



Mapping the Digital Transformation of Microfinance: A Systematic Literature Review

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Abstract

Digital transformation is reshaping microfinance institutions worldwide. This article presents a systematic literature review examining the multidimensional impact of digital transformation on microfinance. The LENS.org scholarly database was selected as the primary data source, and Journal articles published between 2018 and 2024 were collected for this study. A total of 1,000 documents were collected, and after application of the exclusion and inclusion criteria, 562 articles were included in this study. Prisma flowchart, Keyword co-occurrence analysis, citation analysis, and descriptive statistics were used for this study. Findings confirm 7 clusters identified that Institutional capacity, regulatory quality, digital infrastructure, and sociocultural contexts are identified as critical moderating conditions that determine whether digital transformation generates inclusive or exclusionary outcomes. The COVID-19 pandemic was found to be a powerful accelerant of digital adoption among the microfinance institutions. The research community was mainly urged to pursue longitudinal, comparative, and interdisciplinary methodologies to strengthen the evidence base. Evidence-based collaboration among policymakers, institutions, technologists, civil society, and researchers may be needed to support more digitized microfinance institutions.

Keywords: Digital Evaluation, Microfinance Institution, Systematic Literature Review, Bibliometric Analysis

Introduction

Microfinance institutions (MFIs) have been providing financial services to low-income people outside the reach of traditional banking services (Maenuddin et al., 2023). The microcredit model of microfinance has made a significant contribution to poverty reduction and financial inclusion. From its origins as a paper-based, branch-dependent operation, the microfinance sector has undergone fundamental reconfiguration driven by Financial Technology (FinTech) and broader digital transformation (Mushtaq & Bruneau, 2019; Pal et al., 2023). Digital transformation is not merely technological change; it is a comprehensive institutional shift that reshapes how financial services operate (Fersi et al., 2023; Krasonikolakis et al., 2023). This transformation extends beyond mere technology adoption; it entails fundamental changes in organizational culture, client interaction models, risk assessment methodologies, and regulatory compliance frameworks (Gomber et al., 2018). FinTech companies have emerged by offering agile, data-driven, and cost-efficient alternatives to traditional MFIs. With the digital transformation of microfinance, service quality has improved, transaction costs have decreased, and operational efficiency has increased (Mahedi et al., 2025; Akhter & K., 2020; Dorfleitner et al., 2022; Pal et al., 2023).

Digital adoption accelerated during the COVID-19 pandemic, compelling both consumers and institutions to shift toward contactless and digital service modalities (Ozili, 2020). During the COVID-19 pandemic, the importance of digital microfinance became clear as people were confined to their homes due to movement restrictions. This allows microfinance services to reach people and contribute significantly to economic development (Sidduquee, 2025). Mobile money platforms like M-Pesa in Kenya, bKash in Bangladesh, and Wave in West Africa are examples of digital financial services that could reach millions of individuals within short timeframes. Platforms such as bKash, Nagad, and Rocket have enrolled hundreds of millions of accounts and processed trillions of takas in transactions, positioning Bangladesh as a globally notable case of FinTech-enabled financial inclusion (Ahmed et al., 2025; Howlader & Halder, 2025). In this digital transformation, various technologies are being integrated, such as agent banking, mobile banking, and blockchain-based lending platforms. In particular, agent banking plays an important role in providing financial services to rural and unbanked people (Sharif et al., 2024). Despite the benefits and progress of digital microfinance, the digital transformation of

microfinance faces many challenges. These include low digital literacy among rural borrowers, inadequate telecommunications infrastructure, gender-based digital exclusion, and regulatory fragmentation (Aziz & Naima, 2021; Ahammed et al., 2024).

Akter et al. (2021) conducted a bibliometric analysis of the global microfinance literature, identifying poverty alleviation, group lending, and credit scoring as prominent sub-themes, with a growing emphasis on MFIs' financial performance. Ballester et al. (2024) review 30 Scopus articles published through December 2023 that address sustainable poverty reduction but do not specifically focus on digital transformation. Benami & Carter (2021) demonstrated that digital technologies can reshape rural microfinance through innovations in savings, credit, and insurance, while also raising concerns about the need for financial literacy and trust-building. Few works have been systematically integrated into the digital transformation literature—a gap that the present systematic literature review (SLR) aims to address through its thematic synthesis.

Despite the growing body of literature on digital transformation and financial inclusion in microfinance, reviews across disciplinary silos, geographic contexts, and methodological traditions are lacking. Systematic synthesis is needed to fill gaps in the field's thematic architecture and to identify convergent and divergent findings across studies, thereby generating policy-relevant recommendations. This study addresses these needs by conducting a SLR supplemented by bibliometric co-occurrence analysis using VOSviewer software.

