

Mapping the FinTech Research Frontier: A Systematic Bibliometric Analysis of Evolving Themes and Trajectories

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Abstract

This study explores the evolving scholarly landscape of FinTech or financial technology from 2016 to 2026, using a multi-stage bibliometric analysis. Adopting a rigorous four-phase research framework and the PRISMA protocol. The study refined an initial identification of 8,852 records from the ScienceDirect database to a high-quality corpus of 1,638 research articles. This selection was based on the intersections of economics, finance, business management and social sciences in order to ensure relevance to organizational adoption and economic impact. The findings document a dramatic statistical trajectory, with the study output expanding from just 11 articles in 2016 to a peak of 1,481 articles in 2025. The turning point occurred between 2020 and 2021 from where the field experienced an 89% growth rate in a single year which highlights the COVID-19 pandemic as a catalyst for rapid expansion of digital adoption. This study leverages VOSviewer software to construct keyword co-occurrence and co-authorship network visualizations to effectively map the evolution and collaboration of FinTech landscape and shows a transition toward integrating complex topics such as Blockchain, Artificial Intelligence, and Sustainability. The analysis concludes that FinTech has matured from niche technical curiosity to a permanent, multi-disciplinary domain that is essential for global financial progress. Ultimately, this work serves as an essential guide for ensuring that next phase of FinTech exists anchored in socio-economic resilience and universally accessible.

Keywords: FinTech, Financial Technology, Financial Inclusion, Digital Finance.

Introduction

The financial technology sector has emerged as a transformative force, driving unprecedented innovation and promoting global inclusivity and efficiency (Sethi et al., 2025). By combining finance with technology, FinTech has revolutionized the system of conventional banking that leads to dynamic as well as technologically advanced economy, moves far more quickly than the mechanism that we previously rely on (Ha et al., 2025). FinTech has developed tremendously over time and also having multidisciplinary in scope, that might appear scattered in terms of scholarship. As such, a systematic mapping is required

for the determination of most important contributions in the subject area and its current research frontiers (Salem and Shahimi,2025). With the help of these trajectories, it is possible to see a shift in the focus of the FinTech paradigm. When early studies were carried out, it focused on the issue such as basics of technology and included topics as a matter of blockchain, cryptocurrency and crowdfunding. Today, however things have evolved and the issues that are being studied are more concerned with sustainability and inclusiveness (Liu et al.,2024). This systematic bibliometric analysis does not only serve to the tracking the historical growth on the subject so far, it serves as a roadmap as well (Biju et al.,2024). In analyzing the described trends, it becomes possible to identify that which innovation will become necessary for the future development of the field with more inclusive. FinTech has been able to redefine the global economic dynamics by bringing cutting-edge technology in the center of finance. It has been able to transform itself into a decentralized ecosystem which is free of any conventional intermediaries. Following research paths outlined above is imperative, since the discipline is torn between the stringent requirements of RegTech and the innovation (Sethi et al.,2025). While there has been much written on the topic, an analysis is necessary in order to understand the present state of research. With regard to the most productive countries, China and the UK dominate in terms of citation counts (Sahabuddin et al.,2023). This paper evaluates a sample of 1,638 research papers based on systematic bibliometric following the PRISMA framework, thereby providing reliable and reproducible data which concerns the development of the subject area (Salem and Shahimi, 2025). And the goal is to identify gaps in scholarly works so that we can conduct a multi-faceted analysis of how FinTech has grown over time. The application of science mapping using VOSviewer for co-occurrence network analysis and co-authorship enables us to unravel the development and its intellectual structure (Li and Xu, 2021). This study provides guidance on strategies on how to deal with the emerging issues related to financial inclusion.

