

"Exploring the Role of FinTech in Driving Financial Inclusion: A Bibliometric and Network Analysis of Scopus Publications"

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Abstract: Financial Technology (FinTech) has become a pivotal force in enhancing financial inclusion by closing the gaps in reach of banking services, credit, and digital payment networks, especially in regions that are often overlooked. This study conducts an extensive bibliometric and network analysis of 248 scholarly articles sourced from the Scopus database, spanning 2017 to 2024. Utilizing VOSviewer for mapping and visualization, this study uncovers the intellectual framework, emerging themes, and collaboration trends within the FinTech and financial inclusion literature. The findings indicate a notable increase in academic publications in 2024, highlighting the rising interest of both academia and policymakers in digital financial ecosystems and innovation aimed at inclusion. Keyword co-occurrence and citation networks reveal prominent clusters focused on digital payments, mobile banking, blockchain for inclusion, and fintech regulation. This research also pinpoints the most influential authors, journals, and countries contributing to this field, emphasizing the interdisciplinary nature of FinTech research that connects economics, information systems, and social development. By combining quantitative bibliometric insights with thematic mapping, the present investigation highlights a valuable overview of the evolution of scholarly work and future directions, highlighting FinTech's role as a catalyst for inclusive and sustainable financial growth.

Keywords: FinTech, Financial Inclusion, Bibliometric Analysis, VOSviewer, Digital Finance, Scopus, Sustainable Development

1. Introduction

Financial technology (FinTech) has become a key catalyst for fostering inclusive and sustainable economic development by closing the gap between those with and without access to banking services (Bisht, P., et al. 2025 & Nigam et al., 2024). The fusion of technology with financial

services has transformed how individuals and businesses engage with financial products, resulting in greater efficiency, transparency, and accessibility (Chinoda & Kapingura, 2018; Chinoda & Kapingura, 2024). Through innovations such as digital banking, blockchain, and mobile payment systems, FinTech allows previously unserved and underserved groups to engage with the formal financial system (Sokol et al., 2023; Del Sarto, 2025). The global financial environment has witnessed a rapid increase in digital financial services driven by advances in artificial intelligence (AI), cloud computing, and data analytics (Ha et al., 2025; Afjal et al., 2023). These technologies help lower transaction costs, enhance credit availability, and improve customer experience, thereby directly promoting financial inclusion (Jafri et al., 2025). FinTech solutions, such as peer-to-peer lending, mobile wallets, and digital insurance models, are particularly advantageous for emerging markets, where traditional banking infrastructure is often lacking (Cevik, 2024; Williams, 2024). Recent research indicates that the advancement of FinTech has transformed the global financial ecosystem by fostering innovative business models and promoting financial democratization (Kodongo et al., 2024; Technology in Society, 2024). FinTech not only facilitates access to capital but also supports small and medium-sized enterprises (SMEs), women entrepreneurs, and rural communities, thereby driving inclusive growth and reducing economic disparities (MDPI, 2025; Journal of Productivity Studies, 2024). [insert references] Additionally, bibliometric and scientometric studies highlight that the relationship between FinTech and financial inclusion has become an expanding area of research, underscoring the sector's interdisciplinary nature and global significance (Journal of FinTech Studies, 2025; Emerald Journal, 2025).

Although FinTech innovations open up new possibilities, they also face ongoing issues such as data privacy, cybersecurity, and regulatory compliance (Poonam et al., 2024; SSRN, 2024). Maintaining a balance between innovation and risk management is essential for ensuring financial inclusion (PMC Article, 2024; World Journal of Applied Research and Reviews, 2024). Additionally, challenges such as digital literacy gaps, limited access to technology, and gender-related obstacles continue to restrict the reach of financial technology (MF Journal, 2024; Jafri et al., 2025). In emerging markets such as India, FinTech has been instrumental in revolutionizing payment systems and promoting digital financial literacy (Dhaya 2024; Pranajaya et al. 2024). Regulatory measures, including open banking and digital identification systems, have further

bolstered the fintech landscape (Lee, 2024; Dubey, 2022). The COVID-19 pandemic has also hastened the adoption of digital financial services, highlighting the resilience and adaptability of FinTech systems (Malibari et al., 2023; Khaliq et al., 2025). Overall, FinTech is a crucial facilitator of inclusive economic participation and sustainable financial development. The rapid expansion of FinTech-related research underscores its growing significance in academia and policy (Ozili, 2024). Therefore, this study performs a bibliometric and network analysis of Scopus-indexed publications from 2017 to 2024 to identify trends, key contributors, and thematic clusters in the FinTech and financial inclusion research. The results offer a systematic understanding of the global research landscape and identify areas for future exploration.

