring the gap: cross-country and index-based evidence

Gender gaps in digital finance differ more among countries than among income groups, as seen in the cross-country studies. Tripathi and Rajeev (2023) build a gender-based financial inclusion index for 109 countries and conclude that the health, education, labour force participation and political empowerment of women have a significant impact on their digital financial inclusion. A comparable women-specific index is constructed by Kushwah (2024), for 20 countries. In the pooled sample across the G20, Guruprasad et al. (2026) report no statistically significant gender differences, but do report statistically significant differences across countries in Saudi Arabia, Turkey and Brazil. This indicates that national statistics may conceal differences.

Institutional mechanism is a part of how women start using digital finance. In the review, Chatterjee (2024) concludes that electronic wage transfer encourages women to transact digitally, but that it is not effective in South Asia or Sub-Saharan Africa, where ICTs infrastructure is lower. Roy and Patro (2022) discuss the factors leading to women's exclusion, but narrow their discussion to access to finance.

1.2 India: decomposing the access-to-usage gap

All seven India-specific studies included in this sub-theme are quantitative and most of these studies employ Global Findex data and decomposition techniques. According to them, their key conclusion is that the gender gap has shifted from ownership to use. Kamble and Mehta (2026) report no gender disparity in account ownership or borrowing, but do highlight gender disparities in card ownership, their access to digital technology, and their use of card or mobile money. While education, employment, income and locality account for some of the difference there is a significant unexplained difference in all digital indicators.

It is unclear from the studies whether the gender gap is as wide as other gaps. For account inactivity, Zeeshan et al. (2026) identify small but persistent gender differences, and large unexplained rural–urban differences that are even larger than the gender differences. P et al. (2025) also observed, using GfK data 2017 and 2021, that the pandemic had boosted the use of digital transactions, while the gender gap in the use of digital financial services widened. They attribute this primarily to the weaker literacy and access to digital financial products amongst women.

Factors such as women's unemployment mean that women have lower rates of formal accounts, savings and credit, while lower education is primarily limiting women's use of digital services (Ghosh & Chaudhury, 2019). By day, there was an increase in the use of digital finance with males, wealthier, and older respondents indicating greater use, and a gender gap remained even after demonetisation (Ghosh & Hom Chaudhury, 2022). Gender gap in digital financial inclusion is not related to the economic development of a state (Kulkarni & Ghosh, 2021).

Theme 2. Digital payments infrastructure, FinTech and policy

This theme covers the infrastructure and policies through which digital finance reaches women, from UPI and PMJDY to FinTech products and emerging technologies. Most of its studies are qualitative or conceptual, so claims about impact rest on a small number of empirical studies.

2.1 UPI, PMJDY and India's policy architecture

The policy literature is unanimous that there has been faster expansion of access than use in India. Ghosh and Chavan (2026) attribute the lack of formal credit and insurance, poor use, and low usage rates to PMJDY, UPI and small finance banks, which offer near-universal account access. Singh et al. (2026) observe that while financial services access for women was enhanced through PMJDY and MUDRA, policy programmes were missing out on women's specific challenges and rural and poor women were the least included. Poor income, lack of financial knowledge, and geographical and cultural constraints are some of the ongoing factors of exclusion mentioned by Goel (2023) and Ahluwalia and Khurana (2025).

The sample contains only one UPI-specific review, by Parwez (2026). The study finds that on average villages with more UPI had a 27% higher likelihood of registering businesses and a 34% higher likelihood of having a savings account, primarily due to direct benefit transfer integration, using studies with

instrumental-variables and difference-in-differences designs. The gains from formalisation were, however, skewed towards business units that were already close to the formal sector, while just 33% of regular users of UPI were women. The study also reveals a new inclusion-security trade-off that is not currently recognized in policy.

2.2 FinTech platforms and products reaching women

Studies of FinTech products report positive associations with women's financial awareness and decision-making, though most rely on small or non-random samples. A survey of 230 women in Delhi NCR found that FinTech improved financial awareness, security and decision-making (Sidana et al., 2023). Pal and Bhowmick (2024) find that UPI payments allow women micro-entrepreneurs to reach larger markets, and that platforms such as Meesho support home-based work in rural and semi-urban areas. Digital microfinance in Chennai and FinTech for rural women in South Asia are examined by Jayabal et al. (2026) and Divekar et al. (2025).

2.3 Emerging technologies: AI, blockchain and machine learning

This is the most ideologically based sub-theme. Out of a total of five studies, only one reports primary fieldwork. Das et al. (2025) conducted focus groups with 15 providers and 30 rural entrepreneurs in Odisha and report that low digital literacy and lack of trust in AI banking, and provider fears of algorithmic bias, are issues. They offer vernacular interfaces and offline-capable tools. The other studies are conceptual or simulation. Women-led microloans have reportedly increased by 40 per cent and wage payment delays have been cut in half by 25 per cent by the blockchain platform ShePowerChain, but with modelled scenarios and not real world use (Parthiban et al., 2025). Book chapters on Artificial Intelligence and Blockchain for women businesspersons call for their potential without experimentation (Ismaeil et al., 2026; Kaur & Shah, 2026; Joshi et al., 2026).