Literature Review

The scholarly landscape of FinTech has evolved by distinct developmental phases, transitioning from a niche technical subject to an international scholarly priority (Salem & Shahimi,2025). FinTech has a lengthy and complex history that can be separated into three main stages, based on a recent bibliometric analysis. The initial phase spanned 1968-1999 and included the extensive development of banking, the second phase 2000-2011 focused on transitioning to digital trust and attracting bank customers (Salem and Shahimi,2025). The third and current era (2012- present) is defined by “high-speed” transformation; but most importantly, the current focus of FinTech growth revolves around increasing bank efficiencies through digitalization. The amount of academics doing research on FinTech increased dramatically after 2012 and has gone through a boom; moreover, the greatest surge (FinTech 3.5) occurred in 2015, driving vast amounts of new research interest in the field. With the onset of the COVID-19 pandemic, the demand for digital technology was exposed to unprecedented amounts, resulting in numerous submissions of academic papers. As a result, Fintech has been integrated into the current modern economic literature. There are specific areas around the world with substantial amounts of FinTech academic research. According to Salem and Shahimi (2025), the US, China and UK are number 1, 2 and 3 respectively in the production of research in the area of digital finance; therefore, these three countries drive the agenda of digital finance research globally. The level of output and impact differ inside of those three countries with China having a great number of publications, while the UK and USA have higher quality of research output (Sethi et al.,2025). Institutions that assist in the global flow of digital finance knowledge include Chinese Academy of Social Sciences and University of Edinburgh Business School (Biju,2024). The co-

authorship network of research authors includes scholars such as Arner D.W., Buckley R.P., as well as many others who comprise the intellectual backbone of the digital finance discipline (Duan, 2024). This knowledge can provide a foundation for addressing issues at the intersection of financial technology, economic and management models. Research theory for FinTech adoption is built on behavioral science theory and also incorporates the Technology Acceptance Model (TAM), TAM 2; and TAM 3 (Salem and Shahimi, 2025). Social and economic inequalities, in addition to an increase in environmental issues/initiatives have contributed to the growing interest in using technology as a means of addressing social justice and also promoting environmental initiatives (Das et al., 2025). Between 2024-2026, the integration of FinTech with environmental sustainability will be important to the future. Digital financial services will play an important role in the transition to a carbon-free economy in the ASEAN-5 region (Hassan et al., 2026). There is currently a lack of studies that synthesize all studies related to research productivity and intellectual structure; this is considered an important research gap.

Research Gap

A critical “white space” exists in the lack of multi-dimensional synthesis that links research productivity alongside the actual “intellectual structure” of the field. There is a lack of high-resolution mapping that follows the thematic trajectory from traditional fintech (payments, crowdfunding) to emerging 2026 frontier of “Green Fintech” and “Digital Financial Inclusion”.

Research Questions

RQ1: What is the temporal trajectory of FinTech scholarship from 2016 to 2026, and how do the yearly growth patterns reflect in corresponded to the global economic shifts?

RQ2: What does the “Co-authorship network” reveal about international scientific cooperation?

RQ3: Based on the current research frontier, what are the projected trajectories that will define the next decade of financial innovation?

Research Objectives

- To evaluate the yearly growth and temporal trajectories of FinTech scholarship from 2016 to 2026.
- To mapping the research frontiers and predicting upcoming changes which may have an impact on the future developments in the field.

Methodology

The evolving state of FinTech was assessed using selected scientific articles available on ScienceDirect and the data collection process relied on PRISMA methodology, allowing for collecting only those scientific publications that passed rigorous criteria. This dataset was then analyzed across two different bibliometric dimensions. The first type of analysis is concerned with time-wise publication dynamics, which can be compared with key events in the field, such as the period between 2016 and 2026, which marked a significant shift. Secondly, to reveal the nature of the field, the analysis included the co-occurrence of keywords provided by the authors to highlight emerging themes and lastly used VOSviewer to map out co-authorship network and detect the main centers of global innovation.

Research Framework

Fig 1 depicts a clear audit trail of the data curation process. The research design was operationalized into four sequential stages. This structured framework provides a comprehensive roadmap for the systematic database retrieval to conduct a bibliometric analysis of Fintech research.

