International Journal on Science and Technology (IJSAT)
E-ISSN: 2229-7677 ● Website: www.ijsat.org ● Email: editor@ijsat.org

Digital Banking and Sustainability: A Decade of Research Through Bibliometric Mapping.

Faheema Mohammed Manu[1], Dr. N. Rajendran[2]

[1]Research Scholar, Department of Commerce, Parks College, Chinnakarai, Tirupur-641605, Tamil Nadu, India, Affiliated to Bharathiar University.
[2]Head and Associate professor in commerce,Department of Commerce, Rathinam college of arts and science,Coimbatore-641021, Affiliated to Bharathiar University.

Abstract.
Research on sustainability and digital banking has received a lot of attention lately, reflecting the growing intersection between financial technology (FinTech) and environmental responsibility. This bibliometric analysis provides an overview of global research trends in this domain from 2014 to 2025(February). Using Dimensions AI, a total of 2,194 publications were initially identified on March 1st, 2025, with 2,148 retained after screening. VOS Viewer was used to visualize and interpret bibliometric data. The most cited journal in this field was Technological Forecasting and Social Change, while the highest number of publications were found in the journal Sustainability. Brian M. Lucey from the University of Dublin emerged as the most highly cited author, highlighting his influential contributions. A co-authorship analysis was conducted, revealing the most connected research network, visualized through network mapping techniques. In terms of geographical contributions, China ranked first, followed by the United Kingdom, indicating strong research output from these regions. Emerging research themes suggest an increasing focus on green digital banking adoption, blockchain-driven sustainability solutions, ESG frameworks in FinTech, and AI-driven responsible banking. These findings provide a comprehensive roadmap for future research, emphasizing the need for policy frameworks, cross-disciplinary collaboration, and empirical studies on the sustainability impact of digital banking innovations.

Keywords: Digital Banking, Sustainability, Financial Technology.

1 Introduction

1.1 The Rise of Digital Banking

The financial sector has seen a remarkable shift due to technological advancements and the rise of digitalization, which have completely transformed banking services. Digital banking, which involves weaving new technologies into financial services, has rapidly gained traction and become widely accepted[1] . This change is largely fueled by the desire to improve service efficiency and make banking more accessible, impacting how we handle our finances in many areas of life. In this context, a bibliometric review has shed light on how crucial digital technologies have become in the banking sector and how they are increasingly shaping financial operations[2]. As digital banking evolves, it brings remarkable convenience, cuts costs, and supports financial inclusion. It also enhances customer service and complies with regulatory and operational standards, making it an essential element of contemporary financial

ecosystems[3], [4] . Moreover, the COVID-19 pandemic has sped up the adoption of digital financial services, showcasing their vital role in ensuring access to finance and supporting sustainable economic growth [5]. Wanof (2023) points out how innovations in digital technology have made financial services more accessible for low-income communities, tackling traditional obstacles like geographical barriers and administrative challenges[6]. At the same time, the incorporation of FinTech innovations—such as artificial intelligence (AI), augmented reality, and blockchain technology enhanced process efficiency and enabled more advanced financial services[7] . Hence, digitalization has brought about new opportunities for banks to shift towards a customer-focused model, which significantly improves service personalization and the overall user experience [8].

1.2 Sustainability in Banking

Sustainability has emerged as a crucial issue across a range of sectors, from corporations and academia to the banking industry and media. Banks, acting as financial intermediaries, are essential in promoting economic growth while also advocating for sustainable and green banking practices [9]. Considering the increasing importance of sustainability in banking, [10] authors conducted a thorough review, categorizing the literature into three key areas: Ethical Foundations, Sustainable Products, and the Business Case for sustainability. These areas emphasize the ethical dimensions of sustainability, the financial products that enable green finance, and the strategic benefits for banks that adopt sustainable practices.