Theme 3. Determinants of women's adoption and use of digital finance

This theme examines why some women adopt and use digital financial services and others do not. Its 14 studies point to three sets of factors: trust and ease of use, digital and financial literacy, and access to phones and the internet.

3.1 Trust, security and behavioural intention

Two survey studies apply technology-adoption models and both find that trust matters more than efficiency. Among 450 home-based women entrepreneurs, effort expectancy, facilitating conditions, government support, digital literacy and social influence significantly predicted the intention to use FinTech, while performance expectancy did not (Chauhan et al., 2026). Brand credibility positively moderated adoption. In a general sample of 462 respondents, trust and security, ease of use and usefulness drove digital financial adoption, while perceived complexity and aversion to change inhibited it (Prajwal Jain et al., 2025).

3.2 Digital and financial literacy as enablers

Literacy is the most frequently studied enabler, but findings on whether it is itself gendered are mixed. Among women in Chennai's informal sector, financial literacy partially mediates the effect of FinTech on financial inclusion (Maria Vijay et al., 2026). Among 214 women entrepreneurs, digital financial literacy significantly influenced both financial inclusion and firm performance (Peter et al., 2025). However, a

survey across eight districts found education, age and income strongly correlated with digital financial literacy, while its correlation with gender was negligible (Pattnayak & Sahoo, 2024). In contrast, a study of 400 rural respondents in Kerala found gender among the significant determinants of digital financial competence, along with education, income and participation in employment guarantee schemes (Banu et al., 2026). Conceptual chapters link literacy to empowerment through capability and feminist frameworks (Garg & Ahuja, 2026; Rathnayake et al., 2026).

3.3 Digital divide and ICT access

The digital divide is treated as a precondition for digital financial use. A PRISMA review of 21 reports identifies lack of education as the root barrier in women's digital exclusion, leading to financial and psychological dependence on men (Gupta & Kiran, 2025). In Chennai, a mixed-methods study finds significant intra-urban variation in digital access, affordability and skills, with education and socio-economic position shaping outcomes even in a high-connectivity city (G & KS, 2026). In Kanpur, ICT through mobile phones, digital banking and e-governance improved rural women's mobility and decision-making (Agrawal et al., 2025).

Theme 4. Digital finance in women's livelihoods

This theme explores the role of digital finance in the empowerment and enhancement of livelihoods of women across rural employment, groups, credit and enterprises. The 11 studies that inform this theme indicate that there are gains, but these are contingent on women having access to assets, credit and technology.

4.1 Women entrepreneurs and access to formal credit

Data on enterprises is the most robust in this area. Parameswaran and Kadam (2026) used data from the Annual Survey of Unincorporated Sector Enterprises 2022-23 to show that women run fewer enterprises that have accessed formal credit and that those that have accessed formal credit receive smaller loan amounts. For women-run enterprises, the use of computers and the internet is positively related to the amount and probability of accessing formal credit. This relationship is more clearly evidenced among rural enterprises in regard to accessing formal credit. Chapters with a policy focus discuss schemes such as Mahila Udyam Nidhi, Stree Shakti Yojana and Stand-Up India and highlight the stigma and lack of access to capital that women and transgender entrepreneurs experience (Kumar & Joseph, 2025; Gupta et al., 2025).

4.2 Microinsurance, SHGs and microfinance

SHGs continue to play a key role as a delivery mechanism. However, the studies that inform this theme are largely conceptual. Mishra et al. (2026) present a model of how SHGs in Odisha enable collective action, skill development and financial inclusion among women. Mahadik et al. (2025) propose multi-channel distribution (mobile banking, agents) of microinsurance to women in rural agriculture.

4.3 Sectoral, agricultural and rural livelihoods

Studies on sectors indicate that there can be a disjunction between women's involvement in economic activity and their access to digital services. For instance, among small scale seaweed farmers in Tamil Nadu women were involved in a greater extent in marketing and had higher levels of decision-making power within the household. However women had less access to productive resources and digital services than

men. During the mobility restrictions associated with the COVID-19 pandemic women experienced the most severe impacts (97.7% reported mobility restrictions and 73% lost over 50% of their income). There is a call for a policy that ensures women have an equal share in access to productive resources as well as financial and digital inclusion (Swathi Lekshmi Perumal et al., 2026).

Theme 5. Structural barriers and field mapping

This theme gathers studies on the deeper barriers that remain once access is provided, along with bibliometric work that maps the field. Its 10 studies are mainly qualitative or bibliometric, and they explain the context of the gap more than they measure it.