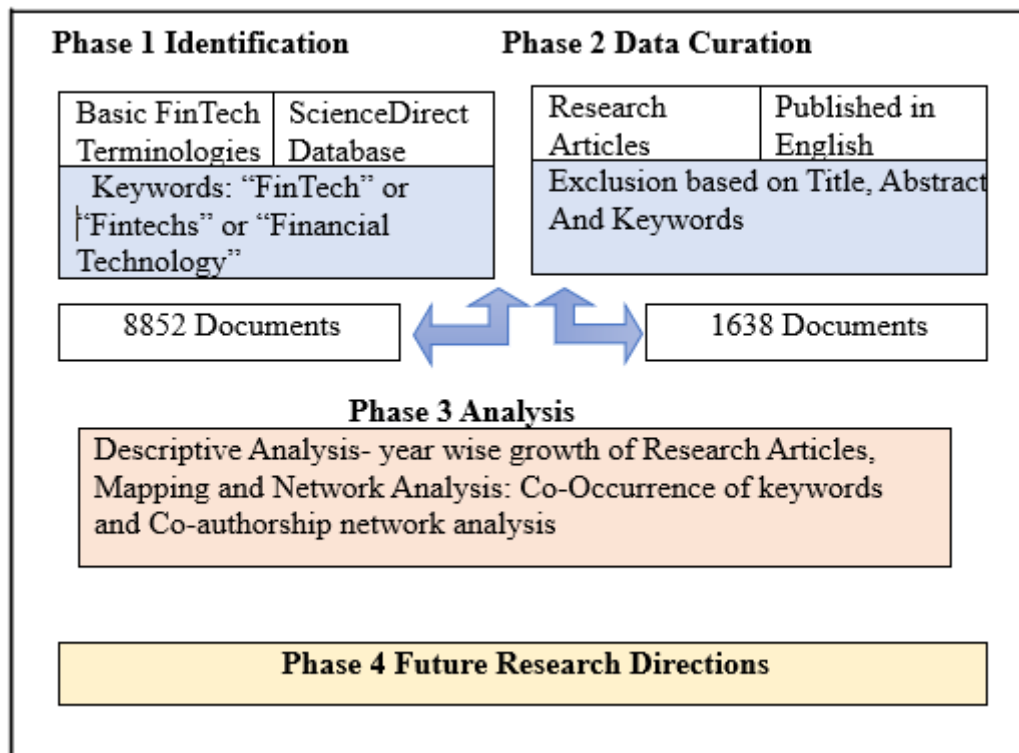


Fig. 1. Research Framework Adopted

Source; Reproduced from the Sethi et al. paper (Sethi et al.,2025)

Phase one: Identifying Relevant Studies on FinTech Innovation and Financial Technology. To identify relevant studies on FinTech innovations in financial technology, I began with a broad search strategy that was composed of a wide range of potential search terms such as ‘digital finance’ and ‘Fintech Innovation’. After this exploratory period, I narrowed my search to one central keyword of ‘FinTech’ and one central keyword of ‘Financial Technology’ in the database Science Direct. Additionally, I used several internal filters that were available within the Science Direct system to narrow my search further to include: Type of Document, Publication Year, and Subject Category in order to optimise my results. This highly focused approach has allowed me to focus specifically on the years 2016- April,2026 and capture only the rapidly evolving technologies from that time frame.

Phase Two: Curating Data from the Selected Study. In the second phase of the search process, I manually read through the titles and abstract of each of the articles that had been identified in the first phase of the search process and curated my data using only licenced studies with an emphasis on financial technology. My aim was to create a comprehensive dataset that was of high quality therefore only the studies that had a central theme related to financial technology would have been included in this analysis. Each of the studies listed as part of my analysis were reviewed to assess whether or not they provided any relevant findings or theoretical frameworks that provided significant information related to the field. Finally, this

analysis encompasses only papers published in English up until April 2026 are represented which ensured that data was both linguistically consistent and representative of the most recent international research trends.