This review makes three distinct contributions to the field. First, by employing VOSviewer bibliometric mapping, the review ensures transparency and replicability, responding to calls for open science in systematic review methodology (Peters et al., 2020). Second, the review spans a particularly consequential period (2018–2024) that encompasses both the pre-pandemic growth of digital finance and the pandemic-induced acceleration of digital adoption. Third, the review adopts a deliberately inclusive approach to geographic coverage, encompassing studies from Sub-Saharan Africa, South Asia, Southeast Asia, Latin America, and transitional economies, thereby mitigating geographic bias.

Literature review

Digital transformation in microfinance is not merely a technological upgrade; it represents a fundamental reconfiguration of institutional processes, service delivery models, and client relationships (Fersi et al., 2023). Drawing on the resource-based view (RBV) of the firm, Dorfleitner et al. (2022) conceptualized MFI digital transformation as the integration of digital technologies across operational, social, and governance dimensions.

Their findings empirically support the idea that MFIs offering digital solutions exhibited improved social performance and reduced transaction costs. Using stochastic frontier analysis on 387 MFIs across 2005–2019, Fersi et al. (2023) confirmed that FinTech adoption improved both operational efficiency and social inclusion metrics. Though benefits were unevenly distributed across institutions by size and geography. The FinTech landscape in Bangladesh has been shaped primarily by the rapid rise of Mobile Financial Services (MFS). Ahmed et al. (2025) examined the strategic evolution of MFS in Bangladesh, which has transitioned from a mobile payment platform to a digital microfinance provider offering savings schemes, loan repayments, and microcredit services. Through their study, they demonstrated that a single platform could serve as both a transaction infrastructure and a microcredit delivery system (Ahmed et al., 2025).

To understand how microfinance institutions can be digitized, researchers have employed several significant theories. Aminah et al. (2024) used the Technology, Organization, and Environment (TOE) framework, and Bari (2021) used the Diffusion of Innovations (DOI). Isa et al. (2026) and Istiak et al. (2026) demonstrated that practical, simple-to-use digital technology is crucial for individuals outside banking services and for microfinance employees. Fersi et al. (2023) found that because innovative MFIs focus on targeting disadvantaged groups, they have higher social efficiency than non-innovative ones (Barua, et al. 2025). Nadeem et al. (2026) show that the association between microfinance and poverty reduction in Pakistan is positively moderated by digital financial knowledge. According to Lonna et al. (2025), switching from manual to mobile payments serves as a "strategic differentiator" in Indonesia.

Despite having many advantages, the literature mentions several barriers. Among them, notable inequalities exist between rural and urban customers, with rural people using fewer digital devices, having less knowledge, and experiencing weaker internet connections (Barai, 2024). According to Moin and Kraiwanit (2023) and Alam (2024), low digital literacy among rural residents is a major barrier to the digitalization of microfinance. One of the main reasons why small microfinance institutions fall behind in the market is the large initial investment required for core banking software and IT teams (Murshid, 2022). According to Kandie and Islam (2022), digital microcredit can sometimes increase poverty due to short loan repayment periods and very high interest rates.

A growing body of scholarly literature has examined various dimensions of digital microfinance. The existing literature also reflects a notable methodological imbalance. Quantitative survey-based studies dominate the evidence base, with qualitative and mixed-methods approaches that might better capture institutional processes, borrower experiences, and

contextual nuance (Hajkowicz, 2023). Furthermore, longitudinal studies that track the sustainability and long-term social impact of digital microfinance interventions are very few (Gurlek, 2023). Taken together, these gaps indicate that while the individual building blocks of knowledge on digital microfinance exist in dispersed form, little work has been undertaken to systematically, transparently, and comprehensively synthesize the necessary evidence base for researchers, practitioners, and policymakers. This study makes distinct contributions to the academic and policy literature. First, it provides the first comprehensive systematic literature review specifically focused on the digital transformation of microfinance, filling a critical gap in the existing evidence base. By incorporating pre- and post-pandemic literature (2018–2024), this study captures a period of rapid institutional change that earlier reviews and thematic studies have not addressed.

Methodology

Bibliometric analysis is a powerful quantitative research method for systematically collecting, managing, and analyzing bibliographic metadata from scientific publications, including citations, author affiliations, journal titles, publication years, and keywords (Callon et al., 1983; Van and Waltman, 2010; Aria & Cuccurullo, 2011). Through this process, it becomes possible to uncover intellectual structures, identify emerging trends, and evaluate scientific impact. This approach is not limited to simple descriptive statistics; rather, it increasingly incorporates advanced computational techniques, such as co-word analysis and science-mapping tools (Danthu et al., 2021). VOSviewer is a freely available computer program developed for constructing and viewing bibliometric maps (van Eck & Waltman, 2010). The tool supports the construction of multiple network types, including co-occurrence, citation, and co-citation networks, based on bibliographic metadata based on title, authors, publication year, source title, abstract, author keywords, and citation counts, all of which were retained during data preparation.