5.1 Socio-cultural and structural barriers

Qualitative chapters identify patriarchy, entrenched gender norms, low asset ownership and limited decision-making as barriers that persist after access is provided (Manhas, 2025; Mahajan & Srivastava, 2026). Singh, Akhtar and Awasthi (2025) extend the analysis to other excluded groups, including transgender persons and persons with disabilities. Educational exclusion compounds these barriers, with girls in rural India facing financial, cultural and safety constraints on schooling (Chauhan & Sinha, 2025).

5.2 Bibliometric mapping of the field

Four bibliometric studies map adjacent literatures: financial literacy over 2000–2019 (Goyal & Kumar, 2021), digital education in financial literacy (Bhullar et al., 2025), financial inclusion and women's economic empowerment over 2000–2025 (Rajput & Thakkar, 2026) and women and the family economy in Bihar (Kumar, 2025). They confirm the growth of the field but do not test the usage gap directly.

Limitations

A review using only the Scopus database was conducted. There is potential to add other databases such as EconLit, Web of Science and regional databases and also reports from the Reserve Bank of India and from government agencies. Studies were identified by research topic and approach using mainly abstracts. Only one study in the review was specific to UPI. Therefore any conclusions reached on UPI are based mostly on the one study (Parwez, 2026). Some studies are book chapters and the research approach is not specified. Others are also conducted outside of India (Andalib et al., 2025; Rathnayake et al., 2026).

Conclusion

The trend for gender difference in financial inclusion has shifted from access to use (Theme 1). Female ownership of accounts is nearly ubiquitous; however, there are significant differences in the use of mobile money, digital accounts and cards, with women being less likely to use these services (Kamble & Mehta, 2026). The most common factors cited to encourage use are trust, government support, social influence and financial and digital literacy (Theme 3; Chauhan et al., 2026; Maria Vijay et al., 2026). There is truth in the advantages of digital payments but differential access to these advantages (Theme 2; Parwez, 2026) and the benefits from UPI are likely to be enjoyed by those who are already at the forefront of the formal economy. Digital tools are also used to benefit women's livelihoods as women and women-led businesses have greater access to formal credit through the use of technology (Theme 4; Parameswaran & Kadam, 2026). Patriarchal norms, asset ownership inequities and women's marginal status in decision-making impede these advances, however (Theme 5; Manhas, 2025).

There were three key gaps in the literature. Firstly, there is a reliance on Global Findex data that is based on account level indicators; lack of studies with gender-disaggregated UPI or transaction level data (Theme 1). Secondly, the unexplained gender gap in use, such as where women's accounts are held by men within the household, is often referred to, but then not discussed in any detail through qualitative research (Theme 1 and 5; P et al., 2025; Parwez, 2026). Thirdly, there are some studies that explore blockchain and AI technologies, but they are either simulations or conceptual (Theme 2). This could be because they have not yet had enough real use data, such as ShePowerChain's reported results, which are based on simulations instead of practical use (Parthiban et al., 2025). Opportunities for research integrating use-based indicators with qualitative analysis of intra-household control of digital payments. It is also possible to explore design considerations in digital payments and their potential impact on women's usage, such as through the support of vernacular or assisted transactions. This is only one of the studies on which this review is based that mentions such features: Das et al., 2025 suggest vernacular interfaces and tools that can work without the internet.

References

- Agrawal N., Upadhyay M., Verma S.P., Prashant (2025). Empowerment of Rural Women through ICT: A Sociological Study of Kanpur District of Uttar Pradesh. *International Research Journal of Multidisciplinary Scope*, 6(4), 882–901. <https://doi.org/10.47857/irjms.2025.v06i04.05982>
- Ahluwalia R., Khurana N. (2025). Advancing Financial Inclusion for Sustainable Development: Strategies and Recommendations for Achieving the SDGs. *Financial Resilience and Environmental Sustainability: Global South Perspectives*, 3–23. https://doi.org/10.1007/978-981-96-4269-4_1
- Andalib T.W., Hossain S.A., Ramayah T., Azizan N.A., Hassan D.I., Khawar S. (2025). The Cultural and Financial Dynamics of Female Entrepreneurs as Well as Their Empowering Ventures. *Emerging Science Journal*, 9(4), 2077–2099. <https://doi.org/10.28991/ESJ-2025-09-04-018>
- Bala S., Singhal P. (2022). Digital financial inclusion through FinTech. *Gender Perspectives on Industry 4.0 and the Impact of Technology on Mainstreaming Female Employment*, 77–90. <https://doi.org/10.4018/978-1-7998-8594-8.ch004>
- Banu M.N., Cholakal I., Azeez N.P.A. (2026). Examining the Socio-Economic Determinants of Digital Financial Literacy in Rural Kerala. *International Journal of Innovation and Technology Management*, 23(2). <https://doi.org/10.1142/S0219877026500033>
- Bhullar P.S., Singh G., Singh G., Gupta P. (2025). Role of Digital Education in Financial Literacy: A Bibliometric Analysis and Future Research Agenda. *FinTech and Financial Inclusion: Leveraging Digital Finance for Economic Empowerment and Sustainable Growth*, 147–164. <https://doi.org/10.4324/9781003514114-11>
- Chatterjee A. (2024). Digital finance: a developing country perspective with special focus on gender and regional disparity. *Digital Policy, Regulation and Governance*, 26(4), 394–419. <https://doi.org/10.1108/DPRG-10-2023-0149>
- Chauhan S., Sharma D., Chhabra M. (2026). Trust over efficiency: How brand credibility drives fintech adoption among home-based women entrepreneurs. *Journal of Enterprising Communities*, 1–23. <https://doi.org/10.1108/JEC-01-2026-0021>
- Chauhan S., Sinha P. (2025). Predictive Analytics to Assess the Cost of Educational Exclusion in Rural India. *International Conference on Intelligent and Innovative Practices in Engineering and Management, IIPEM 2025*. <https://doi.org/10.1109/IIPEM65914.2025.11548212>