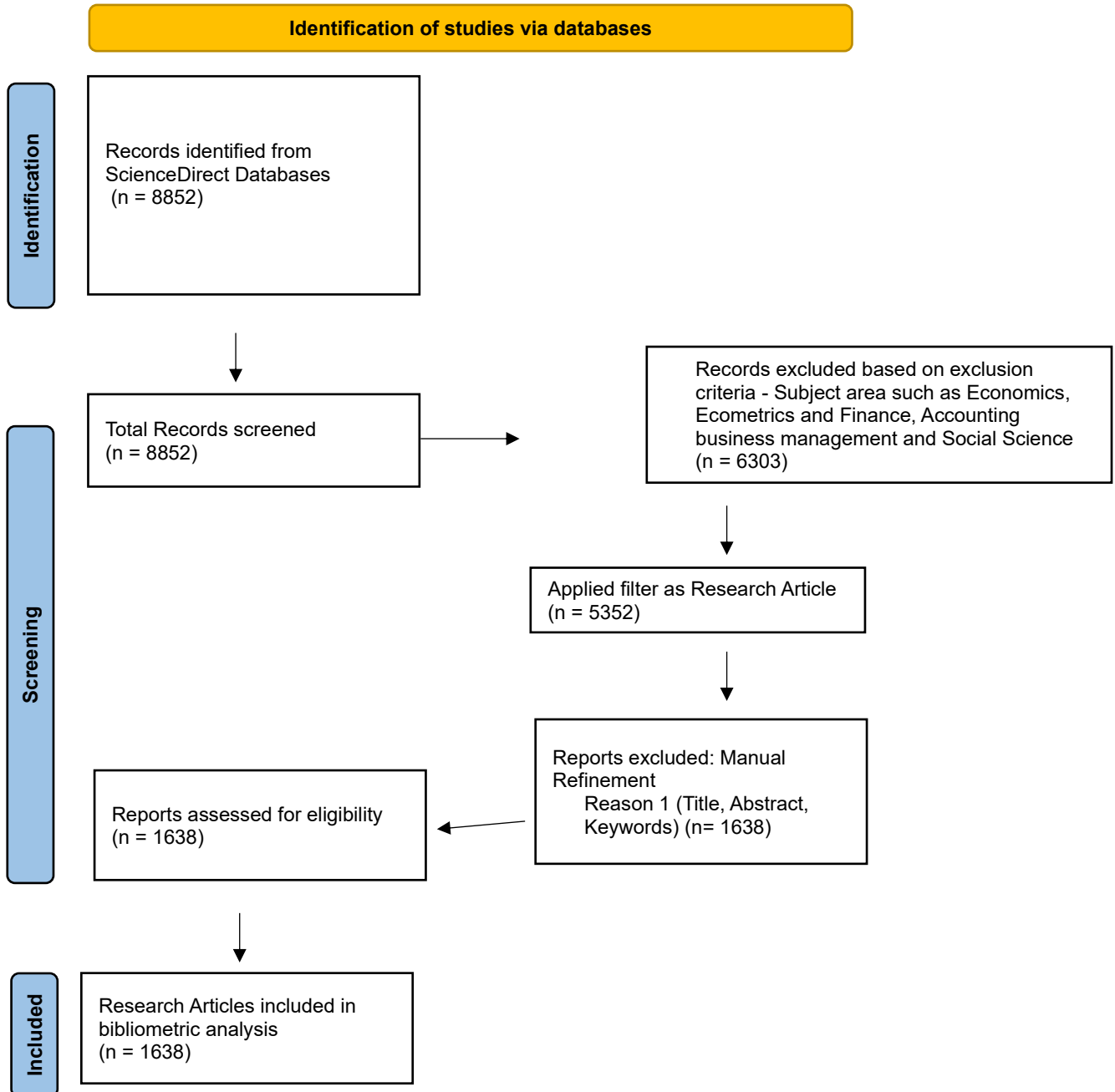


Fig. 2. Prisma Flowchart

Source: Authors' compilation based on Page et al. ([The PRISMA 2020 Statement: An Updated Guideline for Reporting Systematic Reviews, n.d.](#)).

This approach aligns with the PRISMA 2020 protocol, which emphasizes transparency in how a final curated set of research is selected from a large initial pool of database records. Ultimately, this process ensured that our final analysis was builds upon a foundation of validated, high-impact scholarly work.

