

A Bibliometric Analysis of FinTech and Digital Banking: Trends, Networks, and Research Gaps

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ABSTRACT

Financial technology (FinTech) has become a disruptive force in the financial sector, significantly transforming digital banking systems and reshaping modern business models. This study conducts a bibliometric analysis of FinTech and digital banking research using the VOSviewer software along with the SPAR-4-SLR framework. A total of 405 research articles published between 2016 and 2025 were extracted from the Scopus database for analysis. The study applies descriptive, intellectual, and social structure analyses to identify influential authors, leading journals, key countries, and highly cited publications. The results reveal emerging research opportunities in domains such as financial inclusion, artificial intelligence, digital finance, and broader digital transformation. Overall, the findings offer a structured understanding of the evolving research landscape in FinTech and digital banking, providing useful direction for researchers, financial institutions, and industry stakeholders to explore future developments and strategic opportunities.

Keywords:

Bibliometric, Digital banking, Digital Transformation, Fintech, VOSviewer

1. INTRODUCTION

Fintech has transformed the global financial ecosystem by its rapid evolution by reshaping banking models, digital innovation, digital payment and financial inclusion. Intergenerational transfer of trust and caution in financial transaction is inferred and engaged in the mode of transactions. The proliferation in the usage of fintech is growing in banked population and the impact of fintech in the banking sector usage has declined. Adu Derick Taylor (2025) has emphasised the role of usage of mobile and digital banking enhances the reach of financial accessibility. Analogously, Qing He (2025) has investigated how the digital payment behaviour pattern in rural bank has emerged in bridging the gap financial technologies. Xinyu Ge (2025) has further focused on the significance of the policies and regulations by shaping the digital banking sector.

Through bibliometric analysis of 405 publications between 2016 and 2025 from the Scopus database, the study highlights the usage of fintech and trends in the banking sector. Tools such as VOSviewer and SPAR-4-SLR has helped to identify trends, authors, countries, and various clusters. By 2030 the usage of the fintech will increase in the number and it will be widely accepted throughout the world.

RQ1: What are the publication trends in Fintech and Digital Banking publication evolved over the time?

RQ2: Who are the most prolific author in fintech and digital banking?

RQ3: Which journal has the most contribution in the research landscape of fintech and digital banking?

RQ4: Which countries are most active in fintech and digital banking?

RQ5: What are the most cited documents in fintech and digital banking?

There were some objectives of this study:

- 1) examining the current research trends, and
- 2) identifying the structures that make up the research literature on fintech and digital banking. Bibliometric analysis was done with the knowledge mapping tool VOSviewer (Eck & Waltman, 2009) on 405 research papers published in the Scopus database. This study closed the research gaps by
 - 1) providing a thorough review of the literature based on the key issues of fintech and digital banking and
 - 2) providing a systematic and insightful literature review method by analyzing the fintech and digital banking.

This study is presented in 4 sections.

Section 1 is the Introduction. Section 2 describes the bibliometrics analysis using VOSviewer software, Section 3 presents the results and discussion and Section 4 provides the conclusion.

2. Review of Literature

Mohammed Eunus Ali (2025) conducted a comprehensive survey in Oman to examine the impact of fintech and digital banking systems on commercial banks. The study reveals that fintech and digital banking are significantly transforming commercial banks in Oman by enhancing efficiency, accessibility, and competitiveness. Technologies such as digital payments, mobile banking, blockchain, and artificial intelligence are identified as key contributors to improved operations and customer experience, while also promoting financial inclusion. However, the study acknowledges challenges such as cybersecurity risks and regulatory compliance that must be addressed. The research emphasizes that fintech reduces costs and drives economic growth, recommending collaboration between regulators and banks to support sustainable digital transformation in the financial sector.