This study follows a Systematic Literature Review (SLR) protocol aligned by bibliometric co-occurrence analysis. The integration of qualitative synthesis with quantitative bibliometric methods has been validated as a robust approach for mapping emergent and rapidly evolving fields in management, finance, and development studies (Donthu et al., 2021). This study focused on high-quality papers that offered valuable insights into the theoretical perspectives guiding the advancement of the research topic. The data collection process used the Lens.org database to ensure the reliability and trustworthiness of the information.

Data Source and Search Strategy

The LENS.org scholarly database was selected as the primary data source due to its open-access architecture, broad interdisciplinary coverage, and integration of patent and scholarly metadata (Donthu et al., 2021). Unlike proprietary databases (e.g., Scopus, Web of Science), LENS.org provides unrestricted, reproducible access, consistent with open science principles (Visser, M., van Eck, N. J., & Waltman, L., 2021; Pagliaro, M., 2022). The search strategy was developed iteratively, combining Boolean operators with controlled vocabulary and free-text terms across title, abstract, and keyword fields. A structured and systematic search strategy was employed to identify relevant studies on the digital transformation of microfinance. The required bibliographic data were collected from the Lens.org database, which provides extensive coverage of peer-reviewed academic publications. To ensure the research was relevant, the search was conducted across the title, abstract, and keyword fields (Zupic, I., & Čater, T., 2015).

Journal articles published between 2018 and 2024 were collected for this study. The selection of 2018 to 2024 as the temporal boundary for this bibliometric analysis is deliberate and grounded in several interconnected scholarly and contextual rationales. Research on digital financial services and financial inclusion has surged since 2016, with growing interdisciplinary interest underscoring their significance. The pandemic period served as a critical accelerator of digital adoption in microfinance. One of the most severely impacted businesses during COVID-19 was microfinance institutions and their borrowers. (Fu, J., & Mishra, M., 2022). The six-year window is consistent with methodological standards in bibliometric research on rapidly evolving fields (Ha et al., 2025). Kim et al. (2018) focused on narrower periods, demonstrating the value of adopting a broader, more recent timeframe to ensure findings are up to date and relevant.

Following preliminary searches and keyword refinement, the following search string was finalized:

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TITLE-ABS-KEY ("digital transformation" OR "digitalization" OR "digital  
finance" OR fintech OR "financial technology")  
AND
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TITLE-ABS-KEY ("microfinance" OR "microcredit" OR "micro finance  
institution*" OR MFI*)
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A total of 1,000 documents were initially retrieved from Lens.org. To enhance the relevance and quality of the data, several screening procedures were conducted. First, incomplete and duplicate records were removed.

Then, specific inclusion and exclusion criteria were applied, retaining only peer-reviewed English-language articles. After applying all filters and conducting manual screening, the final dataset consisted of 562 articles. The selected records were exported in CSV and plain text formats. Subsequently, VOSviewer was used to perform bibliometric mapping and visualization. VOS (Visualization of Similarities) serves as a robust alternative to traditional multidimensional scaling (MDS), as VOS maps do not suffer from the artifacts that commonly afflict MDS-based approaches (van Eck et al., 2010).

Table 1: Search string used in Lens.org

Lens.org	("digital transformation" OR "digitalization" OR "digital finance" OR fintech OR "financial technology") AND ("microfinance" OR "microcredit" OR "micro finance institution*" OR MFI*)
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Table 2: Inclusion and Exclusion Criteria

CRITERION	ICLUSION	EXCLUSION
Language	English	Non-english
Time frame	2018-2024	Before 2018
Document type	Journal article	Conference paper, books, book chapters, reviews
Publication stage	Finale	In press/early access
Data quality	Complete bibliographic records	Incomplete or duplicate records

Data Analysis Methods

The analytical phase of this bibliometric study followed a structured, methodical procedure comprising three sequential stages: data export from Lens.org, data preparation and cleaning, and network analysis using VOSviewer.

Keyword co-occurrence analysis is used as the primary method for visualizing the conceptual and intellectual structure of research on the digital transformation of microfinance institutions. The analysis type is set to *Co-occurrence*, with *Author Keywords* selected as the unit of analysis, consistent with established bibliometric practice (van Eck & Waltman, 2010). All items are positioned in a two-dimensional space. The weighted sum of squared distances between related items is minimized to ensure closely related keywords are grouped into the same cluster (van Eck & Waltman, 2010). To normalize co-occurrence frequencies and ensure comparability across keywords with varying occurrence rates, the association strength measure is applied (van Eck & Waltman, 2009).

