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Mapping Financial Inclusion: A Bibliometric Review and Future Directions

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Abstract: *Financial inclusion has emerged as a critical driver of equitable economic growth and poverty reduction, garnering significant scholarly attention over the past decade. This study conducts a comprehensive bibliometric review of 876 articles from the Web of Science (WoS) database, focusing on the Economics and Business Finance domain, to map the intellectual structure and evolution of financial inclusion research from 2015 to 2025. Utilizing performance analysis, co-occurrence keyword networks, citation mapping, and thematic clustering, the paper identifies key contributors, institutions, journals, and collaboration patterns shaping the field. Findings reveal a rapid growth in publications, with prominent themes such as digital finance, financial literacy, sustainable development, and inclusive growth dominating the discourse. Emerging sub-themes like fintech innovation, AI-driven financial services, and blockchain applications signal future research trajectories. The study also highlights regional disparities in research focus, underscoring the need for context-specific policies. By synthesizing current trends and gaps, this review proposes actionable directions for advancing financial inclusion aligned with the United Nations Sustainable Development Goals (SDGs), particularly SDG 10 (Reduced Inequalities). The insights aim to guide policymakers, financial institutions, and researchers in fostering inclusive financial ecosystems. The mapping process is done by using R tool (Biblioshiny).*

Keywords: *Financial inclusion; Bibliometric analysis; Web of Science; Research trends; Digital finance; Sustainable development; Inclusive growth; SDGs*

I. INTRODUCTION

Financial inclusion, defined as the provision of accessible, affordable, and equitable financial services to underserved populations, has gained global recognition as a catalyst for reducing poverty and fostering sustainable development (World Bank, 2018). Over the past decade, its integration into policy frameworks, such as the United Nations Sustainable Development Goals (SDGs), particularly SDG 10 (Reduced Inequalities), underscores its transformative potential in bridging socioeconomic disparities (United Nations, 2015).

Empirical studies, including those by Demirgüç-Kunt et al. (2018), highlight the correlation between financial inclusion and improved household welfare, entrepreneurship, and macroeconomic stability. However, despite its growing prominence, the conceptual boundaries and operational pathways of financial inclusion remain contested, with debates centering on its measurement, contextual applicability, and intersection with emerging technologies (Sarma, 2016). This ambiguity necessitates a systematic synthesis of existing scholarship to identify consensus, gaps, and future priorities.

The burgeoning literature on financial inclusion spans diverse disciplines, including economics, development studies, and information systems, reflecting its multidimensional nature. Early reviews by Allen et al. (2016) emphasized the role of institutional frameworks and digital infrastructure in expanding access, while recent works by Ozili (2020) explore disruptive innovations like blockchain and artificial intelligence. However, prior syntheses often adopt narrow thematic or regional foci, limiting their capacity to map the field's intellectual evolution holistically. A bibliometric analysis, as advocated by Zupic and Čater (2015), offers a rigorous, data-driven approach to uncover publication trends, influential contributors, and thematic clusters across a large corpus of literature. Such a methodology is particularly suited to disentangle the complex interdependencies between financial inclusion and global challenges such as climate resilience, gender equity, and post-pandemic recovery (Arner et al., 2020).

Bibliometric analysis, as articulated by Zupic and Čater (2015), serves as a powerful lens to decode the intellectual and social structures of research fields, offering insights into knowledge diffusion, collaboration patterns, and thematic evolution. In the context of financial inclusion, this methodology transcends traditional literature reviews by quantitatively mapping the interplay between foundational theories, such as Sarma's (2016) multidimensional index, and emergent paradigms like AI-driven financial ecosystems (Arner et al., 2020).

While prior qualitative syntheses, including Ozili's (2020) global review, have enriched understanding of financial inclusion's socioeconomic impacts, they often overlook structural biases in research output, such as the underrepresentation of Global South perspectives or the dominance of techno-optimist narratives.

By integrating co-citation networks and thematic clustering, this study not only identifies persistent gaps—such as the limited focus on climate-linked financial exclusion—but also underscores the transformative role of interdisciplinary research in addressing SDG-aligned challenges (Demirgüç-Kunt et al., 2018). Ultimately, this bibliometric exercise advocates for a recalibrated research agenda that prioritizes equity, innovation, and policy-relevant scholarship, empowering stakeholders to design inclusive financial systems resilient to 21st-century disruptions.

