Mapping the Trends of Online Banking Research: A Bibliometric Analysis

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***Abstract*—This study examines keywords related to online banking by identifying trends from 2015 to 2025. A total of 1,206 research papers were analyzed using the Dimension AI database. To gain insights, bibliometric analysis was performed using Excel and VOSviewer software. The results show that online banking has become a widely discussed topic, with global trends and increased research contributing to significant changes in the field. By tracking the development of key terms in online banking, the study highlights important shifts in terminology over time. It is crucial to continue monitoring these changes, especially to understand how recent global events have influenced online banking usage. Additionally, this study adds value to existing research by providing a framework for future studies, allowing researchers to explore new areas in the field. The findings provide valuable insights for academics and banking professionals on the future of digital financial services.**

***Index Terms*—Online Banking, Bibliometric analysis, Online Banking Adoption, Digital Financial Services**

I. INTRODUCTION

Internet banking refers to the use of the Internet as a remote delivery channel for banking services. Such services include traditional ones, such as opening a deposit account or transferring funds among different accounts, and new banking services, such as electronic bill presentment and payment (allowing customers to receive and pay bills on a bank's Web site). (Furst, Lang and Nolle 2000). Online banking originated in the early 1980s when banks started offering electronic banking services. The first major step was taken by New York's Citibank, which introduced ATM networks and electronic fund transfers. The significance of online banking began in the 1990s with the rise of the internet. In 1994, Stanford Federal Credit Union became the first bank to offer online banking services to customers. As internet access grew, major banks worldwide adopted online banking, allowing customers to check balances, transfer funds, and pay bills from their computers. The 2000s saw rapid growth in online banking due to improved internet security, mobile banking apps, and widespread smartphone adoption. Banks introduced two-factor authentication, encrypted transactions, and real-time alerts to enhance security. By the 2010s, artificial intelligence (AI) and machine learning began shaping digital banking. Chatbots, robo-advisors, and biometric authentication improved customer experience and security. Fintech companies also emerged, offering digital banking solutions without physical branches. Today, online banking is an essential part of financial services, enabling fast, secure, and convenient transactions worldwide. With the rise of blockchain, digital currencies, and advanced AI, the future of online banking is expected to be even more innovative and customer-centric. Despite its benefits, online banking faces challenges such as cybersecurity threats, technical issues, and digital literacy gaps. Some customers, especially older adults, may find it difficult to use online banking services and prefer traditional banking methods. Governments and financial institutions continuously work to enhance online banking security and accessibility. Regulations and policies are implemented to protect customers from fraud and data breaches. Financial literacy programs are also introduced to educate users about safe online banking practices. In the future, online banking is expected to evolve further with advancements in blockchain technology, biometric authentication, and digital currencies. As banks continue to innovate, customers can expect even more secure, efficient, and user-friendly financial services. This research paper examines key terms related to online banking and provides a deeper understanding of

its developments from 2016 to 2025. It explores recent trends and the impact of technology on online banking across different periods, including the role of mobile banking in specific years. The study highlights the importance of staying updated with changes in the online banking sector. The primary audience for this research includes academics and managers who influence decisions about online banking. A bibliometric analysis is conducted using the VOSviewer tool to identify authors and countries contributing to online banking research through citations, with data extracted from the Dimensions AI database. Additionally, keyword mapping is applied to identify terms that reflect recent technological advancements in online banking.

II. LITERATURE REVIEW

(Gazi, et al. 2024) examined customer satisfaction with online banking services in the Islamic banking sector of Bangladesh, particularly after COVID-19. Using a modified SERVQUAL model, it evaluates key service quality dimensions such as reliability, efficiency, security, and responsiveness. Reliability emerged as the most critical factor influencing customer satisfaction post-pandemic. Other factors, including efficiency, security, and responsiveness, also had significant positive effects on satisfaction levels. The study highlights the importance of maintaining high service standards to enhance the digital banking experience. It offers valuable insights for bankers, investors, and policymakers to improve online banking services. Enhancing system reliability and security can help build greater trust among users. The findings stress the need for responsive customer service to address digital banking concerns.

(Karim et al., 2023) enhanced a comprehensive review of user authentication methods in online banking, covering knowledge-based, biometric-based, possession-based, two-factor authentication, and multi-factor authentication. Additionally, the study highlights the inadequacy of passwords alone and the growing need for multiple authentication methods. The research systematically analyzes security threats, including malware, phishing, and man-in-the-middle attacks. Leading banks' authentication practices are examined, emphasizing one-time passwords, biometrics, and security keys. Challenges such as artificial intelligence-driven attacks, quantum computing risks, and privacy concerns are discussed. The study underscores the importance of balancing security and usability in authentication systems. Future directions suggest exploring blockchain and digital wallet security.

(Ali, Khan and Kalwar 2021) explored the evolution of electronic banking and its impact on financial services. The research highlights the advantages of online banking over traditional methods, including cost efficiency, accessibility, and convenience. However, challenges such as security concerns, low customer awareness, and infrastructural limitations hinder widespread adoption. The research identifies factors affecting customer acceptance, emphasizing the need for education and promotional strategies. Further suggesting that larger banks efficiently implement online services, but legal and security issues remain critical. The discussion underscores the transformative potential of electronic banking while addressing risks. Future research should focus on enhancing security measures and customer trust.