According to Rama Dwika Pradhipta (2025), fintech and digital banking are crucial for enhancing financial inclusion in Indonesia, particularly given the country's unique challenges, such as its archipelagic geography and a significant unbanked population (26% of adults). The study identifies key drivers for scalability, including technological infrastructure, regulatory adaptability, and strategic partnerships. Successful models, such as mobile banking platforms utilizing agent networks, demonstrate how localized innovations can overcome barriers to access. Collaborative governance and inclusive policies are deemed essential for optimizing these solutions and fostering sustainable development. The research aims to provide evidence-based insights for policymakers, financial institutions, and fintech developers to optimize scalable solutions. A systematic literature review methodology was employed, analyzing peer-reviewed articles, industry reports, and case studies from 2015 to 2025. Thematic analysis was utilized to identify critical drivers and barriers to scalability in fintech and digital banking. Recommendations include harmonizing regulations, expanding digital education, and incentivizing technological innovation specifically for rural markets.

BagusRahmanda et al. (2025) explore the crucial role of fintech in the evolution of digital banking by facilitating remote financial activities and enhancing customer convenience. The collaboration between banks and fintech companies integrates banking services with fintech platforms, allowing seamless access for customers. This transformation reflects the broader changes brought about by the Industrial Revolution 4.0, where digital banks emerge to meet the demands of modern consumers, while also presenting challenges related to system vulnerabilities and regulatory compliance. The primary objective of the research paper is to explore the nature of cooperation between banks and fintech companies. The research findings indicate that collaboration between banking institutions and fintech companies is achieved through the integration of banking services with fintech platforms, which enhances customer convenience and access to banking services in the digital era. Fintech represents the integration of advanced technologies with financial services, significantly transforming digital banking. This evolution encompasses mobile banking applications, blockchain, AI-driven analytics, and cryptocurrencies, which redefine traditional banking practices. The symbiotic relationship between Fintech and banking necessitates that traditional institutions adopt digital strategies to remain competitive. Open Banking initiatives further enhance collaboration, merging the capabilities of established banks with agile Fintech startups, ultimately reshaping the financial ecosystem and enhancing customer experiences in digital banking (NalabothuRaviteja, 2024).

According to Franklin et al. (2022), cryptocurrencies and central bank digital currencies exert a transformative influence on China's financial system. Despite extensive research, Fintech-led innovations continue to redefine monetary policy, digital payments, and cross-border transactions. Zetsche et al. (2020) have explored the emergence of Decentralized Finance and its direct implications for financial regulation, banking stability, and consumer trust. With 289 citations, their paper primarily focuses on how blockchain-based systems challenge conventional intermediaries by implementing automated and programmable financial services. The authors' bibliometric study highlights that digital transformation and blockchain technologies are emerging clusters in Fintech research. A study by Junger and Mietzner (2020)

examines the behavioral factors driving household-level adoption of Fintech services. The study demonstrates that perceived ease of use, trust, and technological readiness substantially influence adoption. The current study highlights consumer behavior trends and the post-pandemic growth in the digital banking sector.

Anagnostopoulos et al. (2018) discuss how digital innovations influence regulatory frameworks, risk management, and traditional banking operations. With 385 citations, it is one of the most highly cited and influential papers in the domain. The authors conclude that Fintech drives efficiency and transparency compared to traditional banking and also pressures banks to modernize compliance processes. Research by Demircuc-Kunt et al. (2017) provides a global assessment of financial inclusion gaps in access to formal financial services and explores how digital banking and mobile payments expand financial accessibility. Financial inclusion is one of the strongest thematic clusters in Fintech literature, particularly growing in Asia and developing economies.

3. RESEARCH DESIGN

The research design of the study explains about bibliometric analysis using the using academic journals (Financial Innovation)& popular eminent researchers (Hassan et al., 2025). Scopus provides access to abstracts and citations from various publications such as peer reviewed, journals, book chapter, reviews and conference proceedings. It also provides the details of advanced search options, including access type, author name, year, document type and language. Relevant keywords were used to retrieve recent research on fintech and digital banking. Literature search was conducted, and the results were obtained on August 07,2025, yielding 547 documents. The data was then filtered to include only “Business Management, and Accounting” as a subject, “Article as a document type, “Journal” as a sourceand “English” as a language, resulting in 405 documents.