- Das N.B., Chaudhury S.K., Sahoo S.P., Das S.R., Maharana N. (2025). AI-Driven Financial Inclusion and Banking Services for Rural Entrepreneurship in Odisha. *Smart Innovation, Systems and Technologies*, 446 SIST, 437–453. https://doi.org/10.1007/978-981-96-7269-1_32
- Divekar P., Bhatia A., Divekar R., Chandani A. (2025). Empowering Rural Women in South Asia Through Fintech: Contribution to Sustainable Development Goals and Entrepreneurial Growth. *Lecture Notes in Networks and Systems*, 1319 LNNS, 1–12. https://doi.org/10.1007/978-981-96-4145-1_1
- G D.P., KS G. (2026). Bridging Digital Gaps: A Technological Roadmap to Inclusive Women's Empowerment in Chennai City. *Journal of Entrepreneurship and Innovation in Emerging Economies*. <https://doi.org/10.1177/23939575261442603>
- Garg V., Ahuja V. (2026). Global Perspectives on Empowering Women Through Financial Literacy: A Pathway to Inclusive and Sustainable Development. *World Sustainability Series*, Part F2330, 237–259. https://doi.org/10.1007/978-3-032-22020-2_12
- Ghosh C., Chaudhury R.H. (2019). Gender Gap in case of financial inclusion: An empirical analysis in Indian Context. *Economics Bulletin*, 39(4), 2615–2630.
- Ghosh C., Hom Chaudhury R. (2022). Determinants of digital finance in India. *Innovation and Development*, 12(3), 343–362. <https://doi.org/10.1080/2157930X.2020.1850012>
- Ghosh S., Chavan P. (2026). Financial Inclusion. *The Routledge Handbook of Indian Banking and Finance*, 50–67. <https://doi.org/10.4324/9781003771883-6>
- Goel A. (2023). Trends and reforms of financial inclusion in India. *International Review of Applied Economics*, 37(2), 275–285. <https://doi.org/10.1080/02692171.2023.2167952>
- Goyal K., Kumar S. (2021). Financial literacy: A systematic review and bibliometric analysis. *International Journal of Consumer Studies*, 45(1), 80–105. <https://doi.org/10.1111/ijcs.12605>
- Gupta M., Kiran R. (2025). Digital exclusion of women: a systematic review. *Global Knowledge, Memory and Communication*, 74(3-4), 938–957. <https://doi.org/10.1108/GKMC-12-2022-0301>
- Gupta M., Rungta D., Awasthi Y., Singh S. (2025). Opportunities for women's rural entrepreneurship in deprived rural environments: Empowering the pathway for women entrepreneurs in rural environments. *Entrepreneurial Opportunities in Disadvantaged Rural Communities*, 355–391. <https://doi.org/10.4018/979-8-3373-0214-0.ch012>
- Guruprasad L.S., Ramasamy K.R.A.B.A., Kulkarni S. (2026). Gender disparities in financial inclusion: promoting women's economic empowerment in G20 countries for sustainable development. *Digital Policy, Regulation and Governance*, 28(4), 411–431. <https://doi.org/10.1108/DPRG-10-2024-0269>
- Ismaeil O., Lamba J.K., Rajput N. (2026). Leveraging Blockchain and AI to Revolutionize Financial Access for Women Entrepreneurs in Emerging Markets. *Sustainable Development Goals Series*, Part F1486, 221–239. https://doi.org/10.1007/978-3-032-00343-0_11
- Jarial S., Pal A., Sood S., Roy A. (2026). Women, Literacy Rate, and Gender Gap in Agriculture. *Toward Women's Empowerment and Gender Equality: Fostering Equitable Growth for Sustainable Development*, 135–146. <https://doi.org/10.1201/9781779641595-15>
- Jayabal A., VT S., M M., A B., Nair H.S. (2026). Transforming women's empowerment in Chennai: The role of digital innovations in microfinance. *E-Learning and Digital Media*. <https://doi.org/10.1177/20427530261420403>
- Joshi S., Kiran D., Kharola M., Sharma R., Chauhan D., Tomar A.K. (2026). FinLitNet: An Intelligent ICT Framework for Predicting Financial Inclusion through Digital Literacy and FinTech Adoption. *Lecture Notes in Networks and Systems*, 1891 LNNS, 514–525. https://doi.org/10.1007/978-3-032-20609-1_47
- Kamble P.A., Mehta A. (2026). From Access to Usage: The Shifting Gender Gap in India's Financial Inclusion. *Bulletin of Economic Research*. <https://doi.org/10.1111/boer.70056>