(Ahmed, et al. 2020) evaluated the quality of electronic banking service and its impact on customer satisfaction using the ES-QUAL model. It employs Structural Equation Modeling with data from 910 respondents across five commercial banks in Pakistan. Findings reveal that fulfillment, privacy, efficiency, and system availability significantly influence customer satisfaction, with trust and perceived value acting as key mediators. The research underscores the role of online service quality in enhancing business performance. It builds on existing literature by adapting the SERVQUAL model to electronic banking. The study recommends banks improve ES-QUAL dimensions to strengthen customer relationships.

(Ismail and Alawamleh 2017) explored the influence of online banking on customer satisfaction in Jordanian banks, highlighting its positive impact on loyalty and word-of-mouth promotion. It examines how demographic factors such as age, gender, education, and income affect internet banking adoption. Strengths and weaknesses of Jordan's online banking systems are analyzed, providing insights into areas for improvement. The study outlines key advantages, including convenience and accessibility, while addressing concerns like security risks and system inefficiencies. It emphasizes the need for robust security measures, such as multi-factor

authentication and SSL encryption, to protect customer data. Cultural factors play a significant role, with many customers still favoring traditional banking due to trust issues. The findings underscore the importance of enhancing digital trust to increase adoption rates. Banks should focus on user-friendly platforms and better security to improve customer confidence. The study provides valuable recommendations for financial institutions aiming to enhance e-banking services. Overall, it offers practical insights for increasing online banking adoption and customer satisfaction in Jordan.

(Khan, Hameed and Khan 2017) explained a comprehensive analysis of online banking adoption in Pakistan using the UTAUT2 model, incorporating cultural dimensions and perceived security. It highlights the rapid growth of online banking, with a 102% increase in transactions over five years, driven by technological advancements and telecom sector expansion. The findings reveal that performance expectancy is the strongest predictor of adoption, while effort expectancy and social influence have minimal impact. Cultural factors, particularly collectivism and uncertainty avoidance, significantly moderate adoption behavior. The study employs structural equation modeling for data analysis, ensuring robust results. Managerial implications emphasize enhancing security measures and customer awareness to boost adoption. Theoretical contributions extend UTAUT2 by integrating cultural influences and security concerns. Despite its valuable insights, the study's generalizability is limited to Pakistan. .

(Katiyar and Badola 2018) described barriers to online banking adoption in India using the Interpretive Structural Modeling approach. It identifies key obstacles such as online illiteracy, lack of trust, and inadequate infrastructure. A literature review and expert consultations helped finalize 12 critical barriers affecting the Indian banking sector. The findings emphasize that online illiteracy and unawareness are the most significant hurdles. Policymakers must address these challenges through digital literacy programs and awareness campaigns. The study highlights the societal benefits of online banking, including convenience and financial inclusion. It provides valuable insights for banking stakeholders to improve digital banking adoption. However, the study is limited to India and does not explore rural adoption rates in-depth.

(Santin, et al. 2018) conducted a meta-analysis on online banking satisfaction, examining 39 articles and 118 valid observations. It identifies 15 key antecedents, including ease of use, privacy, security, and service quality, while confirming trust and loyalty as significant consequences. The research highlights that factor like speed, website design, and information content positively impact satisfaction. However, privacy did not show a significant correlation with satisfaction. The study finds cultural differences in customer perceptions, with Western samples emphasizing reliability and service quality more than Eastern ones. The findings emphasize the importance of enhancing security, user experience, and mobile banking applications. Banks must prioritize customer satisfaction investments to improve retention and long-term relationships. The study contributes to theoretical models of online banking satisfaction and suggests areas for further research.

(Malar, Arvidsson and Holmstrom 2019) examined digital transformation in the Indian banking sector through the lens of service-dominant logic (SDL). It highlights how IT resources can enhance service quality by encouraging customer participation in value creation. Key challenges include inflexible and non-user-friendly online banking systems, along with poor mobile integration. Customers face difficulties due to system complexities, unclear information, and imbalanced value propositions. The study warns of value co-destruction when these issues are not addressed effectively. To ensure value co-creation, banks must prioritize flexibility, user-friendliness, and transparent communication. A well-structured IT strategy should focus on improving customer experience and engagement. The findings emphasize the need for a customer-centric approach in digital banking. Enhancing service systems can lead to improved trust and long-term satisfaction. The study provides crucial insights for banking institutions aiming to refine their digital strategies.

(Chong et al., 2010) provided an insightful analysis of Internet banking adoption in Vietnam, extending the Technology Acceptance Model (TAM) by incorporating trust and government support. Findings highlight perceived usefulness, trust, and regulatory clarity as key factors influencing adoption. The research effectively addresses Vietnam’s unique economic and regulatory context, distinguishing it from studies in developed nations. The study’s robust

methodology, including factor analysis and regression, strengthens its validity. Practical implications suggest banks should enhance security and promote e-banking benefits to increase adoption. Government support is crucial for fostering trust and improving legal frameworks. Future research should explore cultural influences and broader demographics.

III. RESEARCH QUESTIONS

The study seeks to answer the following research questions

RQ1**:** What are the current trends in the field of online banking?