This paper demonstrates that bibliometric analysis, as conceptualized by Zupic and Čater (2015), provides a robust framework for systematically evaluating the trajectory and impact of financial inclusion research. By analyzing 876 articles from the Web of Science (2015–2025), the study reveals a rapidly expanding field dominated by themes such as digital finance, financial literacy, and sustainable development, anchored in foundational works like Sarma's (2016) multidimensional metrics and Demirgüç-Kunt et al.'s (2018) empirical linkages to poverty reduction.

However, it critiques the uneven geographic and thematic distribution of scholarship, noting a persistent overemphasis on technological solutions (e.g., blockchain, AI) at the expense of contextual socioeconomic barriers, such as gender disparities and climate-induced vulnerabilities, as highlighted by Arner et al. (2020). The paper argues for reorienting research toward inclusive policy frameworks that integrate localized insights from underrepresented regions, particularly in the Global South, while leveraging interdisciplinary collaborations to address SDG 10.

RQ1 What is the trend and global patterns about the financial inclusion and its future directions

A. Objectives of the Study

To identify the most impactful contributions, and uncover the evolution and interconnection of themes within the field over 2015 to 2025 period

II. METHODOLOGY

This study adopts a systematic bibliometric methodology (Zupic & Čater, 2015), leveraging data from the *Web of Science* (WoS) Core Collection to explore financial inclusion research.

The initial search using the keyword "*financial inclusion*". Analysed using Biblioshiny, an R-based tool from the *bibliometrix* package (Aria & Cuccurullo, 2017). Co-authorship and institutional collaboration patterns were analysed using centrality measures to assess knowledge diffusion. To ensure robustness, findings were triangulated with seminal works (e.g., Ozili, 2020) and aligned with PRISMA guidelines for transparency (Moher et al., 2009). Bibliometric analysis serves as a vital method for identifying and mapping the body of literature within specific research areas. By applying bibliometric techniques, scholars can reveal patterns of intellectual growth, including trends in publications, citation behaviors, key authors, and highly referenced works (Pritchard, 1969). Utilizing a bibliometric approach, this study adds to the expanding body of research that leverages quantitative methods to trace the development of various fields.

III. PRISMA FRAMEWORK

PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) framework is a widely adopted protocol designed to enhance the rigor, transparency, and reproducibility of systematic reviews and meta-analyses, including those incorporating bibliometric analysis. PRISMA provides a structured checklist and flow diagram to guide researchers in documenting the identification, screening, eligibility assessment, and inclusion of relevant studies, minimizing selection bias and ensuring methodological clarity (Page et al., 2021).

In bibliometric studies, PRISMA is particularly valuable for systematizing literature searches across databases (e.g., Scopus, Web of Science), defining inclusion/exclusion criteria, and transparently reporting outcomes such as publication trends, citation networks, and keyword co-occurrence (Donthu et al., 2021).

By adhering to PRISMA, researchers can standardize the synthesis of large-scale bibliographic data, address potential biases in source selection, and improve the reliability of findings in fields like economics, finance, or knowledge management (Moher et al., 2009).