The shift towards sustainability in banking is characterized by initiatives from both public and private banks aimed at cutting carbon emissions, going paperless, and incorporating eco-friendly financial solutions[11] . Mir and Bhat (2022) dive into the world of green banking practices, highlighting how they contribute to environmental sustainability and align with the UN Sustainable Development Goals (SDGs)[12] . Meanwhile, the financial services industry is undergoing a major transformation, driven by both digitization and a commitment to sustainability. This shift has led to the rise of green FinTech, which combines financial technology with sustainable practices to promote environmental responsibility in banking [13]. Empirical studies back up the idea that sustainability is linked to banking performance, showing that enhanced service performance can lead to greater sustainability in the banking sector[14] . This reinforces the belief that sustainable banking not only benefits the environment but also boosts financial performance and competitiveness.

1.3 The Intersection of Digital Banking and Sustainability

The increasing blend of digital banking and sustainability is transforming the financial landscape, bringing along both exciting opportunities and notable challenges. As financial institutions dive into the world of digital finance, the push for sustainability is emerging as a major catalyst for innovation. Yet, there are still gaps in accessibility and adoption that need to be addressed, underscoring the importance of creating more inclusive financial solutions. One of the most groundbreaking elements of digital banking's contribution to sustainability is the emergence of FinTech innovations. By harnessing data analytics, machine learning, and blockchain technology, FinTech solutions are transforming sustainable finance, allowing for smarter investment choices that align with environmental, social, and governance (ESG) goals. These platforms are empowering both individuals and organizations to weave sustainability into their financial decisions, ensuring that investments are directed toward more responsible options[15] .This

impact is particularly strong in emerging market economies where digital financial tools can support green investments and enhance financial stability [16].

However, despite these strides, several obstacles still stand in the way of fully unlocking the potential of digital banking in sustainability. While digital finance continues to grow, pressing issues like privacy concerns, cybersecurity risks, and regulatory uncertainties are still on the table. These challenges haven't been sufficiently tackled, making it vital for financial institutions and policymakers to develop stronger data protection frameworks and standardized regulations[17] . In addition, authors [18]point out several key managerial challenges in the digital transformation of banking, including issues with strategic alignment, complex regulatory constraints, and the difficulty of engaging customers and employees. These hurdles highlight the necessity for a more systematic approach to integrating sustainability into digital finance. The way we address these barriers will significantly influence the future of digital finance, creating a banking landscape that emphasizes both innovation and environmental stewardship.

1.4 Bibliometric Analysis in Banking and Finance

Bibliometric analysis has become a vital tool for mapping out research landscapes, spotting trends, and pinpointing influential works across various fields like banking, digital finance, and FinTech. By using quantitative methods on academic literature, researchers can track how key topics have evolved and shine a light on areas ripe for future exploration.

In the realm of sustainable banking, [10] a bibliometric review of 676 articles, was conducted revealing how research in this area has progressed across different academic disciplines. Likewise, in the field of digital banking transformation, bibliometric network analysis on 268 publications from 1989 to 2022, has mapped out key research themes and influential studies [2]. These studies demonstrate how bibliometric methods can help us understand shifts in academic focus over time. Moreover, bibliometric techniques have become a go-to approach for diving into FinTech research, helping to map out key contributions, thematic areas, and the latest trends. Researchers have shifted through publications from Scopus to pinpoint leading scholars [19], investigated the rapid surge of scientific activity in FinTech [1], and examined research paths in Islamic finance and financial technology[20] . On top of that, bibliometric methods have been utilized to explore digital financial inclusion [21]and digital literacy, shedding light on changes brought about by the COVID-19 pandemic [22]. Together, these studies highlight how bibliometric analysis plays a crucial role in grasping the ever-changing landscape of financial research.

By thoroughly examining large volumes of academic literature, bibliometric studies offer valuable insights into the growth, development, and interdisciplinary aspects of research in banking, digital finance, and FinTech. As the financial landscape continues to change, these bibliometric methods will be crucial for identifying new trends and steering future research initiatives. This research paper aims to examine the changing dynamics between digital banking and sustainability over the last ten years through an extensive bibliometric mapping analysis.