RQ2**:** Who are the most influential authors and highly cited articles in the research domain of online banking?

RQ3: Which countries have contributed the most to the advancement of research in online banking?

RQ4: What are the most frequently occurring keywords and clusters in online banking research?

IV. METHODOLOGY

The study actively employs a systematic approach to identify the trends in online banking. The VOSviewer toolkit was utilized to visualize analytical information. The information base for this research consists of analytical studies conducted using the information retrieval functionalities of the Dimensions AI database. A total of 1,206 articles published between 2016 and 2025 were selected for analysis. The selection criteria included the presence of the keyword "online banking" exclusively in the article titles. A similar approach was employed to analyze the dataset using VOSviewer, which facilitated the identification of key trends in online banking research. The analysis used in the study includes mapping the most influential authors, the top contributing countries, citation networks, and keyword occurrences.

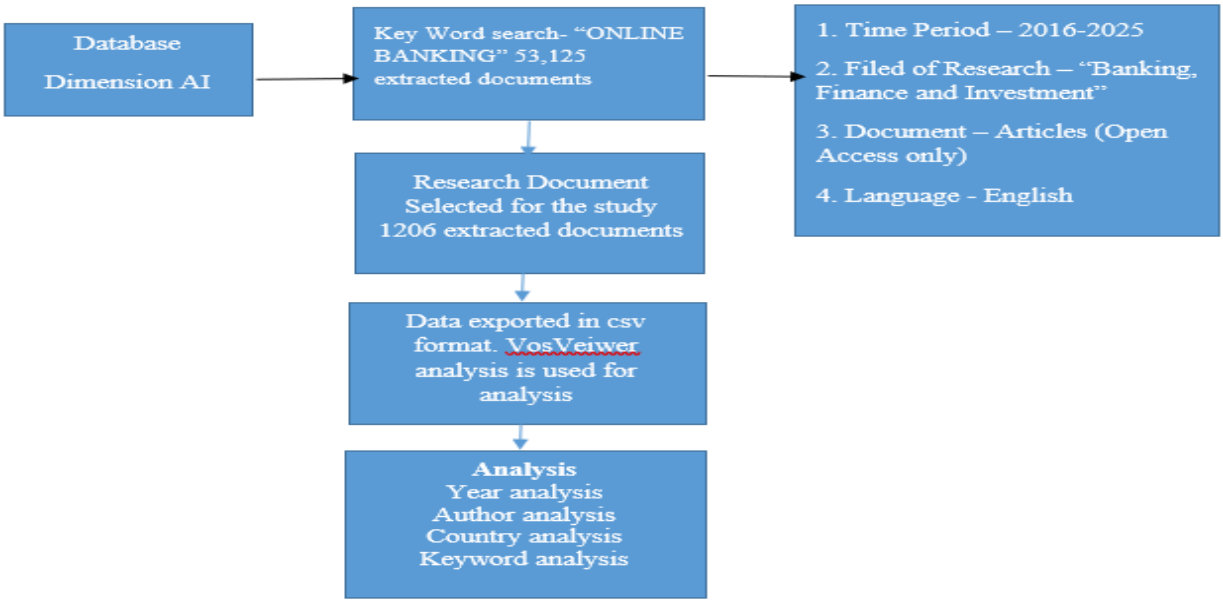

Figure 1 The research paper selection process from the Dimension AI database.

The above picture outlines the selection process from the Dimension AI database, including the keywords used for searching. The term "online banking" provided access to literature in Banking, Finance, and Investments, published between 2016 and 2025. The retrieval process is explained below. Initially, a broad search extracted approximately 53,125 papers on this topic. After applying filters based on subject, document type, and publication year, the results were refined to 1,206 relevant papers.

V. RESULTS AND DISCUSSIONS

When analyzing articles related to online banking, the researcher only selected sources from the Dimension database, and the articles that were considered were those related to online banking in the Keywords. The

Table 1 Total Number of Publications

Year	Total no of Publications
2025	31
2024	300
2023	243
2022	182
2021	155
2020	113
2019	76
2018	68
2017	51
2016	45

most relevant articles were selected, and non-related articles were filtered out until a total of 1206 articles remained. The below tables explain a growing trend in publications of articles in the domain of online banking.