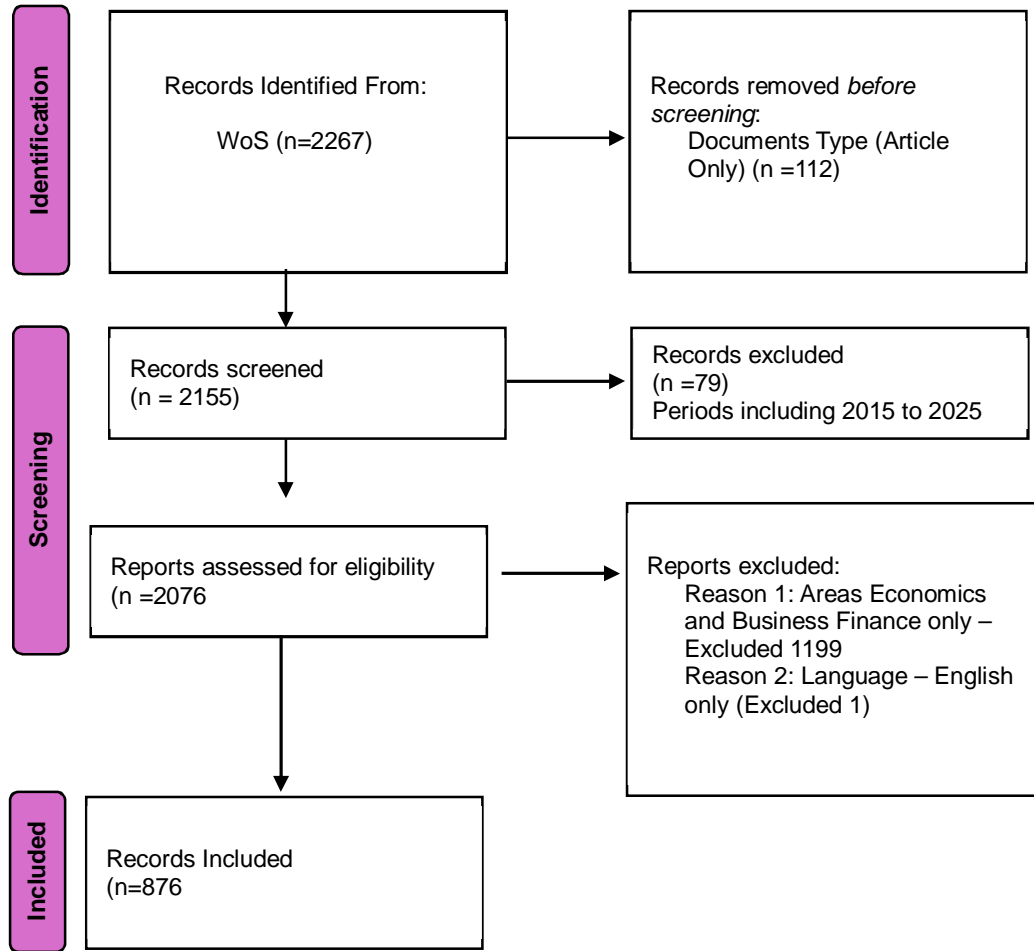


Fig. 1 PRISMA flowchart

(Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ* 2021;372: n71.)

IV. RESULTS AND DISCUSSION

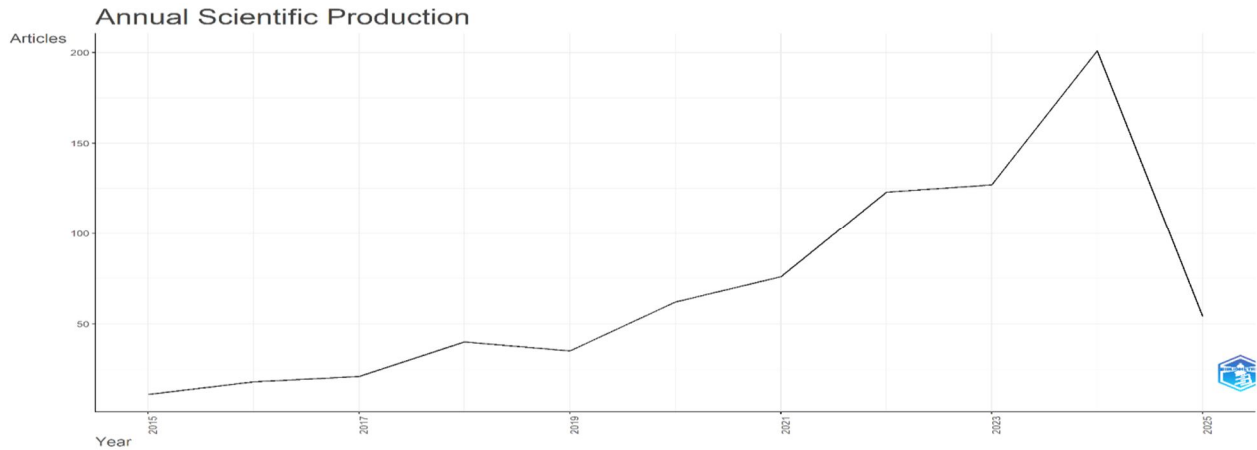
A. Performance Analysis

The first analysis reveals a summary of the performance of the selected publications, as presented Table 1.