Table 1. Data Collection

Data search stage	Details
Research topic	Fintech & digital banking
Scope and coverage	Database: Scopus
	Search field: Article title, abstract, and keywords.
	Time frame: All
	Language: English
	Source type: All
	Document type: All
Keywords and a search string	TITLE-ABS-KEY (“fintech”) and (“digital banking”)
Data extracted	August 07, 2025

Beginning data	N= 547
Removed data	N= 142
Ending data	N= 405

Source: Authors elaboration.

Then, VOSviewer was used to process the bibliometric data of 405 documents to show the citation matrix and visualize the bibliometric network.

4. Results & Discussions

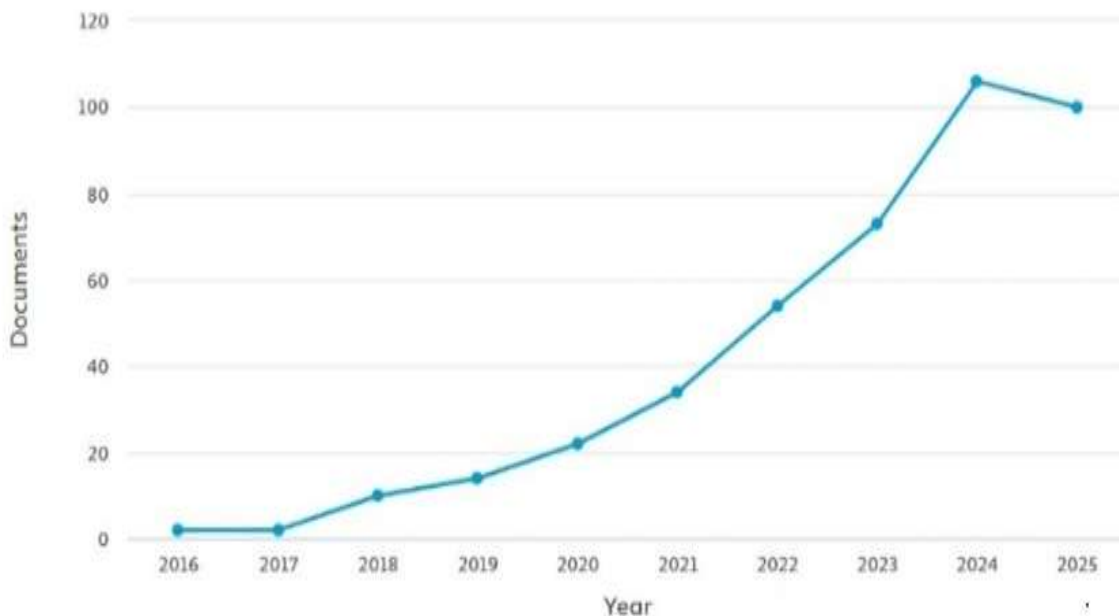
4.1 Performance analysis

This section presents a bibliometric analysis based on several performance parameters. Thus, we can answer this study’s first to fifth research questions.

4.1.1 Trends in publications

Figure 1 shows that the number of research studies on fintech and digital banking is improving every year, from 2016 to 2025, there were three phases. From 2016-2017, output was slight negligible, but 2018-2020 saw immense growth, reflecting rising interest. During 2021-23 post pandemic rose in annual growth above 40%. In 2024, publication was in peak later it saw a decline in 2025. Those numbers show that this topic remains an interesting topic among various researchers.