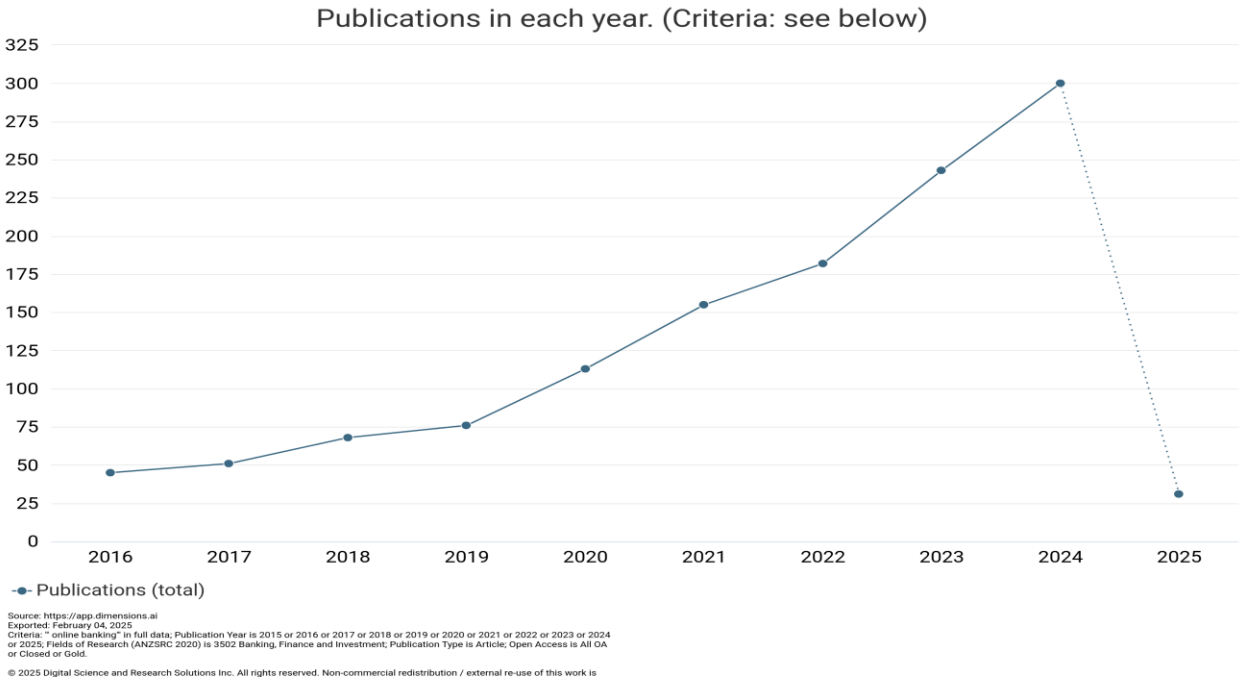

Figure 2. The number of publications on online banking in the Dimension AI database: 2016-2025

The above table shows the total number of publications related to online banking from 2016 to 2025. It indicates an upward trend, indicating growing academic and research interest in the field. From 2016 to 2019, the number of publications increased gradually, reflecting a moderate rise in research activity. Further significant surge is observed from 2020 onwards, with the number of publications rising sharply from 113 in 2020 to 300 in 2024. This rapid growth could be attributed to advancements in financial technology (FinTech), increased adoption of AI and digital banking solutions, and the impact of the COVID-19 pandemic, which accelerated the shift towards digital transactions. The peak in 2024 suggests significant research activity and interest in online banking-related topics. In 2025, the number of publications drops to 31, which may be due to incomplete data for the year or a possible shift in research focus toward emerging financial technologies beyond online banking. The data highlights the increasing significance of online banking research, particularly in recent years, driven by digital transformation, regulatory changes, and evolving consumer preferences.

Table 2 Top ten leading authors' research on online banking

Author	Documents	Citations
Ozili, Peterson K.	3	1257
Lee, In	1	974
Shin, Yong Jae	1	974
Cheng, Maoyong	3	278
Qu, Yang	2	268
Hoque, Ariful	3	182
Najaf, Khakan	4	137
Atayah, Osama F.	3	120
Guo, Pin	3	86
Chen, Zhongfei	2	52

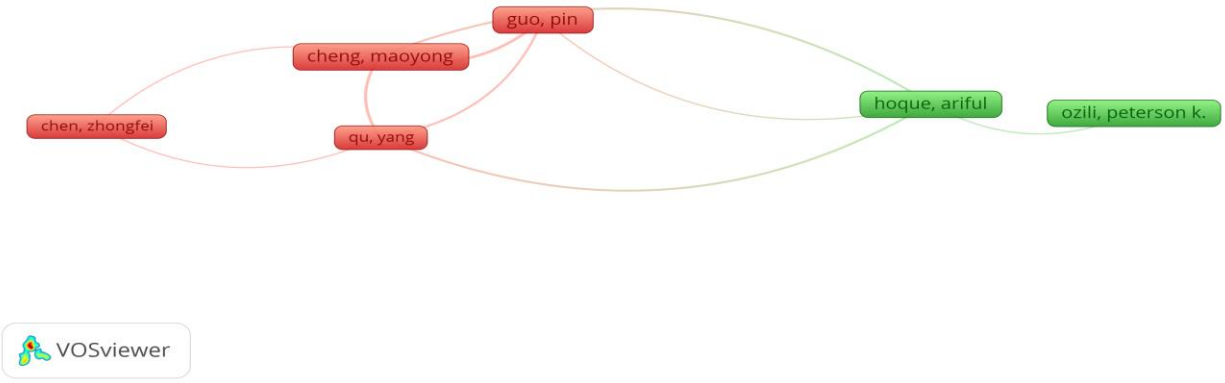

Figure 3 Network of Authors in an Online Banking Research

The table and visualization describe the top Ten authors based on their research contributions and citation impact. Ozili, Peterson K. is the most influential author with three documents and 1,257 citations. Lee, In and Shin, Yong Jae have only one document each but are highly cited (974 citations), indicating strong research impact. Najaf, Khakan has the highest number of published documents (four) but with fewer citations (137), while others like Cheng, Maoyong and Guo, Pin have three documents with moderate citation counts. The VOSviewer network visualization shows collaboration patterns, where Ozili, Peterson K. and Hoque, Ariful form a green cluster, indicating a stronger research connection, whereas Cheng, Maoyong, Qu, Yang, Guo, Pin, and Chen, Zhongfei form a red cluster, suggesting another research network. The data suggests that some authors achieve high impact despite fewer publications, while others contribute more frequently but with moderate influence, reflecting different research collaboration and citation dynamics.