2 Research objectives

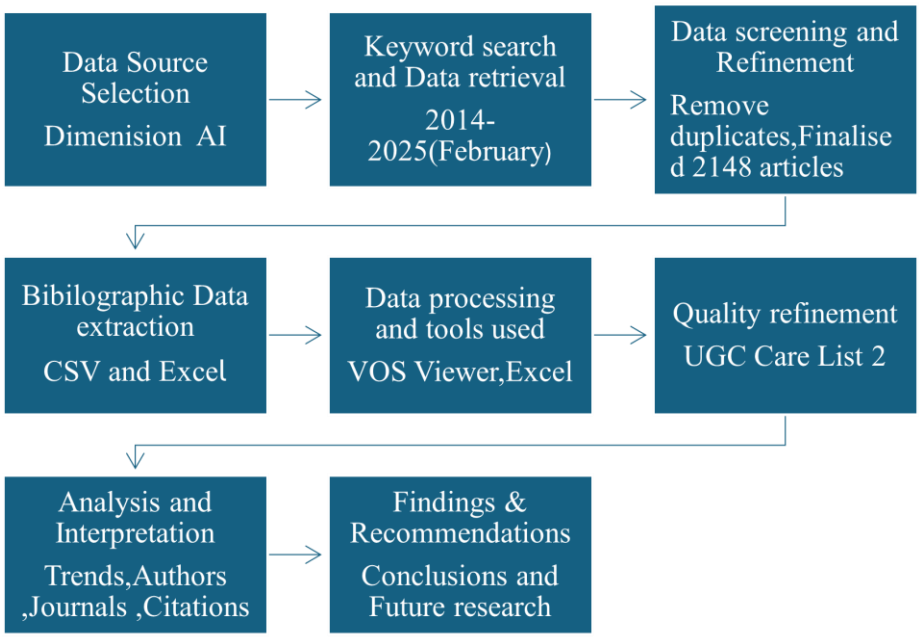
- To analyze the evolution and trends in sustainable digital banking research from 2014 to 2025 by examining the volume and growth of publications.
- To identify the most influential authors, journals, and institutions in the field of sustainable digital banking and financial technology through citation and co-authorship analysis.

- To assess the geographical distribution of research contributions and determine which countries and institutions lead in publishing research on digital banking as well as sustainability.
- To conduct keyword co-occurrence using VOS viewer to identify the emerging research themes.

3 Research methodology

A bibliometric analysis was conducted to examine the research landscape on Digital Banking and Sustainability using the Dimensions database. The search was performed using the keywords: "digital banking," "digital transformation," "digital technology," and "sustainability" or "sustainable banking" in the title and abstract fields. The study covers the publication period from 2014 to February 2025 to capture a decade of research trends. The initial search retrieved 2,194 articles, which were further screened for duplicates and irrelevant records. After this screening process, 2,148 articles were finalized for analysis. To ensure research quality, only articles indexed in UGC Care List 2 were included, refining the final dataset accordingly. The dataset was exported in CSV format, including details such as year of publication, title, source, author, affiliation, organization, country, abstract, and citation count. The data retrieval date was March 1, 2025. The articles on Bibliometric Analysis were analyzed and visualized using VOS viewer and Microsoft Excel 2016 programming.