2. Literature Review

2.1 Conceptualizing FinTech and Financial Inclusion: Financial Technology (FinTech) signifies the blending of finance and technology to offer innovative financial products and services in a way that is both efficient and inclusive. FinTech has transformed traditional financial systems by incorporating digitization, mobile banking, and online lending platforms (Demirgüç-Kunt et al., 2018). It is crucial to provide individuals and small businesses with access to affordable and convenient financial services, particularly in underserved and rural areas (Cevik, 2024). Financial inclusion focuses on ensuring that individuals can obtain affordable and practical financial services, such as transactions, savings, credit, and insurance, delivered in a responsible and sustainable manner (Ozili, 2024). The convergence of FinTech and financial inclusion is evident in the democratization of finance. Innovations such as blockchain, mobile money, and peer-to-peer lending have greatly reduced obstacles to the utilization of financial services (Sokol et al., 2023). According to Chinoda and Kapingura (2024), FinTech is a strategic tool for economic empowerment, especially in developing economies where banking services are not widely available. These technological advancements are supported by regulatory measures that encourage digital identity, data portability and open banking (Dubey, 2022; Lee, 2024).

2.2 Technological Drivers and Evolution of FinTech: Innovations in technology, including artificial intelligence (AI), big data analytics, and blockchain, have been pivotal in propelling the FinTech revolution. As noted by Ha et al. (2025), AI-driven credit-scoring systems improve loan access for groups traditionally excluded from financial services by utilizing alternative

data sources. Similarly, blockchain technology enhances transparency and trust, thereby minimizing fraud and reducing operational expenses (Del Sarto, 2025). In regions such as Africa and Asia, mobile-based platforms have emerged as the most accessible means of digital financial services (Chinoda & Kapingura, 2024). Jafri et al. (2025) and Malibari et al. (2023) emphasize that the COVID-19 pandemic hastened digital transformation within financial services. There has been a notable increase in the use of mobile wallets and online banking, signifying a lasting shift towards digital ecosystems. According to the Journal of FinTech Studies (2025), innovations such as contactless payments and instant remittance systems bolstered financial inclusion during disruptions.

2.3 FinTech and Financial Inclusion in Emerging Economies: In Asia and Africa, emerging markets have experienced a swift uptake of FinTech, largely because of the widespread use of smartphones and government-supported digital programs. In India, innovations such as the Unified Payments Interface (UPI) and Aadhaar-based identity systems have transformed inclusive banking (Dhaya, 2024). Similarly, African nations utilize mobile money platforms, such as M-Pesa, to facilitate cross-border transactions and provide small-scale financing (Kodongo et al., 2024). Pranajaya and Dey (2024) highlighted that collaborations between the public and private sectors propelled FinTech growth, while regulatory sandboxes spurred innovation. FinTech has played a crucial role in empowering women and rural business owners by making microcredit and savings options more accessible (MDPI 2025). Nonetheless, Ozili (2024) and the MF Journal (2024) note that digital literacy remains a significant obstacle to effective inclusion, as many individuals still lack the skills needed to use digital platforms. Additionally, research shows that FinTech's impact on financial inclusion goes beyond mere access; it affects financial resilience, savings habits, and business efficiency (Williams, 2024). Digital lending, crowdfunding, and microinsurance have been vital in supporting small and medium enterprises (SMEs) in low-income areas (Journal of Productivity Studies 2024).