Fig. 2 – Using the PRISMA model as a framework for assessing a set of scientific documents and maintaining relevance throughout a multi-step process resulted in identifying 1,638 research articles pertaining to FinTech. Initially, a total of 8,852 records were retrieved from the Science Direct database. The large number of initial records can be attributed to the fact that FinTech research combines areas of knowledge across various field of study, including finance, technology, business management and social sciences. Records related to FinTech were systematically identified, which resulted in narrowing the number of total records down to 6,303 documents. The corpus was further reduced to 5,352 records after removing book chapters and conference papers and maintaining only scientific articles. The remaining records were then reviewed qualitatively based upon their Title, Abstract and Keyword to assess whether they were discussing FinTech. Following this review, a total of 1,638 records remained for conducting bibliometric analysis.

Phase three: Analysed the growth of journals and research articles based on annual counts. Then used author keywords to look for patterns in terms and subjects. Finally, used co-authorships to see how widely collaborating with countries on similar research topic occurred.

Table 1- Year-wise distribution of research articles published from 2016 to April 2026

Year	Research Article Published
2016	11
2017	31
2018	80
2019	141
2020	251
2021	474
2022	548
2023	724
2024	1016
2025	1481
2026	627

Source: Authors’ Compilation based on ScienceDirect Data

Table 1 the statistical trajectory of FinTech research from 2016 to 2026 reveals a dramatic shift in global academic. Between 2016 and 2026, FinTech research changed from a small or specialized topic into a major global subject. It grew from just 11 studies in 2016 to nearly 1500 articles by 2025 and further 627 articles by April 2026 according to ScienceDirect database. This massive growth shows that experts are no longer solely curious pertaining the technology, but now see it as the most important tool for financial progress (Afjal,2023).