Citation analysis was conducted to identify the most influential publications and sources within the field. This was accomplished by constructing a citation network in VOSviewer, where nodes represent individual publications and directed links reflect citation relationships. This approach highlights the foundational intellectual knowledge underpinning the research domain by identifying the most impactful documents. This

enables the mapping of the core literature of digital microfinance research. VOSviewer supports the construction of networks based on co-authorship, co-occurrence, citation, bibliographic coupling, or co-citation links, drawing on a bibliographic database (van Eck & Waltman, 2023). Items that are frequently co-cited appear close to one another on the resulting map, enabling the identification of thematic clusters and shared intellectual traditions (Waltman et al., 2010).

Following the construction of each network keyword co-occurrence, citation, and co-citation, VOSviewer generated visual maps for interpretation. Items are displayed as labeled circles, with each circle's size reflecting its importance. The distance between two items indicates their degree of relatedness, with shorter distances reflecting stronger associations. Colors denote cluster membership, with each cluster representing a group of closely connected items that can be interpreted as a thematic subfield or intellectual community. These visual representations were systematically analyzed to identify emerging research themes, dominant intellectual contributions, and knowledge gaps (van Eck & Waltman, 2010).

Results and Discussion

Figure 1 below presents the annual trend in publications on digital transformation in the microfinance sector from 2018 to 2024. The analysis clearly demonstrates a strong upward trajectory in research activities during the observed period, indicating a rapidly growing academic and policy-making interest in this emerging research domain. The number of publications rose from 34 in 2018 to 47 in 2019, indicating the study's slow but continuous growth. But in 2020, the number of articles grew dramatically to 96, marking a crucial turning point. The increased demand for digital financial services in the post-COVID-19 era is a major contributor to this noteworthy growth.

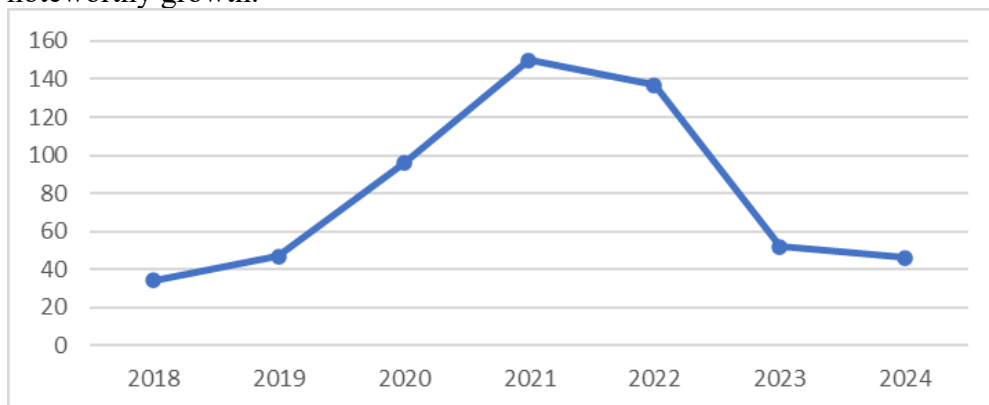


Figure 1: Annual Publication Trend on Digital Transformation in Microfinance (2018–2024)

Notably, the number of publications peaked in 2021 at 150, indicating the highest level of scholarly interest in this field worldwide. The number remained significantly higher than in previous years. Although the number of publications dropped to relatively low levels in 2023 and 2024, the overall trend remains encouraging. This indicates that research on digital MFIs is still growing. In the coming years, research and development in this field are anticipated to accelerate further with the development of mobile finance, digital payment infrastructures, artificial intelligence, and fintech-driven financial inclusion.

The distribution of research papers across different domains of the digital transformation of microfinance is shown in Figure 2. The size of each segment indicates the percentage of research articles relevant to that topic, and each color code corresponds to a different research domain.

