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Fintech Disruption in Traditional Banking

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ABSTRACT

The traditional banking industry has been severely affected by the rise of Financial Technology (FinTech), which has put long-standing operational frameworks and business models to the test. With an emphasis on important functional areas like digital payments, alternative lending, investment platforms, and customized financial services, this study critically analyzes the scope and character of FinTech's disruptive impact on traditional banking institutions. The study explores how FinTech companies use cutting-edge technologies like blockchain, artificial intelligence, and big data analytics to provide flexible, affordable, and customer-focused financial solutions. It does this by using an integrative methodology that includes an extensive literature review, empirical data analysis, and expert interviews. According to the research, FinTech has accelerated the digital revolution of the banking sector while also undermining areas of the market that banks have historically controlled. Through the adoption of new technologies, strategic alliances, and regulatory flexibility, traditional banks are embracing innovation more and more. According to the paper's conclusion, the financial ecosystem is moving toward a collaborative paradigm, wherein FinTech innovation and traditional banking infrastructure must combine for inclusive financial growth, increased customer value, and continued competitiveness.

KEYWORDS:-FinTech, Traditional Banking ,Artificial Intelligence (AI), Financial Inclusion Bibliometric Analysis, Digital Transformation, Disruption

INTRODUCTION

Over the past 20 years, the global financial environment has undergone tremendous change due to the financial technology (FinTech) revolution. FinTech companies have established a new paradigm in the provision of financial services by utilizing breakthroughs like blockchain, artificial intelligence (AI), big data analytics, and mobile applications. This paradigm places an emphasis on quickness, ease of use, customization, and less middlemen. Consumer expectations have shifted toward more agile and digital financial products as a result of these developments, which have also reduced barriers to entry for new players and promoted more financial inclusion. In order to remain relevant, the conventional banking industry,

Historically, the infrastructures of traditional banks have been heavily regulated, capital-intensive, and bureaucratic. FinTech businesses, on the other hand, frequently have leaner business models, fewer regulatory restrictions, and a greater focus on the user experience via digital interfaces. FinTechs will challenge banks' monopoly in a number of essential financial tasks by offering services including digital payments, robo-advisory, peer-to-peer lending, and decentralized finance (DeFi). Further shifting the competitive landscape in Favor of FinTech companies, especially in sectors like mobile banking and contactless payments, was the COVID-19 pandemic's acceleration of the use of digital platforms.

Macroeconomically speaking, the emergence of FinTech has presented the financial sector with both new opportunities and risks. On the one side, FinTech advancements help financial services become more cost-effective, efficient, and risk-aware. Conversely, they bring up issues with data privacy, cybersecurity, financial stability, and regulatory arbitrage . In order to promote responsible innovation while preserving systemic resilience, central banks and regulators from many jurisdictions have been keeping a close eye on these dynamics. Some have even started digital banking licensing and regulatory sandboxes. Scholarly discussion and policymaking discussions are still dominated by this dual narrative of opportunity and disruption.

The rise of hybrid models like "Banking-as-a-Service" (BaaS), digital banks, and open banking platforms is a result of FinTech's disruptive effect on traditional banking as well as increasing cooperation and competition. These solutions preserve consumer confidence and regulatory compliance while enabling traditional banks to take advantage of FinTech infrastructure. FinTechs, however, profit from having access to banking licenses, clientele, and capital. The distinction between traditional and digital finance is becoming increasingly hazy due to this convergence, so it is crucial to examine how research on FinTech disruption has changed over time and which topics have drawn the greatest attention from academics.

A quantitative lens is offered by bibliometric analysis to map and assess the intellectual framework, significant works, cooperative networks, and new subjects in this quickly expanding discipline. Bibliometrics helps researchers find research patterns, intellectual underpinnings, and knowledge gaps by methodically analysing publications, citations, and co-authorship networks. A bibliometric method is particularly helpful for bringing disparate literature together and directing future research because of the interdisciplinary character of FinTech, which spans finance, information technology, economics, law, and behavioral sciences. Using data solely from Scopus-indexed articles to guarantee academic rigor and thorough coverage, this study uses a bibliometric evaluation to critically map the landscape of FinTech disruption in traditional banking. There is still a dearth of thorough mapping of the intellectual structure and theme tendencies in this study domain, despite the FinTech literature's exponential expansion and its ramifications for traditional banking. Reviews that already exist are frequently narrative in character, vulnerable to subjective bias, and have a narrow focus. A methodical, data-based bibliometric. To determine how scholarly attention has changed over time, which subfields have the greatest influence, and where future study might go, analysis is required. Instead of being strategic and anticipatory, scholarly and policy discourses run the risk of becoming fragmented and reactive in the absence of such an overview. This study's goal is to perform a bibliometric review of the academic literature on how FinTech is upending traditional banking.