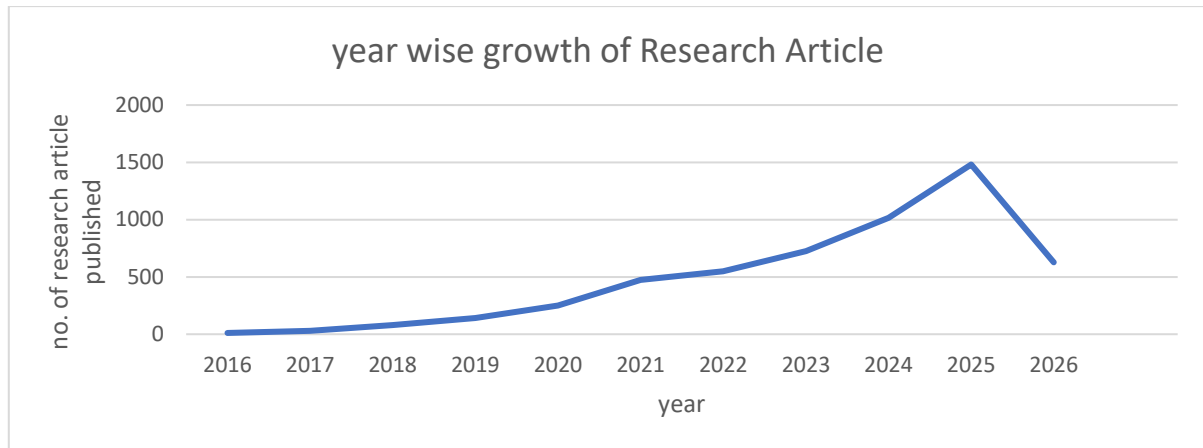


Fig. 3. Year-wise Growth of Publication

Source: Authors' Compilation based on ScienceDirect Data

Fig. 3. It shows the graphical presentation of year wise growth of Publication. Evolving from a niche topic with only 11 articles in 2026 to a dominant global field with 1481 publications by 2025. The major turning point occurred between 2020 and 2021, where research nearly doubled to 474 articles. Pandemic acting as catalyst for rapid digital adoption. Today, with over 627 articles already recorded in the first few months of 2026 till April, the trend has moved towards integrating blockchain, digitalization and Artificial Intelligence to solve complex problems like global financial inclusion. The jump from 251 articles in 2020 to 474 in 2021 represents 89 % growth in solely one year, indicating that FinTech had become a critical survival tool for the global financial system. This surge confirms that FinTech is no longer just a trend, but a permanent transformation in how value is produced, managed and accessed worldwide (Badra et al.,2025). The most aggressive growth phase is observed between 2022 (548 articles) and the peak of 2025 (1481 articles). This exponential climb suggests that field has matured into multi-disciplinary domain that integrate complex topics such as Blockchain, Green growth, Artificial Intelligence, Cyber Security, Sustainability. Surpassing the 1000 article mark in 2024 indicates that FinTech is no longer just a trend but a permanent prevailing area of scientific inquiry (Salem and Shahimi,2025). At the present rate, 2026 is expected to surpass the 2025 record by considerable margin that possibly surpassing 2000 Publications by year's end.

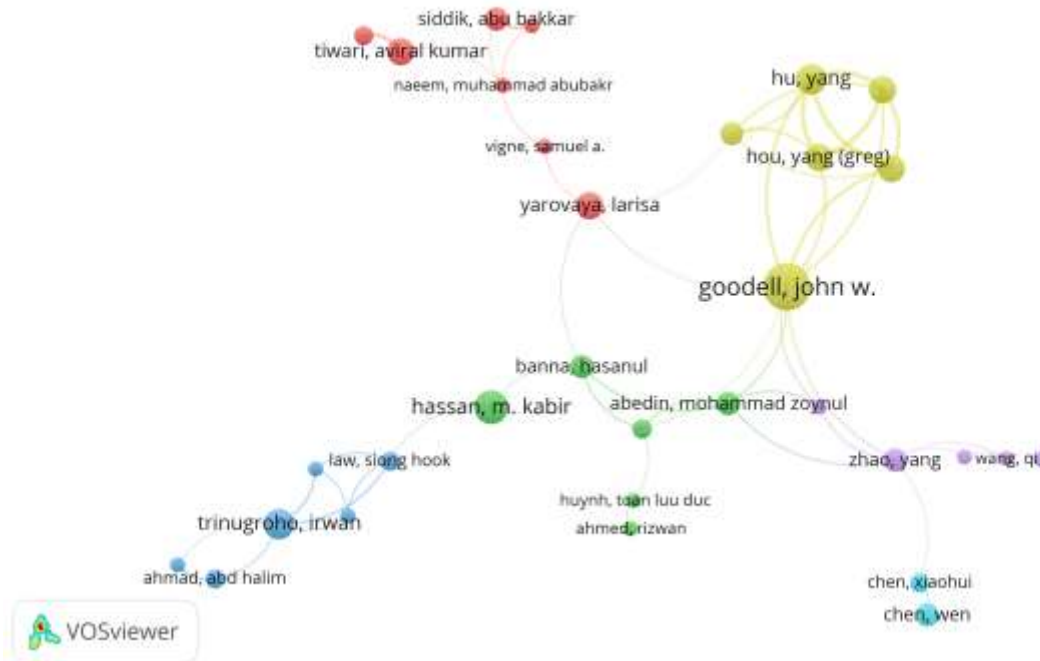


Fig. 4. Co- Authorship (Network Visualization)

Source: Authors’ compilation based on ScienceDirect data

Fig. 4. Out of 4,242 total authors, only 152 meet the threshold criteria for inclusion in the network visualization. More significantly, just 32 of these threshold-eligible authors form connected components. Hu, Yang; Hou, Yang; and Oxley, Les demonstrate the strongest collaborative bonds. Despite having fewer documents than the most prolific author, their total link strength values (25, 23, and 23 respectively) indicate they work as a cohesive research unit. These authors co-author extensively with each other and also maintain stable, long-term collaborative relationships. Goodell, John W. presents a contrasting pattern. With 12 documents and a total link strength of 22. This suggests Goodell serves as a bridge connecting multiple research groups rather than working with a single team. His position likely facilitates knowledge transfer across different sub-domain of the field, making him a critical node for information flow. Tang, Mengxuan (6 documents, 22 total link strength) demonstrates patterns similar to the high – intensity cluster, indicating possible integration with that core group. Authors such as Corbet, Shaen (5 documents, 12 total link strength), Khan, Habib Hussain (5 documents, 11 total link strength) and Trinugroho, Irwan (7 documents, 11 total link strength) represent emerging collaborative nodes that may be developing their networks. The 32 authors connected core represents the intellectual backbone of the field, serving as the primary channel for research dissemination and innovation. Bridge authors could strengthen overall network cohesion and facilitate the integration of isolated researchers into the broader collaborative community. This network structure suggests that while a small, intensely collaborative core drives the field's intellectual development, significant opportunities exist for expanding collaborative relationships across the broader research community.