Main Information About Data	
Timespan	2015-2025
Sources (Journals, Books etc)	163
Documents	772
Annual Growth Rate %	17.25
Documents Average Age	3.08
Documents Contents	
Keywords Plus (ID)	1041
Author's Keywords (DE)	1814
Authors	
Authors	1859
Authors of single-authored docs	90
Authors Collaboration	
Single-authored docs	96
Co-Authors per Doc	2.84
International co-authorship %	41.06

Source: Compiled by Author (Biblioshiny)

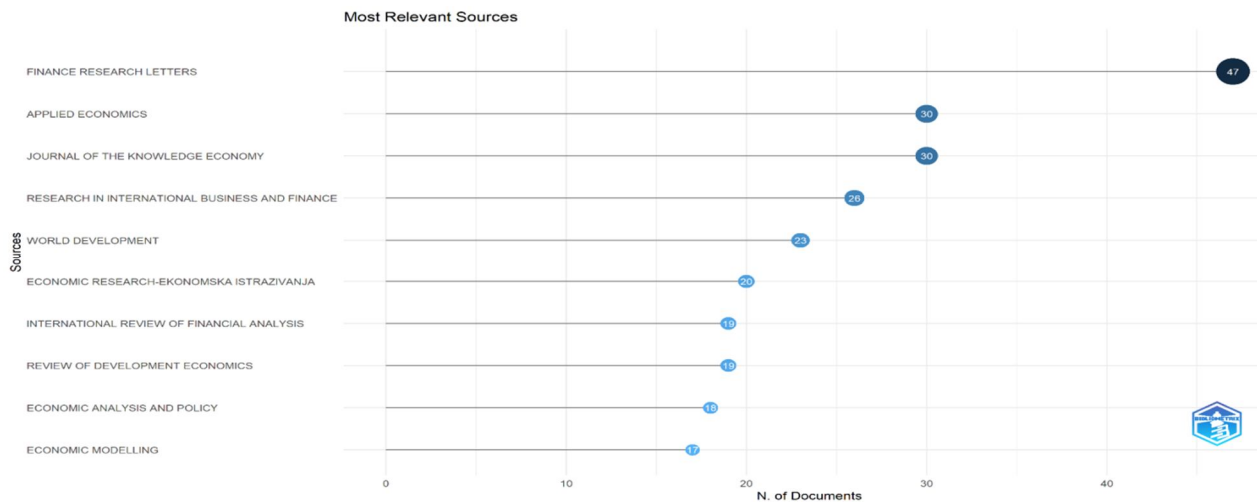
Table 1 provides an overview of bibliometric data related to financial inclusion and future directions, key bibliometric insights from financial inclusion research spanning 2015–2025, derived from 163 sources (journals, books, etc.), which collectively contributed 772 documents. The field exhibits a dynamic annual growth rate of 17.25%, reflecting its rising prominence in global economic and policy discourse. The average document age of 3.08 years highlights the recency of scholarly output, aligning with rapid advancements in digital finance and post-2015 Sustainable Development Goals (SDGs) agendas. Keyword analysis reveals substantial thematic diversity, with 1,814 Author’s Keywords (DE) and 1,041 Keywords Plus (ID), suggesting both conceptual richness and fragmentation in terminology. The research involved 1,859 unique authors, with 96 single-authored documents and 90 authors contributing independently, indicating pockets of isolated scholarship. Collaboration patterns show an average of 2.84 co-authors per document and 41.06% international co-authorship, underscoring moderate but growing cross-border collaboration.