Figure 1: Research Flow diagram



4 Analysis and interpretation

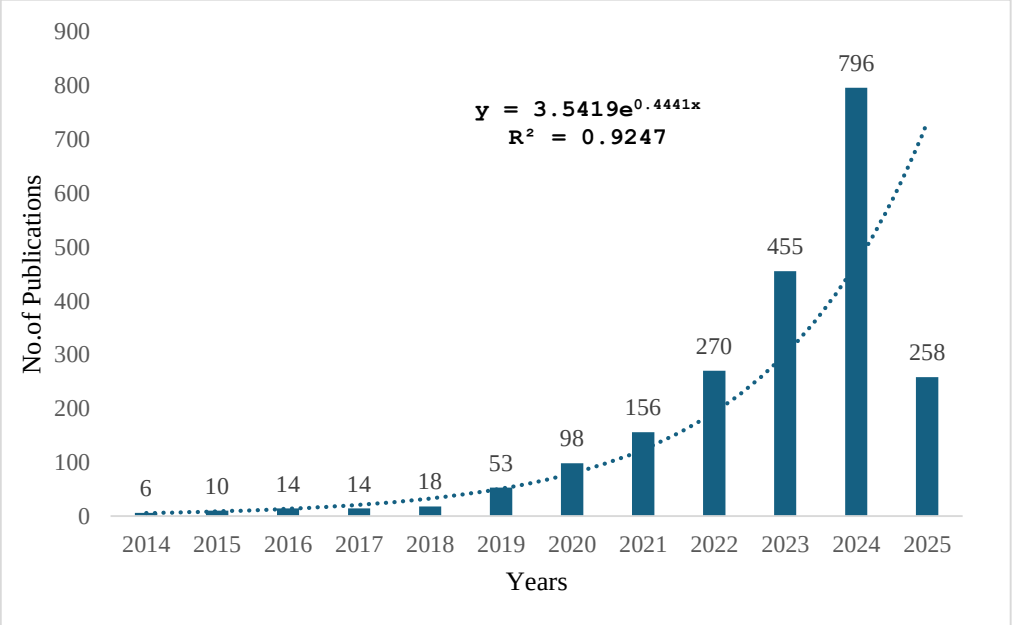
4.1 Year wise publication

The evolution of the research agenda on Digital Banking and Sustainability over the last ten years shows a dramatic progression of research from an isolated topic area to an established academic field (Figure 2). A total of 6 publications were reported in 2014, and the number increased gradually, resulting to 18 in

2018. This indicates that, at that time, digital banking and sustainability were still not receiving significant notice in academic circles, and that, as such, research was probably only just being initiated in an exploratory capacity. A limited number of publications can also be a sign of less regulatory concern on the link between digital banking and sustainability and/or fewer technological developments that stimulate research in this area. But from 2019, there was a marked increase in research activity. There were 53 publications in 2019, which developed to 98 in 2020 and to 156 in 2021. This duration is probably indicative of increasing interest towards sustainable banking practices and digital financial service adoption. The increase may be connected to the world movement for financial inclusion driven by digital banking services, the arrival of fintech solutions onto the market, and initial conversations about how banking institutions can be better environmentally and socially responsible. Moreover, the COVID-19 pandemic has sped up the digital transformation in the financial sector which requires researchers to investigate the sustainability dimensions of digital banking, further contributing to the increase in publications. The major growth in numbers was from 2022 to 2024, where we see a steep rise from 270 (in 2022) to 455 (in 2023), to the peak of publications we see in 2024 (796).

Though the total publications counted for 2025 are 258, this data represents only research accumulated through February. Given the pattern for previous years, it is highly likely that the total number of publications for 2025 will be significantly more, perhaps matching or even surpassing the 2024 totals. This shows that sustainable digital banking remains a field of academic interest, with research into sustainable finance, green fintech products, and regulatory matters characterizing the field. Overall, the pattern over the last decade reflects a move from an early-stage investigation to a broadly accepted and rapidly developing research field, showing the growing importance of sustainability in digital banking.

Figure 2: Year wise number of publications.

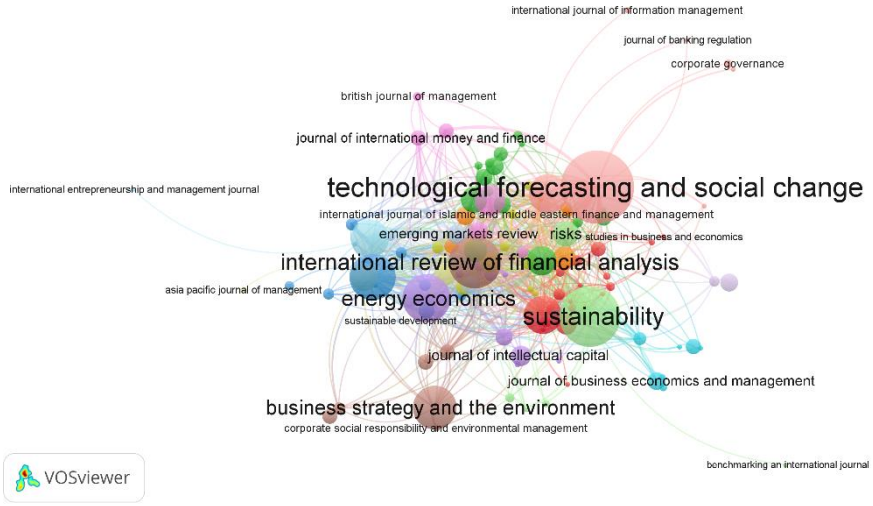


4.2 Bibliometric Citation and Co-authorship analysis.

Journal Citation.