2.4 FinTech and Sustainable Development: An expanding body of research connects FinTech with broader sustainable development objectives, notably SDG 8 (decent work and economic growth) and SDG 10 (reduced inequalities). FinTech's ability to enhance resource distribution, alleviate poverty, and boost women's involvement in financial systems has positioned it as a driver of inclusive growth (Cevik, 2024; MDPI, 2025). [insert here] As noted by Technology in Society (2024), fintech aids economic sustainability by fostering transparency and

traceability in financial transactions. Ha et al. (2025) contend that FinTech-driven green finance models and carbon credit platforms are becoming essential elements of responsible financial ecosystems. The fusion of FinTech with ESG principles ensures that innovation is in harmony with ethical and environmental standards (Ozili 2024). Bibliometric trends indicate a rise in publications associating FinTech with sustainable finance, highlighting academia's increasing interest in exploring the technology's socio-economic impacts (Journal of FinTech Studies, 2025).

2.5 Challenges in FinTech Implementation: Although FinTech has the potential to be transformative, its adoption is hindered by several obstacles such as data privacy concerns, cybersecurity issues, and the digital divide. According to Poonam et al. (2024), consumer trust in digital financial systems is jeopardized by data breaches and biases in algorithms. Additionally, inconsistencies in regulations across countries create barriers to cross-border FinTech solutions (SSRN, 2024). The World Journal of Applied Research and Reviews (2024) highlights that cybersecurity threats are a constant challenge, especially in developing regions with less robust digital infrastructure. Gender disparities and low levels of financial literacy further contribute to exclusion (MF Journal, 2024). As noted by Khaliq et al. (2025) and Malibari et al. (2023), the pandemic exposed both the strengths and vulnerabilities of digital systems; while there was an increase in adoption, there was also a rise in fraud and cyber risks. Therefore, policymakers must balance fostering innovation and ensuring governance to maintain digital trust. Ozili (2024) suggests that regulatory frameworks, such as the European PSD2 and India's open banking initiatives, could serve as global models for responsible FinTech regulation.

2.6 Bibliometric Insights on FinTech Research: Bibliometric analyses offer quantitative insights into the intellectual framework and thematic progression of FinTech research topics (Ranjan, 2024). Jafri et al. (2025) performed a bibliometric evaluation of digital finance, identifying key clusters related to financial inclusion, digital payment systems, and blockchain innovation. Similarly, Technology in Society (2024) and Journal of FinTech Studies (2025) found that most FinTech research post-2020 emphasizes sustainability, cybersecurity, and inclusive growth. The increased academic focus after 2020 corresponds to global digitalization trends and the effects of COVID-19 (Malibari et al., 2023). The citation network reveals that significant works frequently intersect with economics, computer science, and business

management, underscoring the interdisciplinary nature of FinTech (Kodongo et al., 2024; Dubey 2022). Ozili (2024) observes that the transition towards policy-oriented and empirical studies signifies the field's maturation. Consequently, bibliometric mapping aids in identifying influential authors, productive institutions, and emerging research hotspots, which are valuable to both scholars and policy makers.

3. Methodology

3.1 Research Design: This study employs a bibliometric and network analysis approach to systematically chart the intellectual terrain of studies examining the convergence of Financial Technology (FinTech) and financial inclusion. Bibliometric analysis is instrumental in identifying publication patterns, prominent authors, significant journals, and collaborative networks within a particular research area. This technique offers a quantitative perspective on the structure, evolution, and spread of knowledge in a field (Donthu et al., 2021; Zupic & Čater, 2015).

3.2 Data Source and Search Strategy: The study utilized data sourced from the Scopus database, recognized as one of the most comprehensive and reliable repositories of peer-reviewed literature. Scopus was chosen for its broad scope, ability to track citations, and sophisticated analytical tools that facilitate bibliometric research (Elsevier 2024). To gather pertinent documents, the following search query was employed: Search string: TITLE-ABS-KEY ("FinTech" OR "Financial Technology") AND ("Financial Inclusion" OR "Digital Inclusion"). The search was restricted to articles, reviews, and conference papers published from 2010 to 2025 to capture recent developments in FinTech-related financial inclusion research. Documents not in English were excluded to maintain consistency in data analysis.

3.3 Data Cleaning and Refinement: Following the initial search, duplicate and irrelevant entries were manually filtered out. The resulting dataset comprised 312 articles. Each entry includes bibliographic details such as title, authors, year of publication, journal, country, keywords, and citations. The data were then exported in the CSV format for quantitative analysis.