(Figure 1 Annual Scientific Production)

Source: Compiled by Author (Biblioshiny)

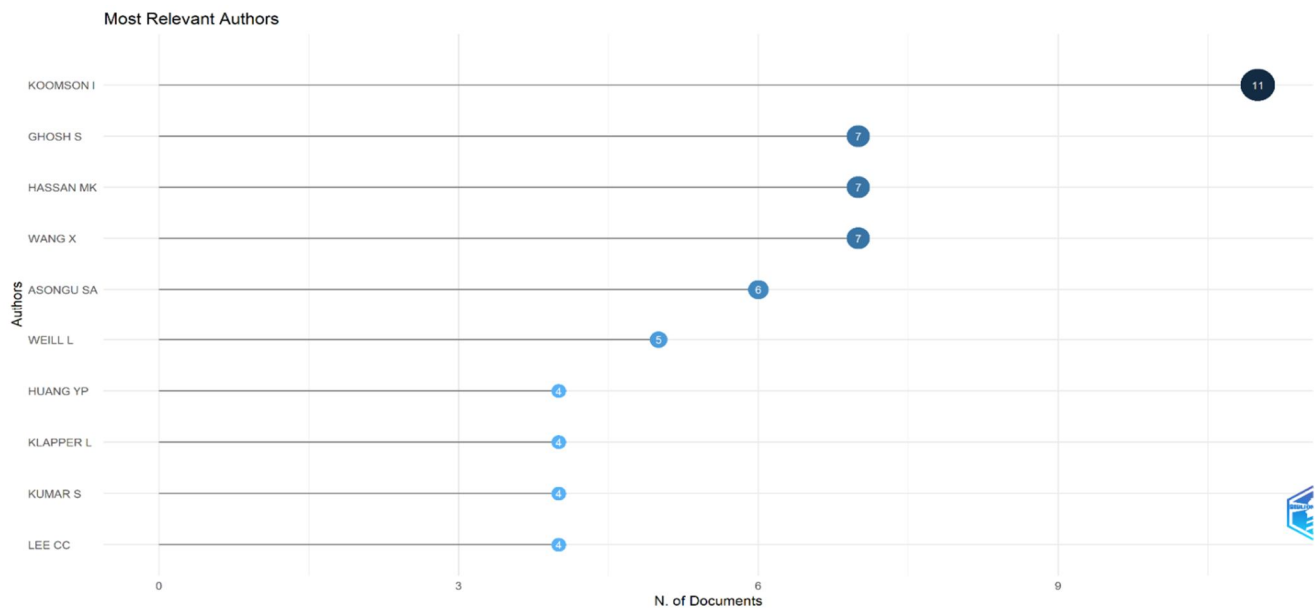
Figure 1, describes the annual scientific production from 2015 to 2025, reflecting robust growth in research output. Starting with 11 articles in 2015, the numbers steadily rise each year, with notable surges such as a jump from 21 articles in 2017 to 40 in 2018, and a significant leap from 76 articles in 2021 to 123 in 2022. The peak occurs in 2024 with 201 articles, highlighting accelerated productivity. While 2019 and 2025 show slight declines (35 and 54 articles, respectively), these are contextualized: the 2019 dip remains modest within the broader upward trajectory, and the 2025 figure represents incomplete data as the year is just beginning, meaning the decline is proportionate to the timeframe rather than indicative of reduced output. Overall, the data underscores sustained growth in scientific research activity over the decade, with 2024 marking a particularly prolific year.



(Figure 2 Most Relevant Sources)

Source: Compiled by Author (Biblioshiny)

Figure 2 shows that the most relevant sources for publications from the visualization, Finance Research Letters emerges as the most relevant source, contributing the highest number of documents (47). It is followed by Applied Economics and Journal of the Knowledge Economy, both with 30 documents each. Other significant sources include Research in International Business and Finance (26 documents) and World Development (23 documents). Further down, journals such as Economic Research-Ekonomiska Istraživanja (20 documents), International Review of Financial Analysis (19 documents), and Review of Development Economics (19 documents) contribute slightly fewer publications. The sources with the least documents in this dataset are Economic Analysis and Policy (18 documents) and Economic Modelling (17 documents).



(Figure 3 Most Relevant Sources)