Table 3 Most Globally cited documents Country wise in the domain of Online Banking

Country	Documents	Citations
United States	130	3812
China	187	3620
United Kingdom	74	3019
Germany	35	2122
Spain	28	1079
France	26	1050
Australia	36	852
Malaysia	47	671
India	75	638
Italy	34	549

The above table explains the contributions of different countries in terms of published documents and citations in research. The United States has the highest citation count (3,812) despite having fewer documents (130) than China, which has the most documents (187) but slightly fewer citations (3,620). The United Kingdom also has a strong impact with 74 documents and 3,019 citations, suggesting high-quality research output. Other countries like Germany, Spain, and France have a moderate number of documents and citations.

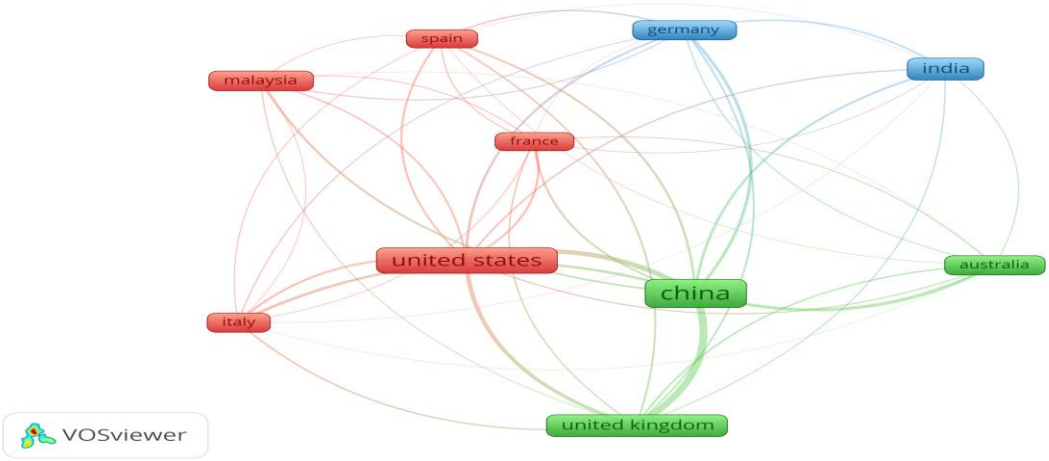

Figure 3 Network of Countries Globally in an Online Banking Research

The VOSviewer network shows collaboration between countries, with China, the United States, and the United Kingdom forming the central research hubs. Different clusters indicate strong regional and international research connections, with countries like Germany, India, and Australia actively contributing. The visualization highlights global collaboration patterns, where highly cited countries tend to have more international research connections, improving knowledge exchange and impact

Keyword Analysis and Co-Occurrence Mapping in Online Banking Research

The analysis examines the frequency of keyword occurrences in abstracts to identify potential trends in selected articles. A total of 19,305 keywords were identified, but only 603 met the specified threshold criteria. Based on a co-occurrence map with a minimum occurrence threshold of 25, all 238 keywords were found to be interconnected. To refine the analysis, 200 relevant keywords were selected, and irrelevant terms were removed. Figure 4 illustrates the co-occurrence map, highlighting the relationships between online banking and other associated terms.

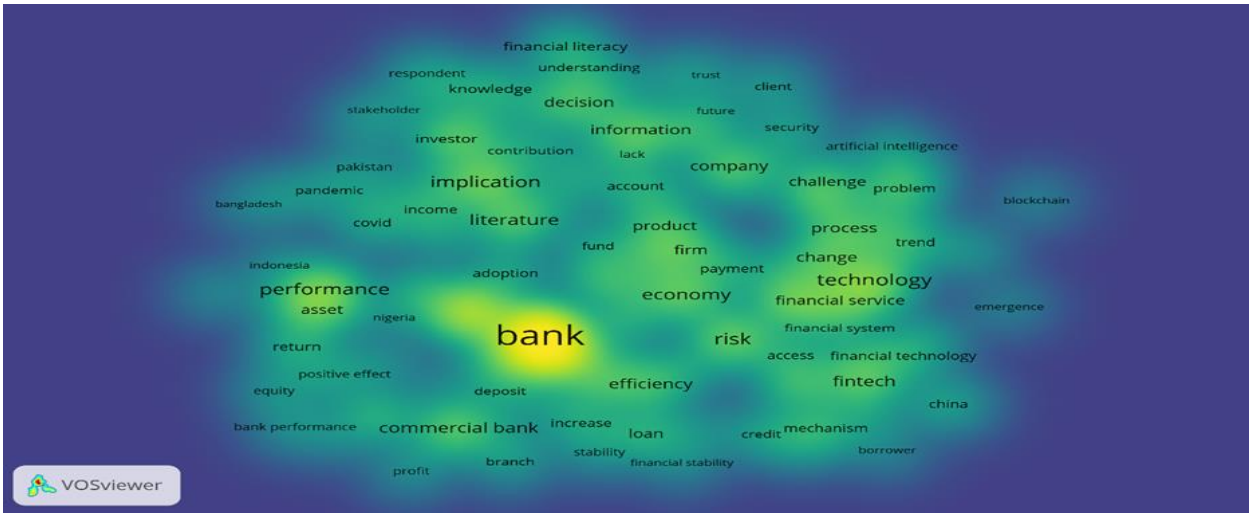

Figure 4 Density Visualization in VOSviewer of online Banking Research Keyword Trends (2016–2025)