3.4 Bibliometric Analysis: The bibliometric analysis utilized VOSviewer was used to investigate publication trends, co-authorship networks, and thematic development. Performance Analysis: This phase involved determining yearly publication patterns, leading authors, prominent journals, and contributing countries and institutions. Citation counts were used to assess the academic impact of each publication (Aria & Cuccurullo, 2017). Science Mapping: Analyses

of co-authorship, co-citation, keyword co-occurrence, and bibliographic coupling were performed to explore the intellectual framework and thematic relationships. Co-authorship analysis uncovered research collaboration networks among the authors, countries, and institutions. Co-citation analysis identified influential authors and sources that were frequently cited together. Keyword co-occurrence analysis highlighted central research themes and emerging topics in fintech and financial inclusion. Bibliographic coupling offers insights into recent research connections among current publications.

3.5 Network Visualization: VOSviewer was used to create network maps, where nodes symbolized entities such as authors, keywords, or countries, and edges represented their connections based on co-occurrence or citation strength. The total link strength (TLS) serves as an indicator of the association between items. Cluster analysis was applied to categorize related topics and illustrate the significant thematic clusters within the field.

3.6 Validation and Limitations: To validate the reliability of the findings, the data accuracy was confirmed by comparing the outputs from both VOSviewer. Nevertheless, since the study exclusively uses Scopus data, there is a chance that some pertinent publications indexed in other databases, such as Web of Science or Google Scholar, may have been excluded. Additionally, bibliometric analysis focuses on quantitative patterns and does not evaluate the qualitative depth of the research.

4. Results:

4.1 Co-authorship Network Analysis of Authors: The co-authorship analysis revealed a total of 683 authors, each meeting the criteria for inclusion, illustrating the collaborative nature of research on FinTech and financial inclusion. This analysis shows that academic contributions in this area are widely distributed, with the majority of authors contributing only one paper, highlighting the topic's emerging and interdisciplinary character. Notable authors like Leong, Carmen; Li, Kai; Kim, Dan J.; Lang, Karl R.; and Kauffman, Robert J. have a strong citation impact and significant total link strengths, signifying their pivotal role in influencing and connecting research clusters. This extensive network of authors emphasizes increasing international collaboration, knowledge exchange, and the development of FinTech as a global research field. The small number of authors with multiple publications also points to ongoing

opportunities for more in-depth collaborative research and thematic alignment in future studies.