- Katoch T., Gurjar P. (2025). Uplifting Women Farmers by Adopting Climate-Smart Practices with Climate Finance: Evidence from Central and Eastern States of India. *Springer Climate*, Part F644, 291–316. https://doi.org/10.1007/978-3-031-90236-9_15
- Kaur G., Shah M.A. (2026). From Innovation to Resilience: AI-Driven Transformation in Women Entrepreneurship. *Decision Making, Learning, and Collaboration in AI-Driven Entrepreneurship*, 189–210. <https://doi.org/10.4018/979-8-2600-1353-3.ch010>
- Khatoon G., Sherwani K.H., Bala H., Kushwah S.V., Zahid U., Ashraf M., Malik F.A., Sani A.A. (2026). Financial Inclusion and Sustainability: Challenges, Curative Measures and Prospects. *World Sustainability Series*, Part F1318, 189–205. https://doi.org/10.1007/978-3-032-01715-4_10
- Kulkarni L., Ghosh A. (2021). Gender disparity in the digitalization of financial services: challenges and promises for women's financial inclusion in India. *Gender, Technology and Development*, 25(2), 233–250. <https://doi.org/10.1080/09718524.2021.1911022>
- Kumar R. (2025). Poverty, Family Economy, and Women: An Analysis of Research Trends. *Spectrum of Operational Research*, 2(1), 202–220. <https://doi.org/10.31181/sor21202522>
- Kumar R., Joseph J. (2025). Gender Inequality and Entrepreneurship Challenges in India: Bridging Gaps and Overcoming Barriers. *Studies in Systems, Decision and Control*, 291, 543–551. https://doi.org/10.1007/978-3-031-87372-0_47
- Kushwah R. (2024). Sustainable Development of G-20 Countries by Empowering Gender Equality and Financial Inclusion of Women in India. [book title to verify: Scopus lists Women's Private Practices of Knowledge Production in Early Modern Europe], 198–211. <https://doi.org/10.4324/9781003487180-19>
- Mahadik R.V., Pawar A.S., Navalgund D.I., Desai S., Ayarekar S., Yadav J.S. (2025). Bridging Distribution Gaps: A Conceptual Framework for Microinsurance Delivery to Remote Subsistence Farmers. *Enterprise Development and Microfinance*, 35(1), 188–206. <https://doi.org/10.3362/1755-1986.25-00011>
- Mahajan N., Srivastava A. (2026). Foundation for a Sustainable and Prosperous Future: Women Empowerment. *Women's Empowerment for a Sustainable Future*, 113–153. <https://doi.org/10.1201/9781779641618-6>
- Majeed M., Shamurailatpam S.D., Shukla P.S., Osman I., Dokurugu H.G. (2025). Fintech Revolution and Financial Inclusion in Emerging Markets: Shaping Sustainable Digital Finance. *Fintech Revolution and Financial Inclusion in Emerging Markets: Shaping Sustainable Digital Finance*, 1–128.
- Manhas S. (2025). Structural and Cultural Barriers to the Economic Empowerment of Women. *Sustainable Development Goals Series*, Part F404, 91–107. https://doi.org/10.1007/978-981-96-2759-2_8
- Maria Vijay M., Vijaykarthigeyan K.T., Maria Evelyn Jucunda M., Sivakumar D., Rekhapriyadharshini A. (2026). The role of financial technology and financial literacy in driving financial inclusion among the women workforce in the informal sector. *International Journal of Human Capital in Urban Management*, 11(1), 123–142. <https://doi.org/10.22034/IJHCUM.2026.01.08>
- Mishra S., Nandini G., Mahapatra K.K., Singh T., Samantaray A., Bag P. (2026). Empowering Women Through Self-Help Groups: A Pathway to Financial Inclusion and Socio-Economic Development in Odisha. *Springer Proceedings in Business and Economics*, 219–235. https://doi.org/10.1007/978-981-95-4200-0_13
- Ojha P.K., Kumar D. (2025). Inclusive Finance: Bridging Gender Gaps in India. *International Research Journal of Multidisciplinary Scope*, 6(4), 238–248. <https://doi.org/10.47857/irjms.2025.v06i04.08125>