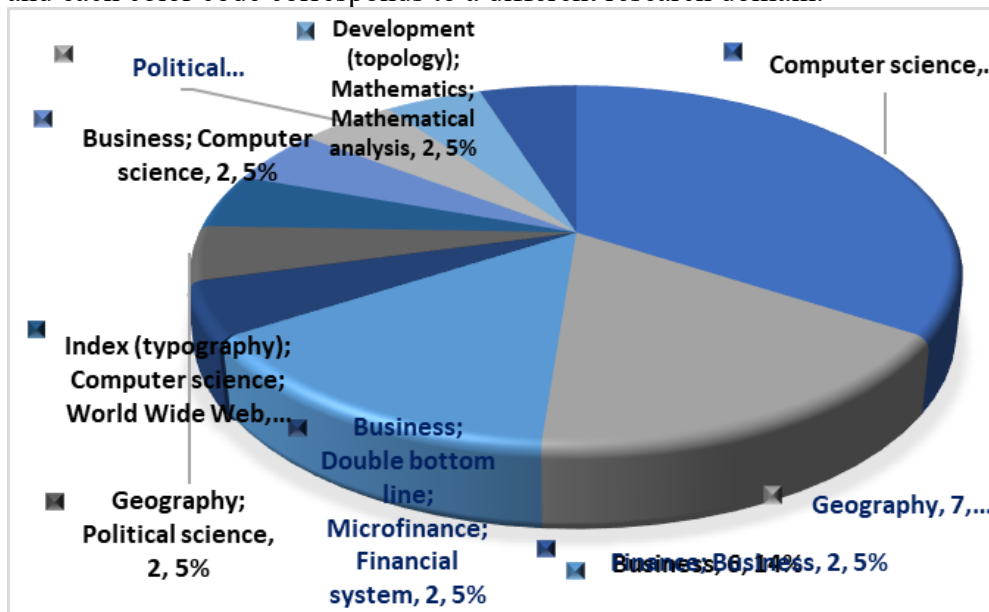


Figure 2: Documents by subject area

Based on the data presented in Figure 2, the main findings of the research on the digital transformation of microfinance are presented below:

Computer Science: With 34%, it is the most prevalent field. This suggests that technology is the main driver of microfinance's digital transformation. Web-based infrastructures, digital platforms, and data management systems continue to be crucial to this field of study. The prevalence of information technology underscores the importance of updating microfinance services and improving operational effectiveness.

Geography and Business: With 17% of the total research output, geography is the second most important factor. This implies that location-

based services, geographic accessibility, and regional context are crucial factors to consider when conducting research on digital microfinance. Furthermore, business makes up 14%, indicating a significant contribution to the sector. This demonstrates that the study domain's primary focus areas are digital business models and the long-term growth of technology-driven microfinance institutions.

Diverse Interdisciplinary Fields: A number of interdisciplinary fields, such as Business and Computer Science, Microfinance and Financing System, Index (Typography), Computer Science and World Wide Web, Geography and Political Science, Political Science, Development (Topology), Mathematics and Mathematical Analysis, and Finance and Business, each make up 5% of all publications. A substantial amount of the research output is represented by each of these. This distribution shows that the study of digital microfinance is a multifaceted topic that integrates viewpoints from technology, economics, policy-making, and development.

Keyword Co-occurrence analysis

Keyword co-occurrence analysis is a quantitative research method for analyzing keywords and their basic characteristics, such as frequency of occurrence and evolution. It is conducted by focusing on keywords instead of publications. It becomes easier to clearly explain each cluster's content. In the network visualization map of VOSviewer, a node indicates a keyword, and the size of that node shows how many papers use that keyword. A larger node means the keyword is more popular. The link between two nodes indicates the relationship between the keywords.