LITERATURE REVIEW

2.1 Developing the Idea of Financial Services Disruption

The theoretical basis of "disruption" in financial services is one of the fundamental topics covered in the literature. By first providing novel services to underserved or niche customers, FinTech firms have progressively grown to compete with traditional banking operations, as explained by scholars using the theory of disruptive innovation. In addition to being technological, disruption is also structural and cultural. Because of old systems and regulatory slowness, traditional banks struggle to adopt innovation and be agile [11]. Platform-based banking and decentralized finance (DeFi) models are two examples of new business models that reframe the delivery of financial services, according to some experts, who contend that the real disruption is not in technology per se [12]. FinTech is also widely seen as a paradigm change rather than just an addition to banking. [13] contend that as traditional sector borders are blurred by digital banking methods, the line separating FinTech companies from banks is becoming less relevant.

2.2 Foundational Theory

The Financial Innovation Theory, which asserts that new financial instruments, are at the heart of FinTech disruption, in reaction to market needs, legal changes, or inefficiencies, institutions or technology are created. According to, financial innovation is the development and acceptance of novel financial procedures, products, and organizational structures that enhance capital allocation. While FinTech companies offer flexible and agile models that address unmet requirements through digital channels, traditional banks frequently function under inflexible old systems. Examples of functional improvements to financial intermediation include the development of robo-advisors, mobile wallets, and peer-to-peer lending platforms, which give businesses and consumers access to more specialized and effective services. As a type of financial innovation, fintech frequently takes advantage of flaws in the conventional banking model, like protracted loan processing periods, expensive transaction fees, and restricted accessibility for those without bank accounts. The hypothesis also highlights how technology facilitates this kind of innovation, arguing that breakthroughs in technology (such as blockchain and APIs) typically occur at the same time as financial development. Crucially, these developments frequently not only enhance established services but can, in certain situations, completely replace or alter them, resulting in disintermediation, which poses a direct threat to established banks.

Disruptive Innovation Theory by, which describes how new competitors can upend established businesses by providing easier, less expensive, or more practical substitutes that eventually win over mainstream markets, is another pertinent theoretical framework. FinTech companies frequently enter the market by focusing on underprivileged or low-margin markets—like small enterprises, millennials, or unbanked people—with digital-first solutions that put an emphasis on speed, convenience, and transparency. Core banking operations are disrupted as these solutions get more sophisticated over time and start to draw in mainstream customers. Because of organizational inertia, regulatory complexity, or risk aversion, traditional banks—with their established client bases and historical infrastructure—are frequently sluggish to react. FinTechs may have already taken a sizable portion of the market or changed consumer expectations by the time established companies try to innovate. According to this idea, banks face greater risk from failing to modify their value propositions to meet changing customer expectations than from technology obsolescence in and of itself.

METHOD

The intellectual landscape of FinTech disruption in traditional banking is thoroughly mapped in this paper using bibliometric analysis. Due to its extensive coverage of peer-reviewed academic literature across fields, the Scopus database was the only source from which the data was obtained. Using the search string ("FinTech" OR "financial technology") AND ("traditional banking" OR "bank disruption" OR "bank transformation"), the dataset was limited to articles, reviews, and conference papers published between
2008 and 2024 to capture the recent evolution

OUTCOME AND CONVERSATION

4.1 Outcome

a. Characteristic Chart

of the field. Bibliometric techniques were applied using VOS viewer for keyword cooccurrence, citation, and co-authorship network analysis to identify dominant research themes, influential authors, and collaboration patterns. The analysis focused on uncovering the intellectual structure of the domain, mapping thematic clusters, and highlighting research gaps.