From the analysis of 404 sources, only 135 journals met the minimum threshold of 3 documents and 10 citations. The dataset reveals the top 11 journals that have made significant contributions, highlighting the balance between the number of documents published and their impact measured through citations and link strength as mentioned in (Figure 3).

Figure 3: Network visualization of journals based on highest citations and publications.



Leading Journals Based on Citation Impact.

Technological Forecasting and Social Change stands out as the most influential journal when it comes to citations, boasting 2,587 citations from just 36 published documents. This suggests that the research featured in this journal is not only frequently cited but also plays a crucial role in shaping the conversation around digital banking and sustainability. Sustainability, on the other hand, leads to the number of documents published (140) and comes second in citations (1,900). While it serves as a major outlet for research in this area, its lower citation-per-paper ratio indicates that although it covers a wide range of sustainability topics, its overall impact per article is somewhat less than that of more specialized journals. Other noteworthy high-impact journals include the International Review of Financial Analysis, which has garnered 1,467 citations from 92 documents, and Energy Economics, with 1,272 citations from 43 documents. These journals play a significant role in exploring the financial and economic dimensions of digital banking and sustainability.

Research Influence and Network Strength

The International Review of Financial Analysis boasts the highest total link strength (258), showcasing robust research connections and collaborations within this domain. Sustainability and Finance Research Letters also demonstrate strong total link strengths (185 and 181, respectively), indicating their influential networks in bibliometric mapping. Interestingly, Technological Forecasting and Social Change, despite its leading citation count, has a comparatively lower total link strength (141). This suggests that while its

articles are highly impactful, they may not be as interconnected with other research compared to journals like the International Review of Financial Analysis.

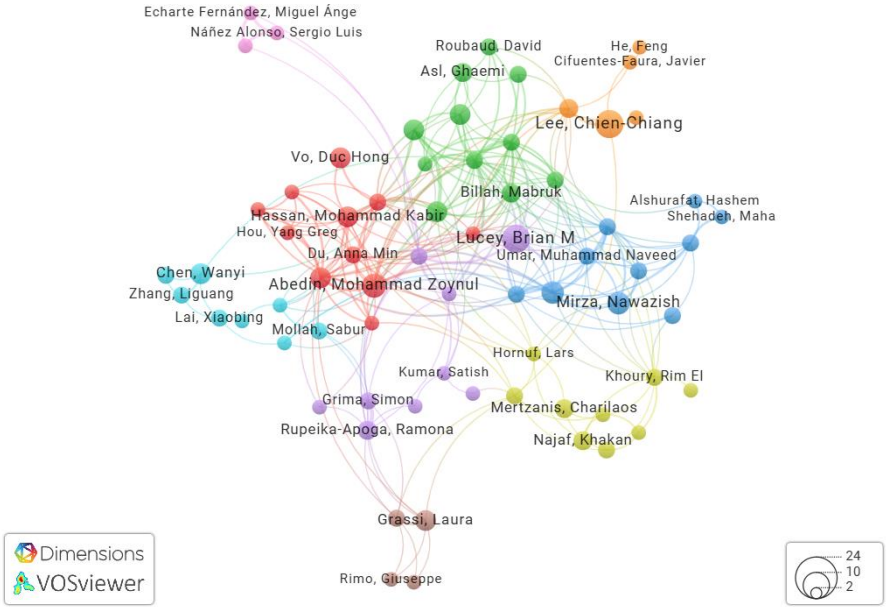
The Trade-off Between Volume and Impact.

Some journals, like Sustainability (with 140 documents and 1,900 citations) and Finance Research Letters (109 documents and 868 citations), seem to favor quantity over citation impact. They offer a wide range of publications but have lower citation-per-document ratios. On the flip side, journals such as Technological Forecasting and Social Change and Business Strategy and the Environment publish fewer articles but boast a higher citation-per-paper ratio, highlighting their focus on impactful research.

Author collaboration and Citation Network.