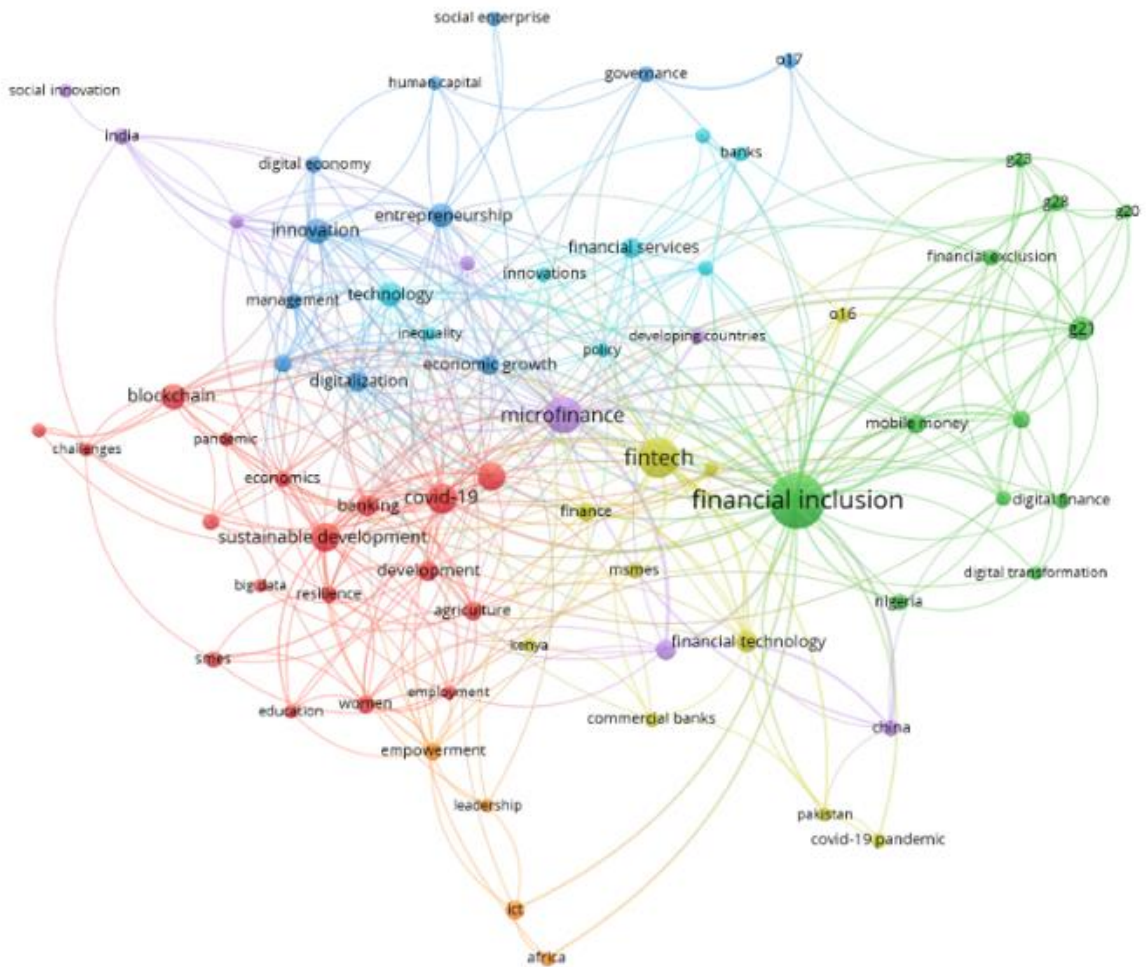


Figure 3: Network visualization of co-occurrence

Within microfinance, Cluster 1, with 18 keywords, focuses on technology and agricultural finance. It emphasizes how microfinance, technological developments, foundational issues, and technological advancements support financial inclusion. The most common keywords are COVID-19 (Occurrence 24, Total Link Strength 39) and Sustainability (Occurrence 19, Total Link Strength 18). Other significant keywords include blockchain, artificial intelligence, agriculture, banking, challenges, development, education, employment, and SMEs. Cluster 2, comprising 12 themes, highlights mobile banking and digital finance systems as tools to enhance economic empowerment. Financial inclusion (Occurrence 75, Total Link Strength 93) is central to digital microfinance research in Bangladesh. Other key terms include digital finance, digital financial inclusion, digital transformation, financial inclusion, financial exclusion, and mobile banking.

nations. China, corporate social responsibility, developing nations, microfinance, and microcredit are important concepts; microfinance is essential to CSR-driven financial activities.

Cluster 6: Banking Services and Innovation, with a total of 8 keywords, highlights the operational and social aspects of microfinance, emphasizing innovation and technology adoption. The keywords include bank, financial services, inequality, innovation, panel data, poverty, and technology, among which technology (Occurrence 24, Total Link Strength 26) plays a particularly important role in poverty alleviation and social development. Cluster 7, the smallest cluster with 4 keywords, focuses on empowerment and leadership, especially in the African context. This cluster shows how information and communication technologies significantly contribute to social empowerment and effective leadership in microfinance programs. The keywords in Cluster 7 are ICT, empowerment, and leadership.

Table 3: Keywords for each cluster by link

Keyword	Links	Total link strength	Occurrence	Avg.pub.year
Cluster 1: Technology and agricultural finance within microfinance				
Agricultural	16	18	9	2019.56
Artificial Intelligence	6	6	7	2021.43
Banking	12	16	12	2020.33
Big data	4	4	5	2015.80
Blockchain	13	15	16	2021.19
Challenges	8	9	5	2021.80
Covid-19	28	39	24	2021.70
Development	15	18	11	2020.18
Economics	10	11	6	2017.67
Education	6	7	5	2015.60
Employment	10	12	5	2022.20
Islamic Finance	3	4	5	2020.60
Pandemic	8	8	5	2021.00
Resilience	12	14	7	2022.57
SMEs	6	7	7	2021.57
Sustainability	18	18	19	2020.16
Sustainable Development	21	27	22	2019.77
Women	12	14	8	2019.88
Cluster 2: Digital finance systems and mobile banking				
Digital Finance	7	7	6	2021.33
Digital Financial Inclusion	9	10	6	2021.00
Digital Transformation	5	5	5	2021.60
Financial Exclusion	10	15	7	2019.29
Financial Inclusion	40	93	75	2020.20
G20	6	8	5	2020.60
G21	13	20	15	2020.87
G23	9	13	6	2018.50
G28	8	13	7	2020.86
Mobile Banking	14	18	8	2019.50