Figure 1. Publication trends



Source: Scopus Database

4.1.2 Authors

Figure 2 illustrates the eight leading authors in the domain of FinTech and digital banking research from 2016 to 2025. This visualization, generated using VOSviewer, emphasizes author productivity based on the

number of publications within this research area. The various colors depicted in the figure represent the temporal distribution of publications, indicating the periods of peak activity for each author during the study timeframe. The findings reveal that each of the eight authors has contributed equally, with three publications each, thereby identifying them as the most prolific contributors in the dataset. This equitable distribution of publications implies that research in the FinTech and digital banking sector is broadly disseminated among multiple scholars, rather than being concentrated under a single prominent author. Such a pattern is typical in nascent and rapidly developing research fields, where numerous researchers concurrently advance the body of knowledge. The color variations in the visualization further delineate the timeline of research contributions. Authors depicted with colors towards the later end of the spectrum signify more recent publications, reflecting the increasing interest and ongoing expansion of research in FinTech and digital banking in recent years. Conversely, colors associated with earlier years denote authors who contributed during the initial phases of the research period, thereby laying the groundwork for the field. Overall, the figure demonstrates that research productivity in FinTech and digital banking is collaborative and distributed across several active scholars, underscoring the growing academic interest and diversification of research contributions in this area between 2016 and 2025. This trend also suggests that the field is still evolving, presenting opportunities for new researchers to contribute and expand the existing body of knowledge.