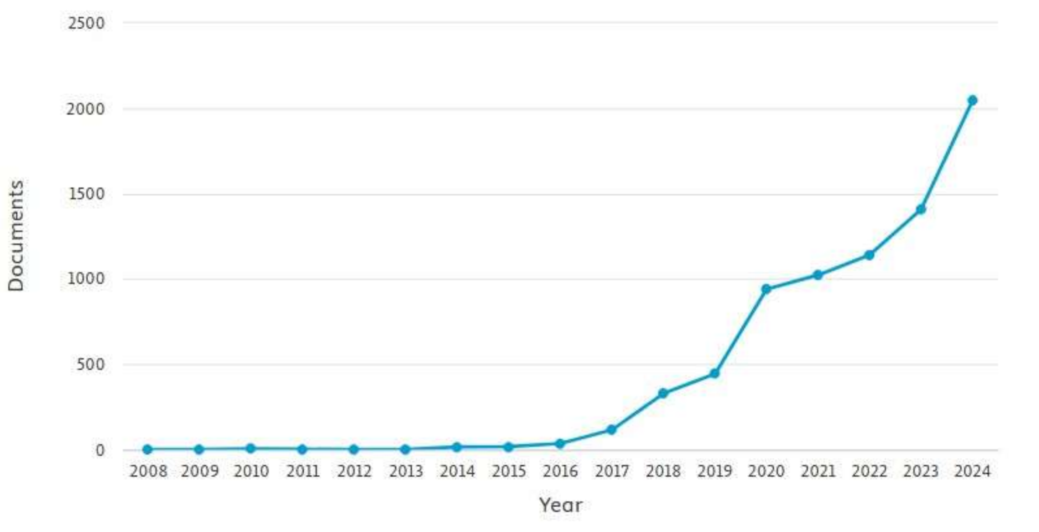

Figure 1. Documents by Year
Source: Scopus Database, 2025

From 2008 to 2024, the graph shows the yearly increase in scholarly papers about FinTech's disruption of traditional banking. The small quantity of documents between 2008 and 2015 suggests that early FinTech development received little scholarlyattention.
There has been a steady rise since 2016, with a noticeable quickening starting in 2018. Between 2019 and 2020, when the COVID-19 pandemic caused global changes in digital financial services, there was the biggest spike. Up until 2023, this rising tendency persisted gradually; however, in 2024, it spiked sharply to almost 2,000 papers. In recent academic discourse, FinTech innovations and their disruptive influence on traditional banking systems have gained significant attention, as evidenced by the trajectory, which represents a rapidly growing research interest.