Mobile Money	8	13	9	2019.67
Nigeria	5	6	7	2021.00
Cluster 3: The impact of digitalization on microfinance and business development				
Digital Economy	8	8	7	2020.14
Digitalization	18	21	10	2021.67
Economic Development	15	18	8	2021.83
Economic Growth	17	21	11	2019.40
Entrepreneurship	19	21	15	2019.13
Governance	7	9	7	2020.71
Human Capital	6	6	5	2020.80
Innovation	19	29	16	2018.20
Management	14	17	6	2020.80
O17	4	6	6	2018.67
Social enterprise	2	2	6	2016.33
Cluster 4: The role of financial technology (FinTech) and commercial banks in microfinance				
Commercial Banks	6	6	6	2020.67
Covid-19 Pandemic	3	4	6	2021.17
Crowdfunding	6	8	5	2021.80
Finance	13	16	9	2019.21
Financial Technology	12	16	12	2021.08
Fintech	27	49	41	2021.27
Kenya	6	6	5	2020.20
MSMEs	6	7	7	2020.57
O16	9	11	6	2020.50
Pakistan	5	7	5	2021.60
Cluster 5: Focuses on microfinance in developing countries and its integration with corporate social responsibility (CSR).				
China	6	13	7	2020.00
Corporate social responsibility	13	14	5	2019.25
Developing Countries	5	5	5	2018.40
India	9	10	7	2014.86
Microcredit	9	19	10	2019.70
Microfinance	31	50	34	2019.56
Social Entrepreneurship	8	8	6	2018.67
Social Innovation	1	1	5	2018.80
Cluster 6: Banking Services and Innovation				
Banks	6	8	6	2020.00
Financial Service	10	12	11	2019.18
Inequality	18	20	5	2021.25
Innovation	6	6	6	2020.67
Panel Data	5	6	6	2020.17
Policy	11	12	5	2018.80
Poverty	13	16	6	2019.67
Technology	17	26	14	2017.92
Cluster 7: Focuses on empowerment and leadership				
Empowerment	13	15	8	2019.75
ICT	5	6	9	2020.56
Leadership	5	5	5	2020.20

Conclusion

This systematic literature review synthesizes a substantial and rapidly growing body of scholarship on digital transformation in microfinance. The VOSviewer bibliometric analysis identified seven thematic clusters that together map the intellectual architecture of the field: blockchain and pandemic resilience; innovation and the digital economy; financial inclusion and mobile money; fintech and financial services in developing economies; financial technology in geographic context; and leadership and empowerment research. The publication-year trend shows a clear shift toward recency, with most clusters spanning 2019-2022, confirming that this is an actively accelerating field. The COVID-19 keyword (avg 2021.70) confirms the pandemic as a significant catalyst for research. The high link strength of Financial Inclusion (93) relative to any other keyword signals it as the conceptual bridge connecting all seven clusters.

The evidence base confirms that digital transformation has generated substantial advances in financial inclusion, institutional efficiency, and client welfare across diverse geographic and socioeconomic contexts. Mobile money, fintech lending platforms, AI credit scoring, and blockchain-based transparency mechanisms have collectively expanded access to formal financial services for millions of individuals and enterprises. The COVID-19 pandemic served as a powerful accelerant of digital adoption. However, the evidence equally demonstrates that digital transformation is not inherently inclusive, equitable, or beneficial. Algorithmic bias, cybersecurity risks, data privacy violations, and predatory digital lending practices represent emerging harms that demand urgent regulatory attention. MFI organizational capacity, regulatory quality, digital infrastructure, and social norm contexts powerfully condition the outcomes of digital transformation.

For microfinance institutions, investment in digital readiness is recommended as a strategic requirement. For that, it required capacity building, technology governance, and digital literacy programming. For researchers, longitudinal, comparative, and interdisciplinary research designs are needed to generate more robust evidence on the pathways, conditions, and long-term consequences of digital transformation in microfinance. Digital transformation holds genuine transformative potential for microfinance and financial inclusion. This review aims to contribute to that collective endeavor by providing a comprehensive, rigorous, and accessible synthesis of current knowledge, along with a clear articulation of the knowledge gaps that must be urgently addressed.