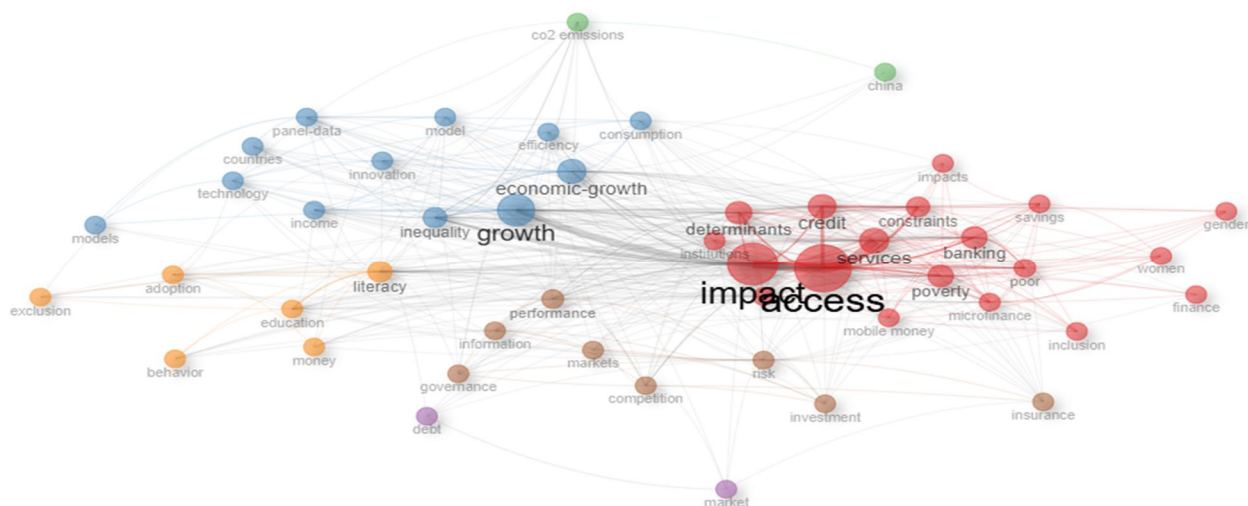
Source: Compiled by Author (Biblioshiny)

Figure 3 shows that the most relevant authors from the visualization, Koomson I stands out as the most relevant author, having published the highest number of documents (11). Following closely behind are Ghosh S, Hassan MK, and Wang X, each with 7 published documents. Asongu SA contributes 6 documents, while Weill L has 5. Authors such as Huang YP, Klapper L, Kumar S, and Lee CC have each contributed 4 documents.



(Figure 4 Word Cloud)

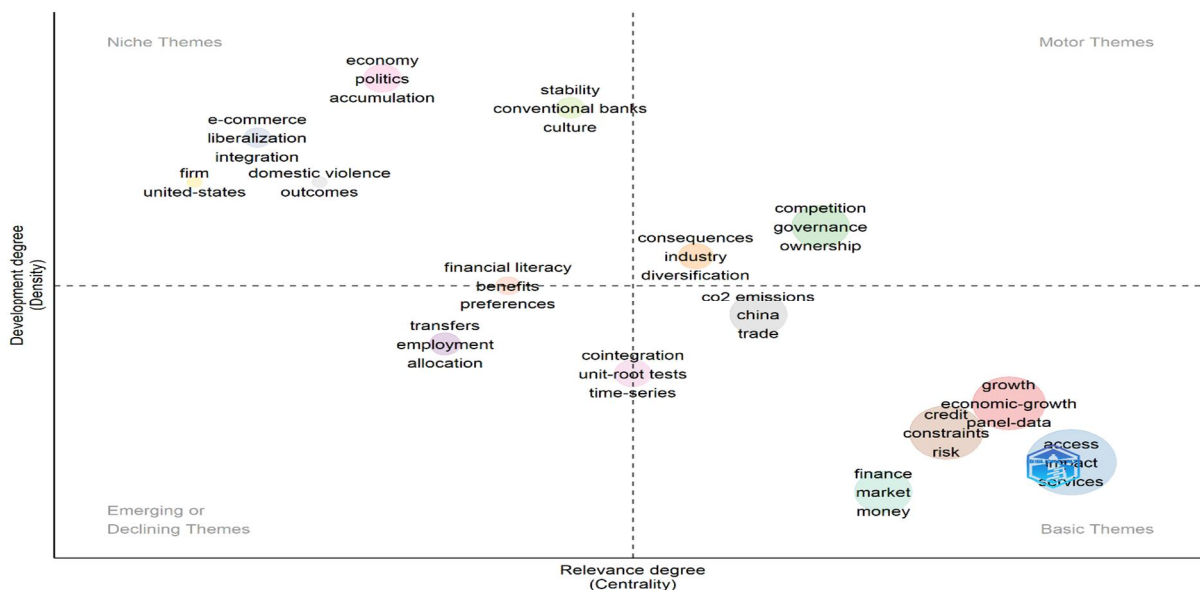
Source: Compiled by Authors (Biblioshiny)