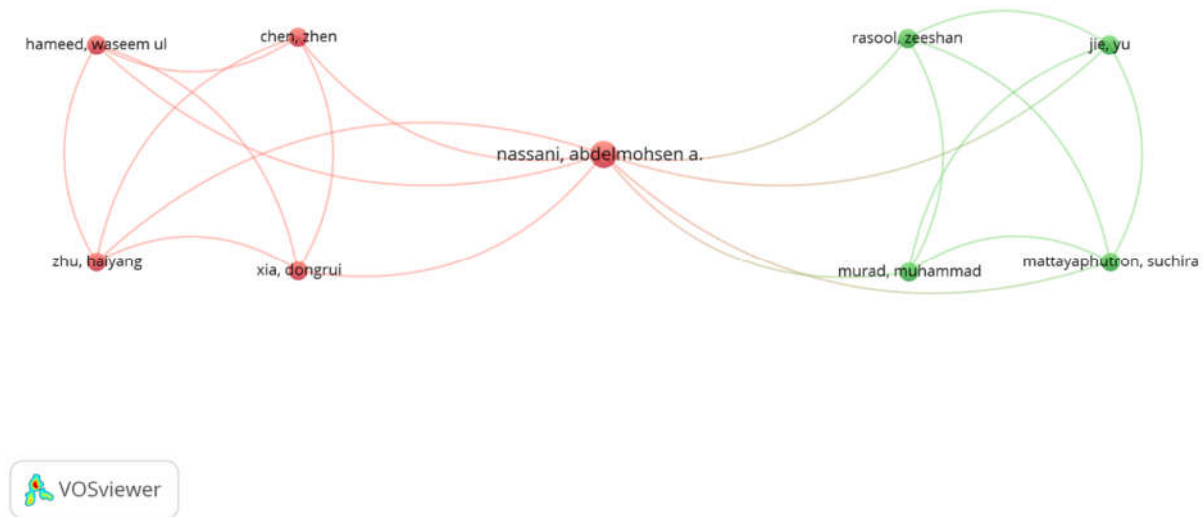


Figure 1: Co-Authorship Network of Highly Cited Authors in Digital Finance

4.2 Author Analysis

Table 1: Top 5 influential Authors

Rank	Author Name	Affiliation University	Country	No. of Articles	Total Citations	Average citation per paper
1	Ozili, Peterson K.	Governors Department, Central Bank of Nigeria, Abuja, Nigeria	Nigeria	3	969	323.0
2	Murinde, Victor	SOAS University of London, London, United Kingdom	United Kingdom	2	365	182.5
3	Demir, Ayse	School of Finance and Management, SOAS University of London, London, United Kingdom	United Kingdom	1	308	308.0
4	Altunbas, Yener	School of Finance and Management, SOAS University of London, London, United Kingdom	United Kingdom	1	308	308.0

Rank	Author Name	Affiliation University	Country	No. of Articles	Total Citations	Average citation per paper
5	Pesqué-Cela, Vanesa	School of Finance and Management, SOAS University of London, London, United Kingdom	United Kingdom	1	308	308.0

The table highlights the most influential authors in the field based on their citation performance. It shows that **Ozili, Peterson K.** holds the leading position with the highest number of total citations and a remarkable average citation per paper, indicating his strong academic impact. The next few authors, including **Murinde, Victor, Demir, Ayse, Altunbas, Yener,** and **Pesqué-Cela, Vanesa,** also demonstrate significant scholarly contributions despite having fewer publications, reflecting the high relevance and quality of their individual works. The presence of authors from institutions such as **SOAS University of London** and the **Central Bank of Nigeria** reveals active research participation from both developed and developing economies. Overall, the table suggests that a small group of authors dominates research in this area, with their studies serving as key references for subsequent research on digital finance and financial inclusion.

4.3 Keyword Co-occurrence Analysis: The analysis of keyword co-occurrence involving 1,162 keywords, with 100 surpassing the minimum occurrence threshold of four, uncovers the intellectual and thematic framework of research on Fintech and financial inclusion. The keyword “fintech” emerged as the most prevalent (118 occurrences, total link strength 511), underscoring its pivotal role in the field. Related terms such as “financial inclusion” (101 occurrences, 314 link strength), “finance” (42, 345), “economic growth” (43, 306), and “sustainable development” (28, 265) suggest that research is primarily concentrated on the convergence of digital financial technologies, economic advancement, and sustainability. Regional focuses such as “China” (41, 276) and “India” (15, 125) indicate significant research interest from emerging economies. Keywords such as “digital finance” (37, 100), “digital financial inclusion” (26, 75), and “financial technology” (29, 137) further highlight the technological focus on promoting inclusion and growth. Environmental themes such as “green economy,” “environmental economics,” “carbon emission,” and “energy transition” reflect an increasing emphasis on sustainability within FinTech discussions. Additionally, terms such as

conceptual and empirical understanding of fintech, digital finance, and financial inclusion. In contrast, more recent publications from 2023 to 2024 have fewer citations, suggesting their emerging importance. The total link strength values indicate limited direct connections between documents, suggesting that while influential papers conceptually guide the field, collaborative citation networks are still evolving. Overall, the citation structure highlights a rapidly evolving research area rooted in seminal works from late 2010, which continue to inform current studies on technology-driven financial inclusion and sustainable development.