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References:

1. Ahammed, M. M. U., Islam, M. S., & Datta, R. K. (2024). Fintech-based financial inclusion in Bangladesh: Overview, challenges and policy directives. *International Journal of Finance & Banking Studies*, 13(1), 1–16. <https://doi.org/10.20525/ijfbs.v13i1.3227>
2. Ahmed, J. U., Khan, S. A., & Faroque, A. R. (2025). bKash: Transitioning from mobile financial services to digital microfinance in Bangladesh. In J. U. Ahmed (Ed.), *Case studies in technology and innovation management*. Springer Nature. https://doi.org/10.1007/978-981-96-3452-1_8
3. Aziz, A., & Naima, U. (2021). Rethinking digital financial inclusion: Evidence from Bangladesh. *Technology in Society*, 64, Article 101509. <https://doi.org/10.1016/j.techsoc.2020.101509>
4. Donthu, N., Kumar, S., Mukherjee, D., Pandey, N., & Lim, W. M. (2021). How to conduct a bibliometric analysis: An overview and guidelines. *Journal of Business Research*, 133, 285–296. <https://doi.org/10.1016/j.jbusres.2021.04.070>
5. Dorfleitner, G., Forcella, D., & Nguyen, Q. A. (2022). The digital transformation of microfinance institutions: An empirical analysis. *Journal of Applied Accounting Research*, 23(2), 454–479. <https://doi.org/10.1108/JAAR-02-2021-0041>
6. Fu, J., & Mishra, M. (2022). Fintech in the time of COVID-19: Technological adoption during crises. *Journal of Financial Intermediation*, 50, 100945. <https://doi.org/10.1016/j.jfi.2021.100945>
7. Zupic, I., & Čater, T. (2015). Bibliometric methods in management and organization.
8. Ha, D., Le, P. & Nguyen, D.K. Financial inclusion and fintech: a state-of-the-art systematic literature review. *Financ Innov* 11, 69 (2025). <https://doi.org/10.1186/s40854-024-00741-0>
9. Howlader, S., & Halder, P. (2025). Fintech's impact on financial inclusion through mobile financial services in Bangladesh. *Business Perspectives and Research*. <https://doi.org/10.1177/09763996251356998>
10. Kim M, Zoo H, Lee H, Kang J (2018) Mobile financial services, financial inclusion, and development: a systematic review of academic literature. *Electron J Inf Syst Dev Count* 84:e12044
11. Krasnikolakis, I., Tzarbopoulos, M., & Eng, T.-Y. (2023). Digital transformation of financial sector organisations: A systematic

- literature review. *Journal of Strategic Marketing*. <https://doi.org/10.1080/0965254X.2023.2230250>
12. Maenuddin, Hamid, S. A., Nassir, A. M., Arshad, M. U., & Bhatti, M. I. (2023). Predictors of microfinance sustainability: Empirical evidence from Bangladesh. *Cogent Economics & Finance*, 11(1), Article 2202964. <https://doi.org/10.1080/23322039.2023.2202964>
 13. Moin, C. M., & Kraivanit, T. (2023). Digital improvements to microfinance in Bangladesh. *International Research E-Journal on Business and Economics*, 8(1), 1–7.
 14. Mushtaq, R., & Bruneau, C. (2019). Microfinance, financial inclusion and ICT: Implications for poverty and inequality. *Technology in Society*, 59, Article 101154. <https://doi.org/10.1016/j.techsoc.2019.101154>
 15. Ozili, P. K. (2018). Impact of digital finance on financial inclusion and stability. *Borsa Istanbul Review*, 18(4), 329–340. <https://doi.org/10.1016/j.bir.2017.12.003>
 16. Pal, A., Dey, S., Nandy, A., Shahin, S., & Singh, P. K. (2023). Digital transformation in microfinance as a driver for sustainable development. In W. Leal Filho, A. M. Azul, F. Doni, & A. L. Salvia (Eds.), *Handbook of sustainability science in the future: Policies, technologies and education by 2050* (pp. 251–271). Springer. https://doi.org/10.1007/978-3-031-04560-8_74
 17. Van Eck, N. J., & Waltman, L. (2009). How to normalize cooccurrence data? An analysis of some well-known similarity measures. *Journal of the American Society for Information Science and Technology*, 60(8), 1635–1651. <https://doi.org/10.1002/asi.21075>
 18. Van Eck, N. J., & Waltman, L. (2010). Software survey: VOSviewer, a computer program for bibliometric mapping. *Scientometrics*, 84(2), 523–538. <https://doi.org/10.1007/s11192-009-0146-3>
 19. Van Eck, N. J., & Waltman, L. (2023). *VOSviewer manual* (Version 1.6.19). Centre for Science and Technology Studies, Leiden University. https://www.vosviewer.com/documentation/Manual_VOSviewer_1.6.19.pdf
 20. Waltman, L., van Eck, N. J., & Noyons, E. C. M. (2010). A unified approach to mapping and clustering of bibliometric networks. *Journal of Informetrics*, 4(4), 629–635. <https://doi.org/10.1016/j.joi.2010.07.002>