Table 2 - Top 20 Keywords based on Occurrences (Oc) and Total Link Strength (TLS)

s.no.	Keywords	Oc	TLS	s.no.	Keywords	Oc	TLS
1.	FinTech	600	1030	11.	Covid 19	48	85

2.	Financial inclusion	150	337	12.	Artificial Intelligence	39	83
3.	Blockchain	97	213	13.	Digitalization	30	75
4.	Financial Technology	81	129	14.	Financial stability	28	71
5.	Digital finance	70	125	15.	Mobile money	26	68
6.	Digital transformation	64	106	16.	Banks	25	61
7.	Innovation	48	106	17.	Bitcoin	23	60
8.	Cryptocurrency	40	103	18.	Financial development	31	60
9.	Banking	37	97	19.	Financial regulation	29	60
10.	China	48	89	20.	Crowd funding	28	55

Source: Authors' compilation based on ScienceDirect data.

Table 2: The above table quantifies the core pillars of FinTech scholarly landscape, using occurrence and total link strength to map keyword network visualization, where FinTech is the undisputed central node having occurrence of 600 times with total strength of 1030, acting as the primary hub for each scholarly connections in the network. After financial inclusion ranks as the second most critical theme which highlighting the socio-economic mission of digital finance. Blockchain and cryptocurrency showing high link strength that is 213 and 103, representing transition that concerning decentralized architectures. Covid 19 confirms that the pandemic served as enormous external accelerator for digital adoption (Salem and Shahimi,2025). China stands out to be leading regional case study, which reflecting its global influence in FinTech ecosystem development (Sethi et al.,2025). Strong link strength of Digital Transformation and Innovation underscores a structural shift towards Industry 4.0.

Fig. 5. by utilizing VOSviewer software to map 1,638 scholarly works with a total of 4096 keywords were identified. From this pool, 219 terms met the inclusion criteria of appearing the minimum threshold of five times, resulting in their classification into 11 distinct thematic clusters. The diagram illustrates how various keywords overlap and also highlighting that besides the core concept of FinTech, financial inclusion, blockchain, other dominant pillars in scholarly journals such as cryptocurrency, digital transformation, artificial intelligence, digitalization emerge as the most frequently occurring keywords, attributes with their corresponding values are summarized in table 2. The information in the table shows which concepts have high frequency and which act as “bridges” means high link strength between different academic disciplines. The term FinTech as the leading keyword took place 600 times with the total link strength of 1030. Financial inclusion has gained prominence in tandem with FinTech due to 150 mentions, 106 reference and a link strength of 337. This is because FinTech innovations can be quickly applied in the improvement of financial systems and increase the availability of services for everyone (Sethi et al.,2025). Innovation, financial technologies, financial innovations and financial resilience have been coloured in purple to reflect on the theme under discussion.

via modern digital lending practices (Afjal,2023). The keywords clustered together demonstrates that innovation is increasingly being defined in the developing world by means of “leapfrogging” in which countries have skipped straight to decentralized, internet-based, financial methods (DERMIRKALE et al.,2025).