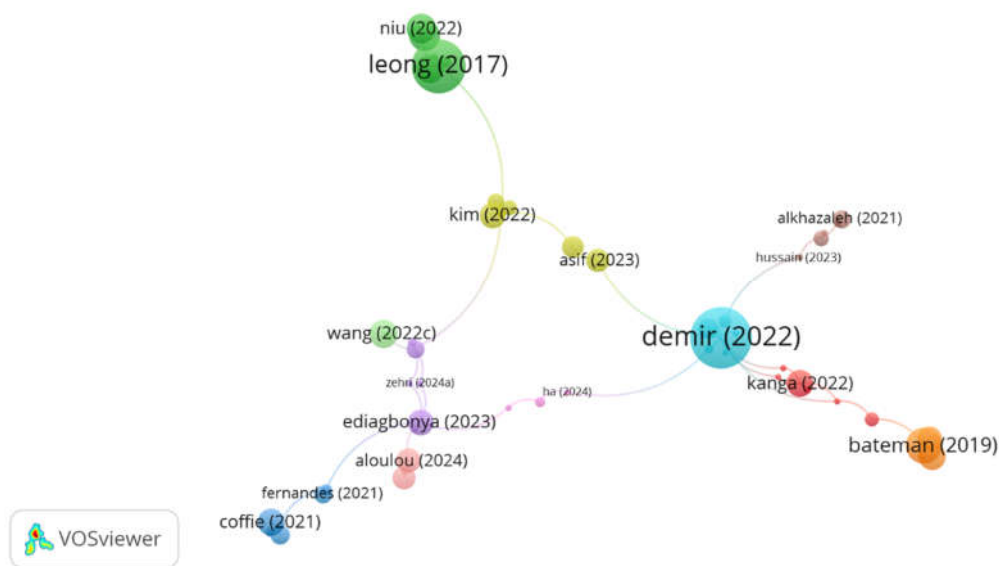


Figure 3: Network Map of Document Citations in FinTech and Digital Finance Research

Table 2: Most Cited Research Papers

Rank	Title	Authors	Publication Year	Journal	Total Citation	Citations per year
1	Impact of digital finance on financial inclusion and stability	Ozili P.K.	2018	Borsa Istanbul Review	870	108.75
2	Fintech, financial inclusion and income inequality: a quantile regression approach	Demir A.; PesquÃ-Cela V.; Altunbas Y.; Murinde V.	2022	European Journal of Finance	308	77
3	Industry 4.0 in finance: the impact of artificial intelligence (ai) on digital financial inclusion	Mhlanga D.	2020	International Journal of Financial Studies	257	42.83

4	Nurturing a FinTech ecosystem: The case of a youth microloan startup in China	Leong C.; Tan B.; Xiao X.; Tan F.T.C.; Sun Y.	2017	International Journal of Information Management	237	26.33
5	How should we understand the digital economy in Asia? Critical assessment and research agenda	Li K.; Kim D.J.; Lang K.R.; Kauffman R.J.; Naldi M.	2020	Electronic Commerce Research and Applications	217	36.17
6	Microfinance, financial inclusion and ICT: Implications for poverty and inequality	Mushtaq R.; Bruneau C.	2019	Technology in Society	213	30.43
7	Rethinking digital financial inclusion: Evidence from Bangladesh	Aziz A.; Naima U.	2021	Technology in Society	169	33.8
8	Digital finance and corporate ESG performance: Empirical evidence from listed companies in China	Ren X.; Zeng G.; Zhao Y.	2023	Pacific Basin Finance Journal	153	51
9	Digital systems and new challenges of financial management fintech, XBRL, blockchain and cryptocurrencies	Mosteanu N.R.; Faccia A.	2020	Quality - Access to Success	145	24.17
10	Digital finance and green growth in China: Appraising inclusive digital finance using web crawler technology and big data	Razzaq A.; Yang X.	2023	Technological Forecasting and Social Change	141	47

4.5 Bibliographic Coupling Analysis of Countries: The bibliographic coupling analysis, which includes 71 countries with 46 surpassing the minimum threshold, underscores global collaboration and intellectual connections in FinTech and financial inclusion research. The results indicate that China leads the field with 100 documents, 3,206 citations, and a total link strength of 9,837, highlighting its central and influential position in the global scholarship. The United Kingdom (28 documents, 2,086 citations, link strength 4,246) and the United States (23 documents, 759 citations, link strength 3,721) were also significant contributors, establishing strong bibliographic ties with other countries. Other notable contributors were India (21 documents, 239 citations, link strength 3,021), Malaysia (10 documents, 219 citations, link strength 2,571), Saudi Arabia (10 documents, 93 citations, link strength 2,506), and Pakistan (12 documents, 216 citations, link strength 2,028), indicating active research participation in emerging economies. Australia (9 documents, 458 citations, link strength 1,710) and South Africa (9 documents, 491 citations, link strength 1,608) exhibited robust regional collaboration networks. The presence of Vietnam, Jordan, Lebanon, and Cyprus with high link strengths despite fewer documents highlights their increasing scholarly integration in the field. Overall, the coupling structure reveals a globally diverse yet hierarchically organized research network,

in which Asian countries (notably China and India) and Western economies (the UK and the US) serve as key knowledge hubs promoting cross-border academic connections in FinTech-driven financial inclusion studies.