The dataset features 5,981 authors, but only 128 of them reached the benchmark of having at least 3 documents and 8 citations (Fig.4). Brian M Lucey stands out as the most prolific and influential researcher overall, with 11 publications and 797 citations. Chien-Chiang Lee matches him in the number of publications (11) but has a lower citation impact per paper, averaging 25.64 citations per publication with 282 citations. Several authors strike a good balance between productivity and citation impact. Elie I Bouri (4 publications, 485 citations, averaging 121.25 citations per publication) and Emmanuel Joel Aikins Abakah (4 publications, 488 citations, averaging 122.00 citations per publication) both show strong contributions in these areas. Lars Hornuf (3 publications, 484 citations, averaging 161.33 citations per publication) also makes a mark in this category.

Figure 4: Network visualization of citation of authors.



The visualization of the co-authorship network (Figure 5) highlights the most connected researchers in the field. This dataset includes 22 researchers, featuring 28 co-authorship links and a total of 46 collaboration instances, organized into 6 distinct clusters. Brian M. Lucey stands out as the most central and influential researcher, serving as a vital connection among multiple authors across different clusters. His

collaborations extend to researchers such as David Roubaud, Mohammad Zoynul Abedin, Mustafa Raza Rabbani, and Satish Kumar, reflecting a strong and interconnected co-authorship network.

Figure 5: Co-authorship network visualization

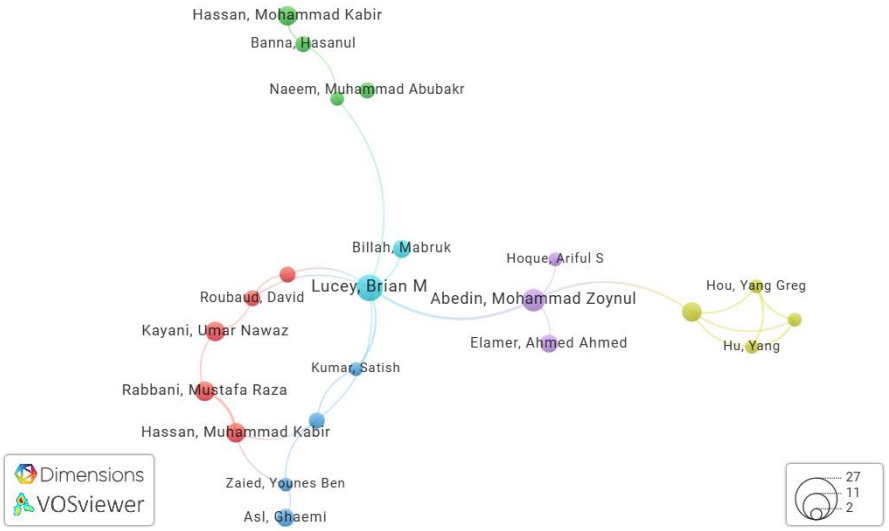


Table 1: Journal Productivity Analysis (Publications & Citations)

Rank	Journal	Publications	Citations	Citations Mean
1	Technological Forecasting and Social Change	36	2587	71.86
2	Sustainability	140	1900	13.57
3	International Review of Financial Analysis	92	1467	15.95
4	Energy Economics	43	1272	29.58
5	Environmental Science and Pollution Research	42	1196	28.48
6	Business Strategy and the Environment	30	1106	36.87
7	Research in International Business and Finance	57	916	16.07
8	International Journal of Financial Studies	27	885	32.78
9	Finance Research Letters	109	868	7.96
10	Small Business Economics	15	618	41.20

Citation of Organization and Country.

Out of 109 countries analyzed, 69 of them met the criteria by having at least 5 documents and 10 citations (Figure 6). China took the lead in citation counts with 11612 citations (total link strength-1382), the United Kingdom (UK) coming in second with 5035 citations (total link strength-782) and the United States (USA) in third with 2787 citations (total link strength-580). These rankings really showcase the strong research influence these countries have within the dataset. When it comes to organizational performance (Fig.7), a total of 2,373 organizations were examined, and 208 of them met the threshold of having at least 5 documents and 10 citations. The University of Economics Ho Chi Minh City topped the list based on citation counts with 643 citations (total link strength-77), highlighting its impressive academic impact. Following closely was Qingdao University in second place with 586 citations (total link strength-68), while Shanghai University claimed the third spot with 559 citations (total link strength-79). These rankings emphasize the significant contributions these institutions are making to research in their field.