Figure 2. Author’s production over time



Source: VOSviewer

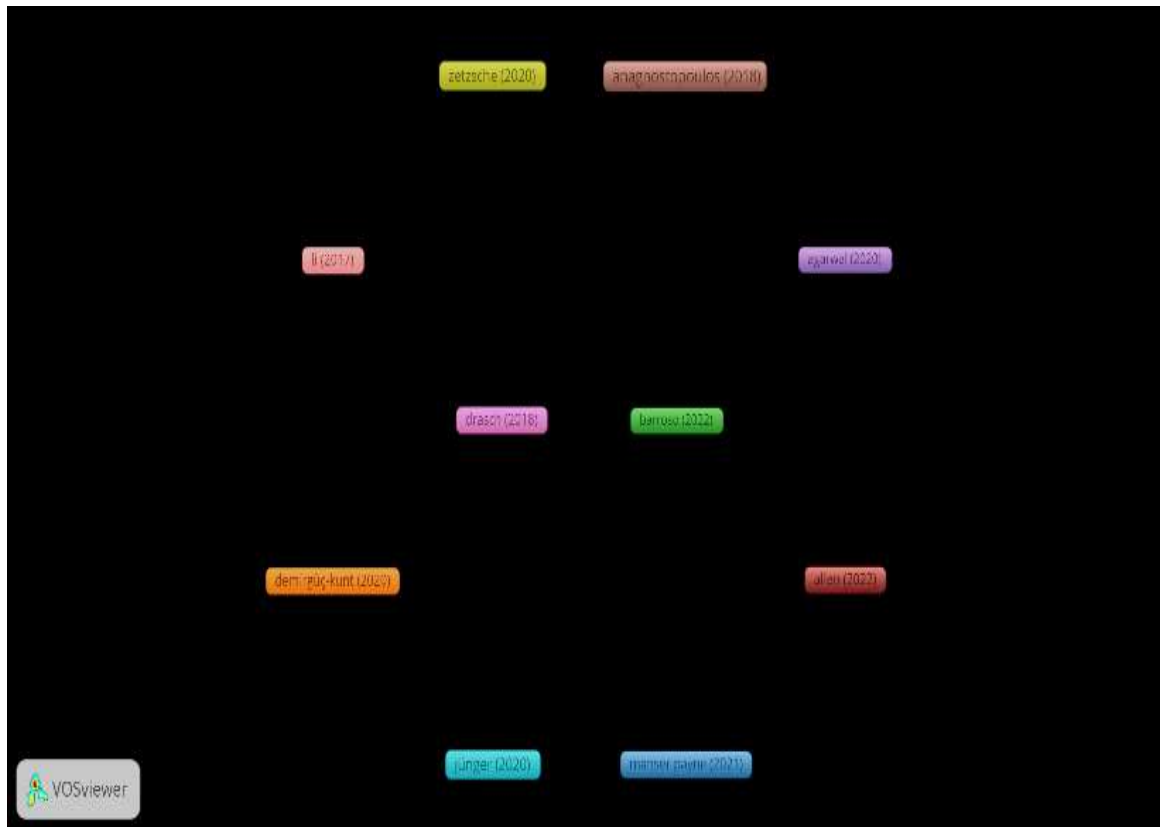
4.1.3 Journals

Figure 3 presents the number of articles each journal has published related to fintech and digital banking. Out of top 9 journals, The journal of Fintech has the most articles, with 08, while the 4 journals equally share 06 articles and another 4 journals equally share 05 articles each. The density visualization generated using VOSviewer illustrates the concentration and influence of journals contributing to research on FinTech and digital banking. In this map, brighter yellow areas indicate a higher density of publications and stronger citation relationships, while the darker blue areas represent journals with comparatively fewer connections or contributions. The visualization highlights several prominent journals that play a key role in disseminating research in this field. Journals such as Journal of Risk and Financial Management, Finance Research Letters, and Future Internet appear with higher density, indicating their significant contribution and strong citation linkage within the FinTech and digital banking research domain. These journals serve as major publication outlets for studies related to financial innovation, digital financial services, and technology-driven banking systems. Additionally, interdisciplinary journals such as Sustainability, Administrative Sciences, Informatics, and Systems are also visible in the network. Their presence indicates that FinTech and digital banking research is not confined to finance journals alone but extends to management, information systems, and technology-oriented journals. This demonstrates the interdisciplinary nature of FinTech research, integrating insights from finance, technology, management, and digital innovation. Furthermore, the presence of journals such as Journal of Theoretical and Applied Electronic Commerce Research reflects the growing linkage between electronic commerce, digital payment systems, and financial technology. The central positioning of certain journals suggests that they act as knowledge hubs, facilitating the exchange and dissemination of research ideas across related disciplines. Overall, the density visualization reveals that research on FinTech and digital banking is widely distributed across multiple academic journals, with several core journals emerging as influential platforms. This indicates the rapid growth and multidisciplinary expansion of the FinTech research landscape.

4.1.5 Articles

Table 1 lists the top ten articles on fintech and digital banking research. Ioannis Anagnostopoulos (2018), whose paper under the title “Fintech and Regtech: Impact on regulators and banks” was published in the journal of Economics and Business and had 385 citations ranked first. Dirk A Zetzsche, Douglas W Arner, Ross P Buckley (2020) published a paper entitled “Decentralized Finance”, in the Journal of Financial Regulation with 289 citations. Table 1 also shows the other most articles too.

Figure 5. Most cited documents



Source: VOSviewer

Table 2. The most cited document

<i>Author</i>	<i>Article Title</i>	<i>Journal</i>	<i>No. of Citations</i>
Ioannis Anagnostopoulos	Fintech and Regtech: Impact on regulators and banks	Journal of Economics and Business	385
Dirk A Zetzsche, Douglas W Arner, Ross P Buckley	Decentralized Finance	Journal of Financial Regulation	289
Moritz Jünger a, Mark Mietzner b	Banking goes digital: The adoption of FinTech services by German households	Finance Research Letters	225