The density visualization of keywords in online banking research highlights key themes and their interconnections. The most prominent term, "bank," indicates that research primarily revolves around banking institutions. Performance-related terms like "performance," "efficiency," and "profitability" suggest a strong focus on evaluating financial outcomes. The significance of financial technology (FinTech), digitalization, and innovation is evident, emphasizing the role of technology in transforming banking services. Keywords such as "artificial intelligence," "blockchain," and "digitalization" indicate that technological advancements are a major research area. Economic factors like "economy," "risk," and "market" show banking's influence on broader financial stability. Customer-centric terms like "trust," "awareness," and "understanding" highlight the role of consumer perception in online banking adoption. Additionally, "financial literacy" and "decision-making" suggest that customer knowledge plays a crucial role in banking choices. The presence of "stakeholder" and "employee" indicates research interest in the role of individuals within financial institutions. Regulation, policy, and government involvement are also significant, showing the importance of governance in banking operations. Geographical terms like "Pakistan," "Indonesia," "Nigeria," and "China" suggest a research focus on developing economies. The prominence of "commercial bank" indicates that private banking institutions are widely studied. Key financial aspects such as "lending," "loan," "credit," "deposit," and "transaction" highlight the importance of financial services. Financial inclusion is another major theme, indicating efforts to expand banking access. The presence of "COVID" and "pandemic" suggests research on banking resilience during crises. Lastly, terms like "return" and "investment" reflect interest in banking profitability and investor perspectives.

Clusters of Online Banking Research

The below table classifies keywords into five distinct clusters, each representing a key theme in banking and financial research.

Cluster 1 (Banking Performance & Financial Metrics) focuses on financial aspects such as income, profit, financial literacy, and banking performance. It highlights important financial indicators like cost, deposit, and return, which play a crucial role in assessing a bank’s financial stability and growth. Additionally, terms such as government, implication, and improvement suggest a link between financial policies and banking performance.

Cluster 2 (Artificial Intelligence & Technology) emphasizes the growing influence of AI, blockchain, and digital transformation in banking. Keywords like banking sector, competition, and efficiency indicate how technology is reshaping the banking landscape. The presence of words like innovation, implementation, and risk management suggests that AI and financial technology are being integrated to improve banking services, security, and decision-making processes. Additionally, terms such as investor, financial system, and fintech highlight the role of new digital financial tools in the industry.

Cluster 3 (Financial Literacy & Consumer Behavior) centers on consumer interaction with financial services. Keywords like financial literacy, bank performance, and consumer behavior show that understanding financial concepts influences banking decisions. Terms such as economic growth, equity, and financial impact suggest that consumer awareness plays a role in economic development. Words like internet banking, mobile banking, and payment indicate a shift in consumer preference towards digital transactions. The inclusion of negative impact and significance suggests that while financial literacy is essential, its effects can vary based on economic conditions and policies.

Cluster 4 (Financial Challenges & External Factors) highlights external influences and challenges in banking. Terms such as access, borrower, credit, and lending focus on financial inclusion and stability. Keywords like COVID, financial inclusion, and financial stability point to global and economic challenges affecting banking services. The presence of words like problem, policy, regulation, and risk indicates that banks must navigate various external pressures, including market fluctuations and policy changes. This cluster also includes keywords related to population and growth, indicating that demographic factors impact financial inclusion and lending.

Cluster 5 (Miscellaneous) consists of only presence which may not fit into the other clusters but remain relevant to banking discussions. These words might indicate the availability and visibility of banking services across different regions.This classification provides a clear overview of the key themes in banking research, illustrating how financial performance,

technological advancements, consumer behavior, and external factors shape the banking industry.