Figure 6: Density Visualization of countries based on highest citation.

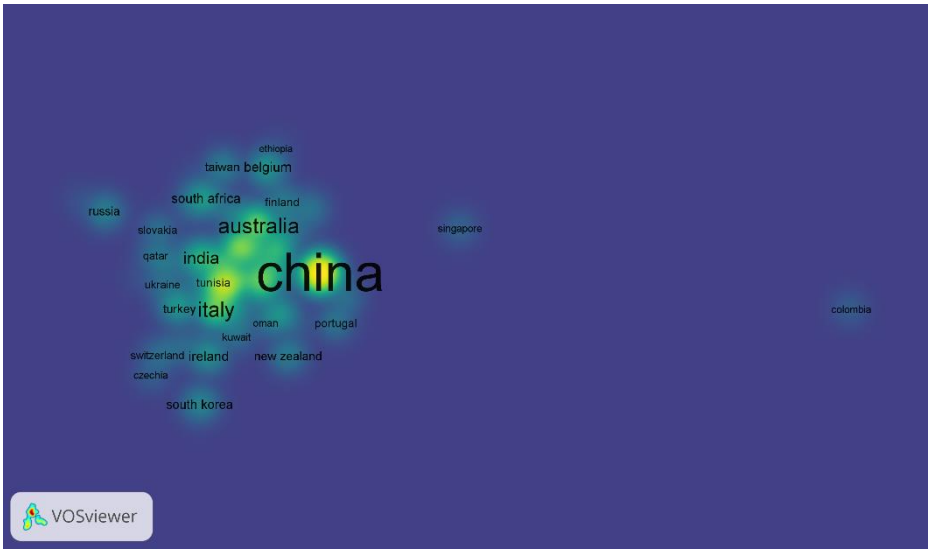


Figure 7: Density Visualization of organizations based on highest citation

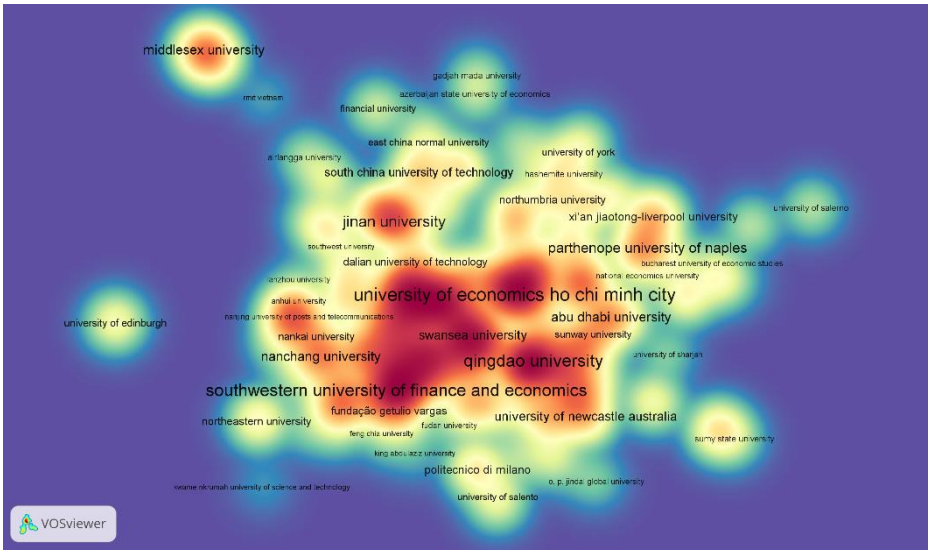


Table 2: Academic Contribution by Institution (Publications & Citations)

Rank	Organization	Publications	Citations	Citations mean
1	University Of Economics Ho Chi Minh City	10	643	64.30
2	Qingdao University	20	586	29.30
3	Shanghai University	16	559	34.94
4	Southwestern University of Finance and Economics	36	557	15.47
5	University Of Johannesburg	10	523	52.30
6	Central South University	10	509	50.90
7	Trinity College Dublin	12	494	41.17
8	Jinan University	22	460	20.91
9	University Of Malaya	12	448	37.33
10	Renmin University of China	16	442	27.63