Franklin Allen a, Xian Gu b, Julapa Jagtiani	Fintech, Cryptocurrencies, and CBDC: Financial Structural Transformation in China	Journal of International Money and Finance	204
Asli Demircug-Kunt, Leora Klapper, Dorothe Singer, Saniya Ansar, Jake Hess	The Global Findex Database 2017: Measuring Financial Inclusion and Opportunities to Expand Access to and Use of Financial Services	The World Bank Economic Review	194
Benedict J. Drasch, André Schweizer, Nils Urbach	Integrating the ‘Troublemakers’: A taxonomy for cooperation between banks and fintechs	Journal of Economics and Business	156
Yinqiao Li., Renee Spigt & Laurens Swinkels	The impact of FinTech start-ups on incumbent retail banks’ share prices	Financial Innovation	140
Sumit Agarwal, Jian Zhang	FinTech, Lending and Payment Innovation: A Review	Asia-Pacific Journal of Financial Studies	133
Marta Barroso , Juan Laborda	Digital transformation and the emergence of the Fintech sector: Systematic literature review	Digital Business	118
Elizabeth H. Manser Payne, Andrew J. Dahl, James Peltier	Digital servitization value co- creation framework for AI services: a research agenda for digital transformation in financial service ecosystems	Journal of Research in Interactive Marketing	166

Source: Author’s Elaboration

5. Findings & Conclusion

This study presents a comprehensive review of the extant literature on Financial Technology (FinTech) and digital banking, employing a bibliometric analysis of 405 research papers published over the study period. The analysis underscores a consistent and significant growth in scholarly publications, indicative of the

increasing interest from both academia and industry in comprehending the role of digital technologies in transforming the financial sector. The burgeoning number of studies suggests that FinTech and digital banking have emerged as pivotal research areas due to their potential to revolutionize traditional financial systems through technological innovation.

The findings of the bibliometric review reveal that a substantial portion of the literature concentrates on themes such as financial inclusion, digital transformation, and regulatory and policy frameworks. FinTech innovations—including mobile banking, digital payments, blockchain technologies, and artificial intelligence—have significantly contributed to the expansion of financial services to previously underserved populations. This has enhanced financial inclusion by facilitating easier access to banking services, particularly in developing and emerging economies. Concurrently, digital transformation has enabled financial institutions to streamline operations, enhance customer experience, and introduce innovative financial products and services. Another critical dimension highlighted in the literature is the role of government regulations and policy initiatives in shaping the development of FinTech and digital banking. Regulatory frameworks are pivotal in ensuring security, transparency, and consumer protection while simultaneously fostering innovation in financial services. Policymakers and regulatory authorities are increasingly focused on creating supportive ecosystems that balance innovation with risk management. Moreover, the results of the study demonstrate that FinTech and digital banking are contributing to improved efficiency, accessibility, and sustainability within the financial sector. Digital technologies have facilitated faster transactions, reduced operational costs, and improved the delivery of financial services, thereby enhancing the overall performance of financial institutions. Furthermore, the integration of advanced technologies is promoting the development of sustainable financial systems that are more inclusive and resilient.

Despite the significant progress in this research domain, several opportunities remain for future studies. Researchers are encouraged to conduct cross-country comparative analyses to better understand how FinTech adoption and digital banking practices differ across various economic and regulatory environments. Additionally, further investigation into evolving consumer behavior is necessary to understand how users perceive, adopt, and trust digital financial services. Finally, more research is needed on policy implications, particularly regarding regulatory frameworks, data security, and ethical considerations, to ensure that FinTech innovations continue to develop in a safe, inclusive, and sustainable manner. Finally, In conclusion, the bibliometric review of 405 research papers provides valuable insights into the development, trends, and future directions of FinTech and digital banking research, highlighting its growing importance in shaping the modern financial ecosystem.