Cluster 1 (Banking Performance & Financial Metrics)	Cluster 2 (Artificial Intelligence & Technology)	Cluster 3 (Financial Literacy & Consumer Behavior)	Cluster 4 (Financial Challenges & External Factors)	Cluster 5
Ability	Artificial Intelligence	Adoption	Access	Presence
Account	Banking sector	Annual report	Borrower	
Attention	Blockchain	Asset	COVID	
Awareness	Business	Bangladesh	Credit	
Client	Challenge	Bank	Financial inclusion	
Contribution	Change	Bank performance	Financial stability	
COVID	China	Banking industry	Firm	
Decision	Company	Branch	Lending	
Employee	Competition	Central bank	Loan	
Financial literacy	Consumer	Commercial bank	Stability	
Form	Digital finance	Correlation		
Fund	Digital transformation	Cost		
Future	Digitalization	Deposit		
Government	Efficiency	Economic growth		
Implication	Emergence	Effect		
Improvement	Financial industry	Equity		
Income	Financial innovation	Financial performance		
India	Financial market	Impact		
Information	Financial service	Increase		
Interest	Financial system	Indonesia		
Investor	Financial technology	Internet banking		
Islamic bank	Fintech	Liquidity		
Issue	Implementation	Mobile banking		
Knowledge	Innovation	Negative impact		
Lack	Market	Nigeria		
Literature	Mechanism	Online banking		
Manager	Opportunity	Payment		
Money	Problem	Performance		
Outcome	Process	Population		
Pakistan	Regulation	Positive effect		
Pandemic	Risk	Profit		
Policy maker	Risk management	Profitability		
Product	Technology	Return		
Respondent	Trend	Significance		
Response		Transaction		
Saving				
Security				
Stakeholder				

Trust				
Understanding				

Table 4 Classifications of Clusters of Online Banking Research

VI. CONCLUSION

The study examines trends in online banking and its significant growth in recent years. The findings highlight the most influential research in this domain, particularly studies with the highest citation rankings, underscoring their global impact. The research primarily focuses on the banking industry's performance and the evolution of recent technologies, as identified through keyword and co-occurrence analysis. Additionally, key areas of interest influencing online banking trends include banking performance and financial metrics, artificial intelligence and technology, financial literacy and consumer behavior, and financial challenges and external factors. The VOSviewer tool was utilized to identify the top ten authors contributing to online banking research. This study makes several contributions to the field. First, it examines the current state of published articles from 2016 to 2025. Second, it analyzes citations and researcher relationships to identify the most influential scholars in online banking. Third, a network analysis of the top ten countries based on total citations provides an objective evaluation of the literature. Fourth, keyword mapping techniques, including co-occurrence and co-word analysis, were employed to highlight the most frequently researched themes, offering valuable insights for future studies. As a bibliometric analysis, this study presents a comprehensive overview of online banking research. It employs mapping techniques such as year-wise publication analysis, author analysis, country-based analysis, and co-occurrence analysis. Furthermore, it explores emerging trends in online banking by examining the number of publications per year, subject fields, and influential articles in this domain. The study also identifies top keywords and leading authors using VOSviewer, Dimension AI, and Google Scholar Profiles. Lastly, it sheds light on unexplored areas within online banking, suggesting potential research topics for future studies.

VII. LIMITATIONS OF THE TUDY

The limitations of this study include the fact that the search results are restricted to journal articles, excluding book chapters, reports, and other databases. Additionally, the research data has been extracted solely from Dimension AI for the period between 2016 and 2025. Furthermore, the study focuses specifically on online banking, with the possibility of incorporating additional related terms in future research. Emerging trends and topics in online banking will be explored in subsequent studies. Moreover, future research can employ different analytical techniques using statistical tools such as Biblioshiny, and others. Additionally, databases such as Scopus and Web of Science can be utilized in forthcoming studies to enhance the scope and depth of analysis.

REFERENCES

[1] Ahmed, R. R., Romeika, G., Kauliene, R., Streimikis, J., & Dapkus, R. (2020). ES-QUAL model and customer satisfaction in online banking: Evidence from multivariate analysis techniques. *Oeconomia Copernicana*, *11*(1), 59-93.

[2] Ahmi, A., Tapa, A., & Hamzah, A. H. (2020). Mapping of financial technology (FinTech) Research: A bibliometric analysis. *Globalization*, *2*, 2008.

[3] Aldás-Manzano, J., Lassala-Navarré, C., Ruiz-Mafé, C., & Sanz-Blas, S. (2009). The role of consumer innovativeness and perceived risk in online banking usage. *International Journal of Bank Marketing*, *27*(1), 53-75.

[4] Al-Emran, M., & Granić, A. (2021). Is it still valid or outdated? A bibliometric analysis of the technology acceptance model and its applications from 2010 to 2020. *Recent advances in technology acceptance models and theories*, 1-12.

[5] Ali, M., Khan, M. A., & Kalwar, M. A. (2021). Challenges for online banking in customers perspective: a review. *International Journal of Business Education and Management Studies*, *5*(1), 37-56.

[6] Alsmadi, A. A., Shuhaiber, A., Alhawamdeh, L. N., Alghazzawi, R., & Al-Okaily, M. (2022). Twenty years of mobile banking services development and sustainability: a bibliometric analysis overview (2000–2020). *Sustainability*, *14*(17), 10630.

[7] Arkaan, D. U., Budianto, E. W. H., & Dewi, N. D. T. (2023). Mapping Research Topics on Mobile Banking in Sharia and Conventional Financial Institutions: VOSviewer Bibliometric Study and Literature Review.

[8] Aziz, M. R. A., Jali, M. Z., Noor, M. N. M., Sulaiman, S., Harun, M. S., & Mustafar, M. Z. I. (2021). Bibliometric analysis of literatures on digital banking and financial inclusion between 2014–2020. *Library Philosophy and Practice*, *2021*, 1-31.