The keywords in the green cluster are indicative of Socio-Economic Impact and Structural Transformation dimension of FinTech research. This includes keywords such as Digitalisation, Financial Development, Economic Development, Industry 4.0, includes the application of advanced technologies (such as AI, Big Data, Cloud Computing) to develop a more efficient financial ecosystem, however, these technologies do not just provide “speed” of transactions but instead decrease transaction costs that, in the past, made it difficult for the banks to serve either impoverished or remote population. Digital financial inclusion is a strong instrument for poverty reduction by providing “micro -lending” and “mobile money” platforms also bridge the gender financial inclusion gap and minimise the overall income inequality through providing “vulnerable populations” in rural or underserved areas with the exact tools as urban elites (Afjal,2023). This multi-disciplinary ecosystem that includes FinTech in the center of the innovation and Social Equity in the area demonstrates the evolution of banking from efforts to make banks operate more efficiently, to a system in which technology, in-and-of-itself, creates the conditions necessary for social and sustainable growth.

Future Directions of Research

Over the next decade, research must be conducted from one of the three perspectives outlined below in order to shape FinTech innovation. First, according to the lessons of the yellow cluster, a study of the connection between sustainable development and digital finance will result in knowledge about how these two areas can support institutional accountability and create green growth (Hassan et al.2026). While there is a high degree of connectivity noted with blockchain and cryptocurrency, researchers also need to focus on the economic stability of these industries and how they will affect long-term stability (Sahabuddin et al.2023; Salem and Shahimi,2025). Lastly, the priority should shift from developing FinTech to its more human-oriented use and utilizing its social benefits.

Findings

1. Temporal growth and global trajectories (2016-2026): The research landscape has undergone a radical shift, evolving from a niche specialization with only 11 articles in 2016 to a dominant global discipline with 1,481 publications in 2025, based on ScienceDirect database. The Pandemic catalyst: between 2020 and 2021, a critical turning point occurred, where research output surged by 89% (from 251 to 474 articles). This spike indicates that the FinTech become a vital survival tool for the global financial system throughout the Covid 19 pandemic. As of April 2026, 627 articles have been already recorded in the ScienceDirect, indicating continued strong growth in the field. This sustained growth confirms that FinTech is a long-term academic and economic pillar rather than a temporary trend.
2. Thematic Clusters and Research Frontiers: The analysis identified 11 distinct thematic cluster from 219 high - occurrence terms, mapping the current boundaries of the field.
 - **Core pillars:** “FinTech” remains the undisputed central node (600 occurrences), followed by “Financial Inclusion” (150 occurrences) and “Blockchain”
 - **Emerging Frontiers:** Recent trends show a significant shift toward integrating Artificial Intelligence, Cryptocurrency, and Digitalization to address complex issues like global accessibility.

- **Socio – Technical intersection:** Clusters increasingly intersect around Sustainable Development, Financial resilience and Inclusive growth moving beyond pure technology to focus on socio-economic impact.

Limitation of the study

The study is subject of several methodological constraints such as –

- Database Scope – The analysis was exclusively confined to the ScienceDirect database. This single source approach means that relevant research which is published in other major databases such as Scopus, Web of Science – may not be fully represented in the corpus. Means the thematic clusters and growth trajectories identified here is consider the landscape within ScienceDirect rather than the entire global body of FinTech scholarship.
- Analytical Focus – The bibliometric methodology was specifically designed to visualize keyword co-occurrence patterns using network analysis tool (VOSviewer), but it does not capture other dimensions of research impact such as country-wise productivity analysis or citation metrics. The analysis did not perform a comparative assessment of research output across distinct nations or regions. Therefore, the findings do not show which nations are at the forefront of FinTech research or how geographical distribution has evolved over time.

Policy recommendations

The findings of this audit offer a clear direction for policymakers that prioritize ‘inclusive innovation’ because Financial Inclusion emerged as the second most influenced theme in the dataset, it must become the cornerstone of future strategy (Biju et al.,2024).

Conclusion

FinTech has developed from being a new technology into becoming an interdisciplinary economic domain. In our study, we have used four-stage PRISMA methodology where out of 8,852 articles, 1,638 highly relevant articles were considered for further evaluation. There are eleven thematic clusters that demonstrate a change from purely technical research to social-economic effects, particularly financial inclusion and sustainability (Liu et al.,2024). The field development is rapid, starting from 11 studies in 2016 and ending with 1,481 in 2025 (ScienceDirect). All in all, FinTech has transitioned from a technical fad to a solid scientific research subject (Salem and Shahimi,2025).

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