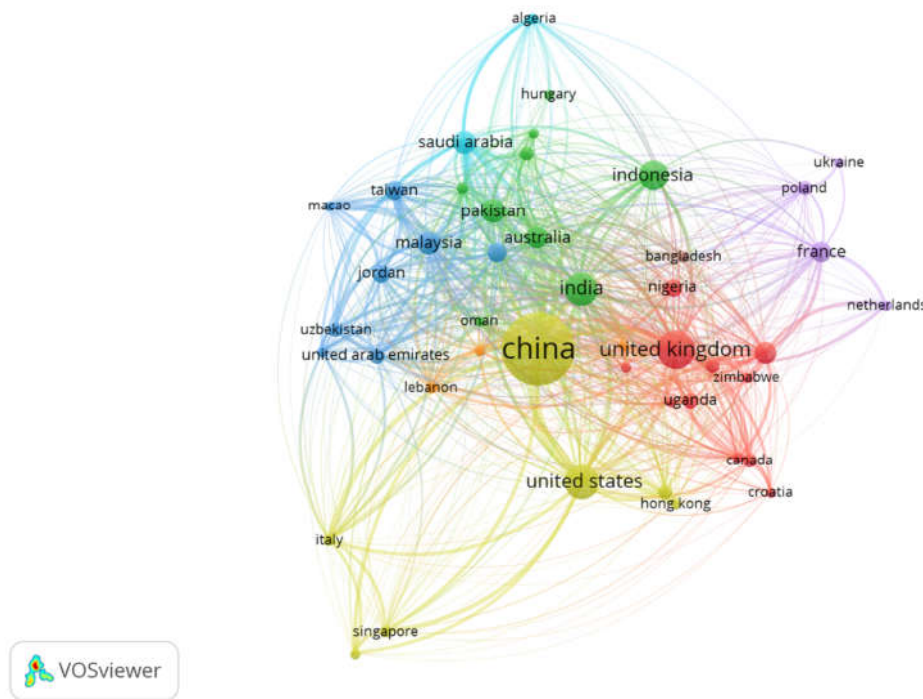


Figure 4: Geographic Collaboration Map: Leading Nations in Digital Finance Research

5. Discussion: This bibliometric and network analysis of Scopus-indexed publications on FinTech and financial inclusion reveals a rapidly maturing field that is technologically driven and policy relevant. The concentration of research around themes such as digital payments, mobile banking, blockchain applications, and FinTech regulation indicates that scholars are focusing on the concrete mechanisms through which digital innovation translates into broader access to financial services (Verma et al., 2025). The dominance of a handful of highly cited early works alongside an expanding set of recent publications suggests that foundational studies set the conceptual agenda, while newer empirical and policy-oriented papers build the applied evidence base. Geographic patterns in the literature underscore the dual nature of FinTech research: it is globally distributed but is anchored in specific national experiences. China's prolific output and strong bibliographic coupling reflect large-scale deployments of digital finance and data-driven

approaches, whereas contributions from the UK, US, India, and other emerging economies show diverse regulatory and infrastructural contexts shaping research questions. These geographic differences help explain why clusters form around distinct problems, such as mobile-money systems in Africa and South/Southeast Asia's digital-IDDD and payments ecosystems, highlighting that technological possibilities interact with local institutions, regulatory frameworks, and market structures (Mazhar & Rehman, 2016).