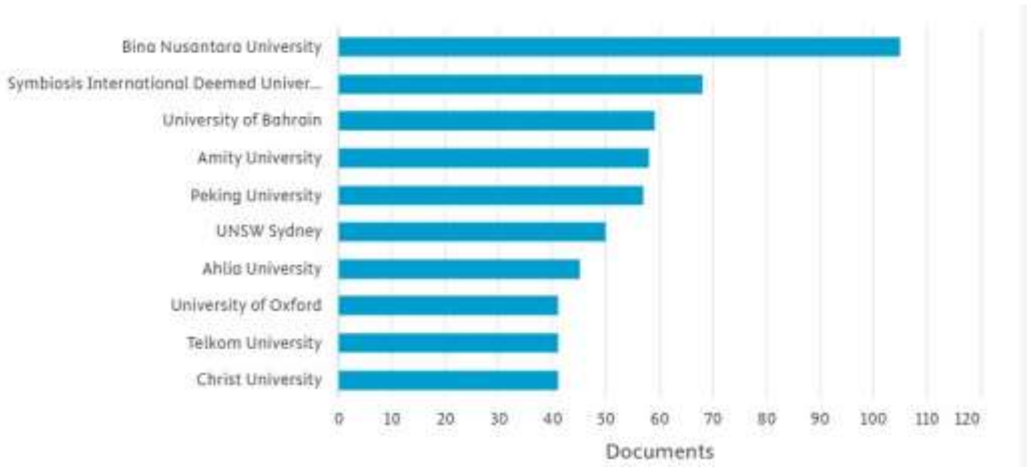

Figure 2. Documents by Affiliation
Source: Scopus Database, 2025

Based on the quantity of scholarly papers, the figure shows the leading institutions in the FinTech and traditional banking disruption space. With more than 110 documents, Bina Nusantara University takes the lead, demonstrating its strong institutional commitment to financial technology studies and research concentration. With each submitting about 60 documents, Symbiosis International Deemed University and the University of Bahrain come next. Other noteworthy participants include 50–60 articles from Amity University, Peking University, and UNSW Sydney. Interestingly, internationally recognized universities like the University of Oxford are also listed, albeit with relatively lower outputs. This shows that growing and regionally prominent universities, particularly in Asia, are driving a large portion of the research momentum. This distribution shows that interest in FinTech is spreading throughout the world, with a large amount of scholarly effort taking place outside of the conventional academic powerhouses in the West.

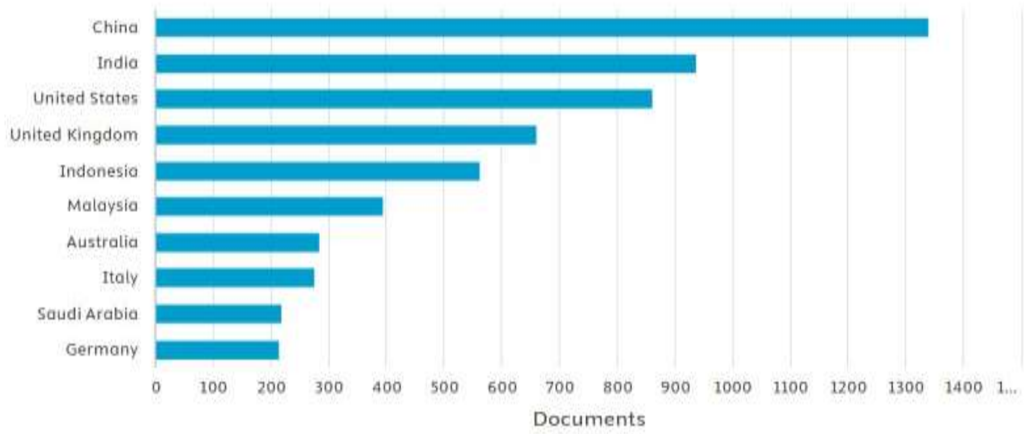

Figure 3. Documents by Country
Source: Scopus Database, 2025

China stands up as the top nation with more than 1,400 documents, demonstrating its leadership in developing financial technology and research on digital banking. With respective outputs of over 900 papers, India and the US come in second and third, respectively, demonstrating their robust academic and technology ecosystems. Indonesia is the largest contributor among Southeast Asian countries, with over 500 articles, while the United Kingdom comes in at number four. Germany, Saudi Arabia, Italy, Malaysia, and Australia are among the other prominent suppliers, each with 200–400 documents. According to the statistics, academic discussion of FinTech is centred on Asia, especially in China and India, reflecting both local innovation centres and the expanding relevance of digital finance in emerging economies.

b. Citation Analysis

Table 1. Most Cited Article

Citations	Author and Year	Title
1165	[18]	On the Fintech Revolution: Interpreting the Forces of Innovation, Disruption, and Transformation in Financial Services
447	[19]	How Valuable Is FinTech Innovation?
419	[20]	The Fintech Opportunity
401	[21]	A systematic review of blockchain
286	[22]	Small business awareness and adoption of state-of-the-art technologies in emerging and developing markets, and lessons from the COVID-19 pandemic
235	[23]	Disruption of Financial Intermediation by Fintech: A Review on Crowdfunding and Blockchain
232	[24]	Capital Markets Union and the fintech opportunity
206	[25]	A Survey of Fintech Research and Policy Discussion
172	[26]	Fintech and Banking. Friends or Foes?
169	[27]	The Impact of Fintech on Banking