- P M., Kumar S., Shetty S. (2025). Beyond the screen: unfolding digital finance usage through a gendered lens during and after COVID-19. *Cogent Economics and Finance*, 13(1). <https://doi.org/10.1080/23322039.2024.2448574>
- Page M.J., McKenzie J.E., Bossuyt P.M., et al. (2021). The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ*, 372, n71. <https://doi.org/10.1136/bmj.n71>
- Pal R., Bhowmick B. (2024). Digital Technology and the Empowerment of Indian Women Micro-Entrepreneurs. *2024 IEEE Global Humanitarian Technology Conference, GHTC 2024*, 326–331. <https://doi.org/10.1109/GHTC62424.2024.10771561>
- Parameswaran S., Kadam A. (2026). Access to formal credit for women-owned enterprises in India's unorganized sector: does technology adoption help close the gender gap? *Applied Economics*, 58(33), 6872–6885. <https://doi.org/10.1080/00036846.2025.2526853>
- Parthiban U., Pannerselvam V.D., Murugesan A., Ramasamy K. (2025). ShePowerChain: A Blockchain-Based Platform for Women's Financial Inclusion and Empowerment. *Asian Women*, 41(3), 82–97. <https://doi.org/10.64446/aw.2025.9.41.3.82>
- Parveen N., Maqbool A. (2026). Study Of Financial Literacy Among Working Women Of India And Its Importance For Economic Growth. *Cineforum*, 66(2), 440–451.
- Parwez S. (2026). Unified Payments Interface (UPI) in India: Platform Design, Development Outcomes and the Limits of Payment-Led Transformation. *Singapore Economic Review*. <https://doi.org/10.1142/S0217590826500293>
- Pattnayak N.C., Sahoo R. (2024). A Study on Socio-Demographic Determinants of Digital Financial Literacy in India. *Theoretical and Practical Research in the Economic Fields*, 15(4), 1012–1022. [https://doi.org/10.14505/tpref.v15.4\(32\).17](https://doi.org/10.14505/tpref.v15.4(32).17)
- Peter S., Elangovan G., Gupta A. (2025). Digital engagement in financial inclusion for bridging the gendered entrepreneurial financial gap: evidence from India. *Cogent Business and Management*, 12(1). <https://doi.org/10.1080/23311975.2025.2518492>
- Prajwal Jain P., Mahesh R., Ramesha S.S., Kanodia G. (2025). Pathways to Sustainable Digital Financial Inclusion: Investigating Critical Factors in Emerging Economies. *Proceedings of the 2025 12th International Conference on Computing for Sustainable Global Development, INDIACom 2025*. <https://doi.org/10.23919/INDIACom66777.2025.11115352>
- Prameela P., Kanniammal K. (2025). Catalyst for Inclusion: A Bibliometric Journey through Micro Finance, Poverty Alleviation and Employment. *International Research Journal of Multidisciplinary Scope*, 6(4), 1422–1440. <https://doi.org/10.47857/irjms.2025.v06i04.08424>
- Rajput K.S., Thakkar A. (2026). Women Empowerment Through Financial Inclusion: Opportunities and Challenges. *World Sustainability Series*, Part F2330, 121–135. https://doi.org/10.1007/978-3-032-22020-2_7
- Rathnayake N.D.N.B., Singh A.K., Garg V. (2026). Empowering Women through Financial Literacy: A Pathway to Economic Inclusion in South Africa. *Diversity in Women's Entrepreneurship: Global Sustainability in African Countries*, 61–81. <https://doi.org/10.1201/9781003508953-4>
- Roy P., Patro B. (2022). Financial Inclusion of Women and Gender Gap in Access to Finance: A Systematic Literature Review. *Vision*, 26(3), 282–299. <https://doi.org/10.1177/09722629221104205>
- Ruban C.A., Nithya A.R. (2025). The Role of FinTech in Enhancing Financial Literacy Among Women for Sustainable Economic Development. *Journal of Applied Bioanalysis*, 11(3), 252–260. <https://doi.org/10.53555/jab.v11i3.240>
- Sidana A., Goel R., Rehman M. (2023). A study of stimulating sustainable women empowerment through Fintech applications. *Fostering Sustainable Businesses in Emerging Economies: The Impact of Technology*, 207–221. <https://doi.org/10.1108/978-1-80455-640-520231013>