Reference

- Ali, M. E. (2025). *The Role of Fintech and Digital Banking Systems in Commercial Banks in Oman. International Journal of Research and Innovation in Social Science, IX(IIIS), 926–935.* <https://doi.org/10.47772/ijriss.2025.903sedu0066>
- Allen, F., Gu, X., & Jagtiani, J. (2022). *Fintech, cryptocurrencies, and CBDC: Financial structural transformation in China. Journal of International Money and Finance, 127, 102625.* DOI: <https://doi.org/10.1016/j.jimonfin.2022.102625>
- Anagnostopoulos, I. (2018). *Fintech and Regtech: Impact on regulators and banks. Journal of Economics and Business, 100, 7–25.* DOI: <https://doi.org/10.1016/j.jeconbus.2018.07.003>
- Banking and Fintech in the Digital Financial Ecosystem for the Unbankable Population.* (2025). 1(1), 14–25. [https://doi.org/10.70764/gdpu-jbfi.2025.1\(1\)-02](https://doi.org/10.70764/gdpu-jbfi.2025.1(1)-02)
- Demirgüç-Kunt, A., Klapper, L., Singer, D., Ansar, S., & Hess, J. (2020). *The Global Findex Database 2017: Measuring financial inclusion and opportunities to expand access to and use of financial services. World Bank Economic Review, 34(Supplement), S2–S8.* DOI: <https://doi.org/10.1093/wber/lhz013>
- Jain, A. K., Sahoo, A., & A., R. (2025). *The Convergence of Cybersecurity, IoT, and Fintech: Building a Secure Future for Digital Banking. Economic Sciences, 21(2), 321–326.* <https://doi.org/10.69889/0tzbzp69>
- Jünger, M., & Mietzner, M. (2020). *Banking goes digital: The adoption of fintech services by German households. Finance Research Letters, 34, 1–10.* DOI: <https://doi.org/10.1016/j.frl.2019.08.008>
- kafeel, U. (2025). *The Transformative Impact of Fintech Innovations on Traditional Banking Systems: A 360-Degree Comparative Analysis. Indian Scientific Journal Of Research In Engineering And Management, 09(05), 1–9.* <https://doi.org/10.55041/ijsrem48956>
- Lu, L. (2024). *Fintech in Banking Institutions (pp. 132–162). Oxford University Press.* <https://doi.org/10.1093/9780191884597.003.0005>
- Nalabothu, R. (2024). *Financial Technology (Fintech) and Banking Industry Transformation: A Symbiotic Evolution into the Digital Era.* <https://doi.org/10.59256/ijsreat.20240401004>
- Pradhipta, R. D., Wafdayanti, H., Mawardi, W., & Pangestuti, I. R. D. (2025). *Measuring Fintech and Digital Banking Scalability to Enhance Financial Inclusion in Indonesia.* <https://doi.org/10.54518/ebh.4.3.2025.688>

- Rahadian, D., Suriman, Krisnawati, A., & Dinçer, H. (2023). *Relationship and Impact of the Value Creation Model on Fintech and Digital Bank Collaborations in Indonesia*. 1–6. <https://doi.org/10.1109/icondbtm59210.2023.10327232>
- Rahmanda, B., Anggayasti, U. H., & Nafi'a, Z. I. (2024). *Banking Transformation in the Digital Era: Bank Cooperation with Financial Technology and the Role of the Financial Services Authority in Digital Bank Supervision*. *International Journal of Multidisciplinary Research and Analysis*, 07(12). <https://doi.org/10.47191/ijmra/v7-i12-04>
- Suhartati, T., Warsini, S., and Junaidi, R. R. (2024). *A bibliometric analysis: Corporate social responsibility and firm value*. *Corporate Board: Role, Duties and Composition*, Volume 20, Issue 1, pages 56 to 65. DOI: <https://doi.org/10.22495/cbv20i1art5>
- Ungratwar, S., Sharma, D., & Kumar, S. (2025). *Mapping the Digital Banking Landscape: A Multi-Dimensional Exploration of Fintech, Digital Payments, and E-Wallets, with Insights into Current Scenarios and Future Research*. <https://doi.org/10.21203/rs.3.rs-5569720/v1>
- Zetsche, D. A., Arner, D. W., & Buckley, R. P. (2020). *Decentralized finance (DeFi)*. *SSRN Electronic Journal*. DOI: <https://doi.org/10.2139/ssrn.3539194>

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