Source: Scopus Database, 2025

c. Keyword Co-Occurrence Network Visualization

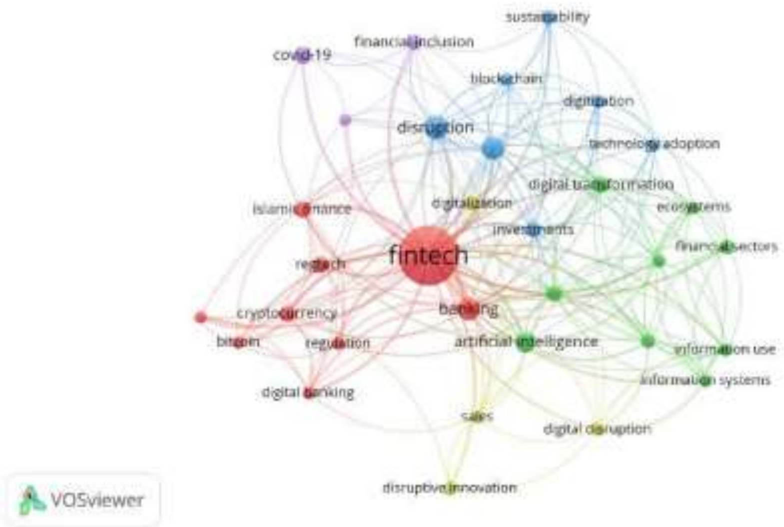

Figure 4. Network Visualization
Source: Data Analysis, 2025

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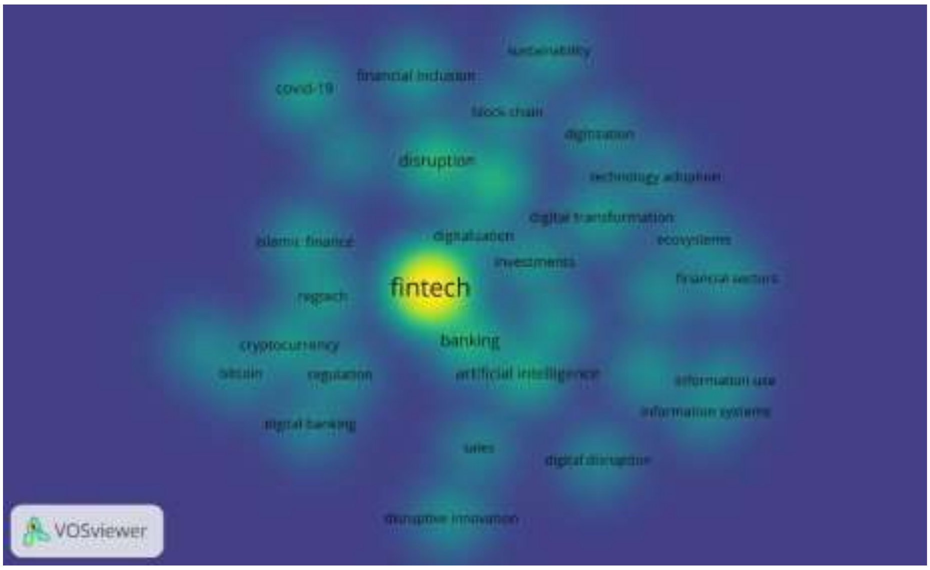

Figure 6. Density Visualization

Source: Data Analysis, 2025

CONCLUSION

This bibliometric review reveals the dynamic and rapidly evolving nature of research on FinTech disruption in traditional banking. The significant growth in scholarly output, particularly after 2020, reflects a global recognition of FinTech as a transformative force within the financial services industry. Thematic analyses indicate a shift from foundational discussions on digitalization and artificial intelligence toward more complex and socially oriented issues such as financial inclusion, sustainability, and post-pandemic recovery. The dominance of contributions from China, India, and emerging economies underscores the global relevance of FinTech beyond traditional Western financial centres. Moreover, the collaborative patterns among authors and countries suggest an encouraging trend toward interdisciplinary and cross regional research. As the field matures, future studies must explore emerging areas such as digital ecosystems, regulatory innovations, and ethical dimensions, ensuring that FinTech development contributes not only to technological advancement but also to equitable and resilient financial systems.

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Trends underscore the importance of agile regulation—mechanisms such as regulatory sandboxes, open API mandates, and FinTech charters can support innovation while protecting consumer interests and systemic stability.

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