- Simona D., Amritha K.S., Daniel B. (2026). Mobile Phones and the Internet as Catalysts for Women Empowerment in Developing Countries: A Systematic Review. *Tech Startups Driving Innovation: Empowering Women in Bangladesh*, 34–46. <https://doi.org/10.1201/9781003544838-3>
- Singh K., Akhtar S., Awasthi V. (2025). Bridging the Gap: Making the Financial Services Accessible to the Vulnerable Sections of the Society. *Sustainable Finance*, Part F5029, 55–75. https://doi.org/10.1007/978-3-032-01677-5_3
- Singh K., Dixit S., Vaithyanathan R.K., Sharma V., Ravinder N., Ray A. (2025). From Financial Aid to Ecosystem Development: A Systematic Literature Review of An Evolving Government Support Mechanism for Women Entrepreneurs. *Journal of Applied Bioanalysis*, 11(3), 441–451. <https://doi.org/10.53555/jab.v11i3.260>
- Singh R., Sentikumla, Singh V.P., Goel R., Singh B.P., Sahoo R.N. (2026). Financial Inclusion and Gender Inequality in India: Bridging Gaps through Policy Interventions. *Gender, Power, and Economic Inequality in the Global South: An Intersectional Approach*, 68–83. <https://doi.org/10.4324/9781003587309-8>
- Swathi Lekshmi Perumal S., Kalidoss R., Nikita G., Divu D., Suresh Kumar M., Vipin Kumar V.P., Saju G., Surya S., Narayanakumar R., Jose K., Leslie V.A., Arabindoo S.S., Aarsha S., Ramshad T.S., Prachi Siddharth B., Mayur Shivdas T., Grinson G. (2026). Gendered resilience in India’s seaweed farming: Highlighting policy lessons from the COVID-19 pandemic for inclusive Blue economy framework. *Marine Policy*, 194. <https://doi.org/10.1016/j.marpol.2026.107247>
- Tripathi S., Rajeev M. (2023). Gender-Inclusive Development through Fintech: Studying Gender-Based Digital Financial Inclusion in a Cross-Country Setting. *Sustainability (Switzerland)*, 15(13). <https://doi.org/10.3390/su151310253>
- Verma N.M.P., Srivastava A. (2020). The Routledge Handbook of Exclusion, Inequality and Stigma in India. *The Routledge Handbook of Exclusion, Inequality and Stigma in India*, 1–340. <https://doi.org/10.4324/9780429295706>
- Zeeshan Z., Gupta N., Shamim T., Ara S. (2026). Explaining gender and regional barriers to financial inclusion in India: Evidence from Blinder–Oaxaca decomposition of account inactivity. *Cogent Economics and Finance*, 14(1). <https://doi.org/10.1080/23322039.2026.2662720>