[9] Biancone, P. P., Saiti, B., Petricean, D., & Chmet, F. (2020). The bibliometric analysis of Islamic banking and finance. *Journal of Islamic Accounting and Business Research*, *11*(9), 2069-2086.

[10] Campos-Teixeira, D., & Tello-Gamarra, J. (2022). Fintechs: a global bibliometric analysis and research trends. *Journal of technology management & innovation*, *17*(2), 71-86.

[11] Chong, A. Y. L., Ooi, K. B., Lin, B., & Tan, B. I. (2010). Online banking adoption: an empirical analysis. *International Journal of bank marketing*, *28*(4), 267-287.

[12] de Oliveira Santini, F., Ladeira, W. J., Sampaio, C. H., & Perin, M. G. (2018). Online banking services: A meta-analytic review and assessment of the impact of antecedents and consequents on satisfaction. *Journal of Financial Services Marketing*, *23*, 168-178.

[13] Furst, K., Lang, W. W., & Nolle, D. E. (2002). Internet banking. Journal of financial services research, 22, 95-117

[14] Gazi, M. A. I., Masud, A. A., Amin, M. B., Hossain, M. A., bin S Senathirajah, A. R., & Abdullah, M. (2024). Evaluating customer satisfaction with the quality of online banking services after COVID-19: developing country perspective. *Cogent Business & Management*, *11*(1), 2423057.

[15] Grabner-Kräuter, S., & Faullant, R. (2008). Consumer acceptance of internet banking: the influence of internet trust. *International Journal of bank marketing*, *26*(7), 483-504.

[16] Haq, A., & Bahit, M. (2021, September). Visualization and Bibliometric Analysis of FinTech Trend Research. In *3rd Annual International Conference on Public and Business Administration (AICoBPA 2020)* (pp. 80-84). Atlantis Press.

[17] Ismail, L. B., & Alawamleh, M. (2017). The impact of online banking of customer satisfaction in Jordan. *Journal of Organisational Studies & Innovation*, *4*(2).

[18] Karim, N. A., Khashan, O. A., Kanaker, H., Abdulraheem, W. K., Alshinwan, M., & Al-Banna, A. K. (2023). Online banking user authentication methods: a systematic literature review. *Ieee Access*, *12*, 741-757.

[19] Katiyar, R., & Badola, S. (2018). Modelling the barriers to online banking in the Indian scenario: an ISM approach. *Journal of Modelling in Management*, *13*(3), 550-569.

[20] Khan, I. U., Hameed, Z., & Khan, S. U. (2017). Understanding online banking adoption in a developing country: UTAUT2 with cultural moderators. *Journal of Global Information Management (JGIM)*, *25*(1), 43-65.

[21] Kiljan, S., Simoens, K., Cock, D. D., Eekelen, M. V., & Vranken, H. (2016). A survey of authentication and communications security in online banking. *ACM Computing Surveys (CSUR)*, *49*(4), 1-35.

[22] Krishen, A. S., Dwivedi, Y. K., Bindu, N., & Kumar, K. S. (2021). A broad overview of interactive digital marketing: A bibliometric network analysis. *Journal of Business Research*, *131*, 183-195.

[23] Loonam, M., & O'loughlin, D. (2008). Exploring e-service quality: a study of Irish online banking. *Marketing Intelligence & Planning*, *26*(7), 759-780.

[24] Maditinos, D., Chatzoudes, D., & Sarigiannidis, L. (2013). An examination of the critical factors affecting consumer acceptance of online banking: A focus on the dimensions of risk. *Journal of Systems and information Technology*, *15*(1), 97-116.

[25] Malar, D. A., Arvidsson, V., & Holmstrom, J. (2019). Digital transformation in banking: Exploring value co-creation in online banking

services in India. *Journal of Global Information Technology Management*, *22*(1), 7-24.

[26] Nobanee, H., Dilshad, M. N., Al Dhanhani, M., Al Neyadi, M., Al Qubaisi, S., & Al Shamsi, S. (2021). Big Data applications the banking sector: A bibliometric analysis approach. *Sage Open*, *11*(4), 21582440211067234.

[27] Nugroho, A. S. E., & Hamsal, M. (2021). Research trend of digital innovation in banking: a bibliometric analysis. *Journal of Governance Risk Management Compliance and Sustainability*, *1*(2), 61-73.

[28] Saputri, M. I., Budianto, E. W. H., & Dewi, N. D. T. (2023). *Internet Banking in Islamic and Conventional Banking: Mapping Research Topics using VOSviewer Bibliometric and Library Research*.

[29] Tuli, E. (2024). Exploring digital banking adoption in developing Asian economies: Systematic literature review and bibliometric analysis. *International social science journal*, *74*(252), 399-426.

[30] Vatanasombut, B., Igbaria, M., Stylianou, A. C., & Rodgers, W. (2008). Information systems continuance intention of web-based applications customers: The case of online banking. *Information & management*, *45*(7), 419-428.

[31] Wei, W., Li, J., Cao, L., Ou, Y., & Chen, J. (2013). Effective detection of sophisticated online banking fraud on extremely imbalanced data. *World Wide Web*, *16*, 449-475.

[32] Yoon, C. (2010). Antecedents of customer satisfaction with online banking in China: The effects of experience. *Computers in Human Behavior*, *26*(6), 1296-1304.