The disciplinary crossovers evident in the keyword and citation networks—spanning economics, information systems, development studies, and environmental finance—point to the interdisciplinary character of FinTech. This breadth is an asset because it enables richer analyses of how innovations affect financial access, firm productivity, inequality, and sustainability. Simultaneously, it introduces fragmentation: different disciplines emphasize different outcomes, methods, and measures, which can slow cumulative knowledge building. Consolidating robust empirical approaches and shared metrics for financial inclusion would strengthen the field's capacity to inform policy. The policy and practice implications follow directly from the mapping of themes and gaps. First, the evidence that digital payments and mobile platforms are central to inclusion implies that investments in connectivity, digital-ID systems, and interoperable infrastructure remain high priorities. Second, the repeated emergence of regulatory and cybersecurity concerns in the literature signals the need for regulatory harmonization, consumer protection, and capacity building in cybersecurity, especially in jurisdictions with rapidly expanding digital finance adoption. Third, the intersection of FinTech with sustainability and green finance—an emerging but growing theme—suggests opportunities to align inclusive finance objectives with environmental goals, for instance, via the digital delivery of tailored green credit products for SMEs and low-income households. Methodologically, bibliometric techniques are well-suited for charting intellectual structure and growth patterns, but they cannot substitute for in-depth qualitative or causal empirical work. The present study's reliance on a single bibliographic source and English-language publications means that some regional or non-English contributions may be under-represented. Moreover, citation-based influence measures favor earlier publications and may not fully capture the policy impact of more recent, practitioner-oriented reports or regulatory innovations. Future empirical work should therefore combine bibliometric mapping with case studies, policy evaluations, and longitudinal designs to trace how

specific FinTech interventions change financial behavior and welfare over time. Looking forward, the literature would benefit from several specific directions: longitudinal studies that measure the sustained impact of FinTech on poverty, savings, and small-business performance; comparative cross-country analyses that unpack how institutional variation conditions FinTech outcomes; and integrated research on digital literacy and gender gaps to ensure that technology-driven inclusion does not exacerbate existing inequalities. Additionally, as AI, big data, and decentralized finance evolve, careful studies of algorithmic fairness, data governance, and the distributional consequences of automated credit-scoring systems will be essential. In summary, the bibliometric evidence portrays FinTech as a potent enabler of financial inclusion but also as a domain that raises fresh regulatory, ethical, and infrastructural challenges. Harnessing FinTech's inclusive potential requires coordinated research agendas that link technological innovation to institutional design, capacity building, and safeguards so that digital finance delivers equitable, sustainable benefits at scale.

6. **Conclusion:** Overall, this study's bibliometric mapping demonstrates that FinTech has rapidly emerged as a central driver of financial inclusion, with dominant clusters around digital payments, mobile banking, blockchain, and regulatory frameworks, and with research activity concentrated in major knowledge hubs such as China, India, the UK, and the US. These patterns imply that advancing inclusive digital finance requires sustained investments in interoperable payment infrastructures, digital identification, cybersecurity, and targeted efforts to raise digital literacy—particularly for women and rural populations—while regulators balance innovation and consumer protection. Future work should prioritize longitudinal and comparative studies to assess long-term welfare effects, investigate the scalability of FinTech across institutional contexts, and examine distributional and sustainability outcomes to ensure equitable and resilient inclusivity.
7. **Future Research Directions:** Future research on FinTech and financial inclusion should prioritize the analysis of longitudinal data to understand the enduring socioeconomic effects of digital finance. Additionally, it is important to investigate how FinTech can advance green finance, digital currencies and sustainable entrepreneurship (Ha et al., 2025; MDPI, 2025). Comparative studies between developed and developing nations can also provide insights into the scalability and adaptability of fintech solutions (Lee, 2024). Furthermore, incorporating artificial intelligence, blockchain, and IoT into inclusive finance frameworks requires interdisciplinary research that

connects technology, economics, and policy studies (Del Sarto, 2025; Jafri et al., 2025). As bibliometric analyses continue to develop, they can significantly contribute to mapping global research collaboration networks and identifying emerging themes in the field of digital finance. The literature consistently highlights FinTech as a crucial enabler of financial inclusion, enhancing equitable access to financial services through technology-driven innovation. Its impact extends beyond economic inclusion to sustainability, gender equity, and digital empowerment. However, challenges related to cybersecurity, regulations, and digital literacy remain unresolved. The increasing body of bibliometric evidence emphasizes FinTech's interdisciplinary significance and its growing role in global financial ecosystems. Collectively, the reviewed literature offers a strong foundation for this study's bibliometric and network analysis of Scopus publications from 2017 to 2024, aimed at mapping the intellectual evolution and identifying knowledge gaps in fintech and financial inclusion research.

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