(Figure 5 Co-occurrence Network)

Source: Compiled by Authors (Biblioshiny)

Co-occurrence Network visually represents the relationships between key terms, in this network, nodes (circles) represent individual keywords, while edges (lines) indicate the strength of co-occurrence between terms. Different colors group related keywords into thematic clusters, revealing patterns of association. The central terms, such as "impact," "access," and "financial services," appear bold and prominent, indicating their high frequency and importance in the dataset. The red cluster on the right likely relates to financial services, banking, credit, and digital transactions, while the blue cluster on the top left may focus on economic growth and policy. Other clusters, such as the orange and brown groups on the bottom left, might represent different dimensions of economic determinants or development, whereas the green and purple clusters on the periphery suggest specialized or emerging subtopics. The dense web of connections demonstrates strong interrelations between these topics, implying a multidisciplinary or highly interconnected research field. Overall, this network highlights dominant themes related to financial inclusion, economic growth, credit services, and policy implications, offering valuable insights into the structure and focus of the research domain.



(Figure 6 Thematic Map)

Source: Compiled by Authors (Biblioshiny)

The thematic map visualizes different research themes based on their development degree (density) and relevance degree (centrality). The map is divided into four quadrants, each representing distinct thematic classifications: Niche Themes, Motor Themes, Emerging or Declining Themes, and Basic Themes.

In the top-left quadrant (Niche Themes), topics such as economy, politics, accumulation, liberalization, integration, e-commerce, and domestic violence appear. These themes are highly developed but have low centrality, meaning they are well-researched but less connected to other key topics in the broader research field. These themes often represent specialized or isolated topics within the dataset.

The top-right quadrant (Motor Themes) contains stability, conventional banks, culture, competition, governance, ownership, and diversification. These are well-developed and highly central themes, making them the driving forces in the research field. Their strong connectivity with other themes suggests they play a crucial role in shaping the discourse.

The bottom-left quadrant (Emerging or Declining Themes) includes financial literacy, benefits, preferences, employment, allocation, and transfers. These topics have low development and low centrality, indicating that they are either underdeveloped research areas or declining in relevance within the field.

The bottom-right quadrant (Basic Themes) features core research topics such as finance, economic growth, credit, risk, access, impact, and services. These themes are highly relevant but less developed, suggesting they form the foundation of the research field and have the potential for further exploration and refinement.

Overall, this thematic map provides an insightful overview of the structure of the research field, highlighting well-established themes, emerging areas, and foundational topics that require further investigation.

V. CONCLUSION

Bibliometric analysis of financial inclusion research from 2015 to 2025 provides a comprehensive overview of the intellectual landscape, highlighting key themes, emerging trends, and gaps in the literature. The study identifies a rapid growth in publications, driven by increasing global recognition of financial inclusion as a tool for economic development and poverty reduction (Demirgüç-Kunt et al., 2018). Prominent themes such as digital finance, financial literacy, inclusive growth, and sustainable development dominate the discourse, reflecting the evolving role of technology in expanding financial access (Arner et al., 2020). Additionally, emerging research directions, including fintech innovations, AI-driven financial services, and blockchain applications, suggest a transformative shift toward technology-enabled financial ecosystems (Ozili, 2020). Bibliometric review provides valuable insights for policymakers, financial institutions, and researchers, offering a roadmap for future research and practice. By addressing existing gaps and fostering inclusive, technology-driven solutions, the field of financial inclusion can evolve to create more equitable and resilient financial systems globally.

A. Limitations and Future Scope of Research

In this work, the authors have taken data from the Web of Science database, so for better and more intensive analysis, other databases like Scopus, Lens etc., can be integrate for a more holistic coverage of the research area. In the process of searches using only the 'Financial Inclusion' keyword, the authors have found a limited number of papers, so for a comprehensive study and some other included keywords, may give some new dimensions for the future researcher. This study has included only the "articles" category of documents, but in future research, inclusion of chapters in edited books and conference proceedings, could yield new research insights, for the area of Financial Inclusion.

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