Appendix

Table A

Table A1

Summary of Included Studies by Design, Sub-Theme and Study Context

Study	Approach	Design	Sub-theme	Context
Chatterjee (2024)	Quant.	Finindex 2021; IV bivariate probit	1.1	East Asia Pacific, South Asia, Sub-Saharan Africa
Guruprasad et al. (2026)	Quant.	Finindex 2021; Wilcoxon tests	1.1	G20 countries
Kushwah (2024)	Quant.	Women's FI index	1.1	G20 countries
Roy & Patro (2022)	Qual. (R)	Systematic literature review	1.1	Global
Tripathi & Rajeev (2023)	Quant.	Gender FI index; panel models	1.1	109 countries
Ghosh & Chaudhury (2019)	Quant.	Finindex 2017; Fairlie decomposition	1.2	India
Ghosh & Hom Chaudhury (2022)	Quant.	Finindex 2014, 2017; regression	1.2	India
Kamble & Mehta (2026)	Quant.	Finindex 2021; Fairlie decomposition	1.2	India
Kulkarni & Ghosh (2021)	Quant.	Secondary data; primary survey	1.2	India
Ojha & Kumar (2025)	Quant.	Survey (n = 400); logistic regression	1.2	India (Uttarakhand)
P et al. (2025)	Quant.	Finindex 2017, 2021; pooled logit, Fairlie	1.2	India
Zeeshan et al. (2026)	Quant.	Household data (n = 3,000); Blinder–Oaxaca	1.2	India
Ahluwalia & Khurana (2025)	Qual.	Conceptual policy chapter	2.1	India, global
Ghosh & Chavan (2026)	Qual.	Descriptive policy chapter	2.1	India
Goel (2023)	Qual. (R)	Thematic literature review	2.1	India
Parwez (2026)	Qual. (R)	Structured review (94 studies)	2.1	India
Singh et al. (2026)	Mixed	Policy analysis; mixed data	2.1	India
Bala & Singhal (2022)	Qual.	Conceptual chapter; G20 indicators	2.2	India
Divekar et al. (2025)	Qual. (R)	Literature review; case studies	2.2	South Asia (India, Bangladesh)
Jayabal et al. (2026)	Qual.	Literature review, survey, interviews	2.2	India (Chennai)
Majeed et al. (2025)	Qual.	Edited book	2.2	Emerging markets
Pal & Bhowmick (2024)	Qual.	Case analysis of four technologies	2.2	India
Sidana et al. (2023)	Quant.	Survey (n = 230)	2.2	India (Delhi NCR)
Das et al. (2025)	Qual.	Focus groups (n = 45); thematic analysis	2.3	India (Odisha)
Ismaeil et al. (2026)	Qual.	Conceptual chapter; case studies	2.3	Emerging Asian economies
Joshi et al. (2026)	Quant.	ML predictive framework	2.3	Emerging economies
Kaur & Shah (2026)	Qual. (R)	Narrative review; case studies	2.3	India, emerging economies
Parthiban et al. (2025)	Quant.	Platform design; simulation	2.3	Not specified
Chauhan et al. (2026)	Quant.	Survey (n = 450); PLS-SEM	3.1	India
Prajwal Jain et al. (2025)	Quant.	Survey (n = 462); binary logit	3.1	Emerging economies
Banu et al. (2026)	Quant.	Survey (n = 400); ordinal logit	3.2	India (Kerala)
Garg & Ahuja (2026)	Qual.	Conceptual chapter	3.2	Global
Maria Vijay et al. (2026)	Quant.	Survey of informal-sector women; SEM	3.2	India (Chennai)
Parveen & Maqbool (2026)	Qual.	Secondary data analysis	3.2	India
Pattinayak & Sahoo (2024)	Mixed	Survey, interviews; regression	3.2	India
Peter et al. (2025)	Quant.	Survey (n = 214); mediation analysis	3.2	India
Rathinayake et al. (2026)	Qual.	Conceptual chapter	3.2	South Africa
Ruban & Nithya (2025)	Qual. (R)	Literature review; case comparison	3.2	Multi-country
Agrawal et al. (2025)	Mixed	Survey (n = 200), interviews	3.3	India (Uttar Pradesh)
G & KS (2026)	Mixed	Secondary data, survey (n = 250), interviews	3.3	India (Chennai)
Gupta & Kiran (2025)	Qual. (R)	Systematic review (21 reports)	3.3	Global
Simona et al. (2026)	Qual. (R)	Systematic review	3.3	Developing countries
Andalib et al. (2025)	Qual.	Case studies; in-depth interviews	4.1	Bangladesh
Gupta et al. (2025)	Qual.	Conceptual chapter	4.1	India (rural)
Kumar & Joseph (2025)	Qual.	Conceptual chapter	4.1	India
Parameswaran & Kadam (2026)	Quant.	ASUSE 2022–23; econometric analysis	4.1	India
Singh, Dixit, et al. (2025)	Qual. (R)	Systematic review (30 articles)	4.1	Global
Mahadik et al. (2025)	Mixed	Conceptual framework	4.2	Not specified
Mishra et al. (2026)	Qual.	Conceptual framework	4.2	India (Odisha)
Prameela & Kanniammal (2025)	Quant. (R)	Bibliometric analysis (2,426 papers)	4.2	Global
Jarial et al. (2026)	Qual.	Conceptual chapter	4.3	Not specified
Katoch & Gurjar (2025)	Quant.	Remote sensing; ML credit score	4.3	India (central and eastern states)
Swathi Lekshmi Perumal et al. (2026)	Mixed	Household survey; participatory methods	4.3	India (Tamil Nadu)
Chauhan & Sinha (2025)	Mixed	Household survey; interviews	5.1	India (rural)
Khatoom et al. (2026)	Qual.	Conceptual chapter	5.1	Global
Mahajan & Srivastava (2026)	Qual.	Comparative descriptive chapter	5.1	Multi-country
Manhas (2025)	Qual.	Conceptual chapter	5.1	Global, India
Singh, Akhtar, et al. (2025)	Qual.	Conceptual chapter	5.1	Global
Verma & Srivastava (2020)	Qual.	Edited handbook	5.1	India
Bhullar et al. (2025)	Quant. (R)	Bibliometric analysis (350 papers)	5.2	Global
Goyal & Kumar (2021)	Mixed (R)	Systematic review; bibliometric (502 papers)	5.2	Global
Kumar (2025)	Quant. (R)	Bibliometric analysis (1,547 papers)	5.2	India (Bihar)
Rajput & Thakkar (2026)	Quant. (R)	Bibliometric analysis (1,802 papers)	5.2	Global

Note. N = 63. Studies are ordered by sub-theme (numbered as in Table 1), then by author. Quant. = quantitative; Qual. = qualitative; Mixed = mixed methods; (R) = review study. Approach, design and context were coded from Scopus abstracts. Context refers to where the study's data or analysis is set, not the authors' affiliation.