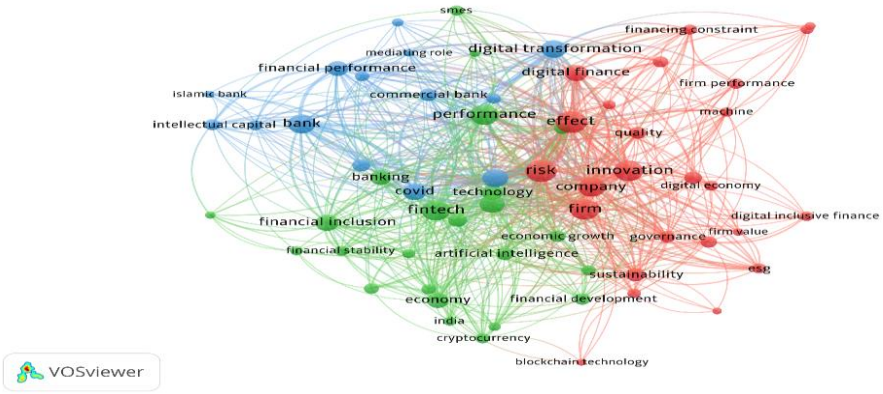
Table 3: Research Productivity by Country (Publications & Citations)

Rank	Country	Publications	Citations	Citations mean
1	China	892	11612	13.02
2	United Kingdom	210	5035	23.98
3	United States	138	2787	20.20
4	Australia	69	2444	35.42
5	Italy	115	2360	20.52

6	France	62	2087	33.66
7	Vietnam	64	1611	25.17
8	Germany	52	1603	30.83
9	Malaysia	95	1554	16.36
10	India	116	1508	13.00

4.3 Keyword Analysis and Emerging Trends

Figure 8: Network visualization of co-occurrence of keywords



In this analysis, the size of a node reflects how frequently a keyword appears, while the curved lines between nodes illustrate their co-occurrence in the same publication. When nodes are closer together, it indicates a higher frequency of co-occurrence [23]. While the dimensions database doesn't provide a way to visually map out keywords in a network format, we can still perform an analysis using the data found in titles and abstracts. Among the 4,898 keywords identified, 710 met the criteria for appearing at least 10 times in published papers. From this group, the top 102 most common keywords were categorized into three main clusters.

- *Cluster 1 (Blue) - Banking Performance and Financial Stability.*

Initially, the focus of research was on traditional banking performance, financial inclusion, and intellectual capital, covering topics like financial performance, Islamic banking, and commercial banking. This shows that earlier studies investigated how digital banking interacts with financial performance and stability in the banking sector.

- *Cluster 2 (Green) - Fintech and Technological Advancement.*

As time went on, research began to encompass financial technology (fintech), artificial intelligence (AI), cryptocurrency, and blockchain technology. The growing number of connections indicates a shift towards the technological enablers of digital banking.

- *Cluster 3 (Red) - Innovation, Risk, and Governance.*

Recent studies are now focusing on digital transformation, innovation, governance, sustainability, and ESG (Environmental, Social, and Governance). There's an increasing interest in how digital banking impacts corporate performance, risk, and financing constraints, reflecting a move towards more sustainable financial systems.

Emerging Trends

- From Financial Performance to Digital Finance.

The shift from traditional banking performance metrics (Cluster 1) to digital finance and fintech solutions (Cluster 2) suggests a transition in research from conventional banking analysis to a more technology-driven approach.

- Technological Innovations Driving Banking.

AI, blockchain, and cryptocurrency are closely tied to fintech and banking trends, underscoring their transformative role in financial services.

- *Sustainability and ESG Integration.*

The inclusion of sustainability, governance, ESG, and firm value in the latest research trends (Cluster 3) highlights a growing focus on sustainable banking practices and responsible finance.
The density and connections within the network show that digital banking research has evolved from traditional performance metrics to a more technology-centric financial ecosystem. The strong relationships among digital transformation, risk, innovation, and sustainability underscore how closely linked fintech adoption is to sustainable financial development. Future research might aim to find a balance between embracing new technologies and managing risks, ensuring ESG compliance, and fostering financial inclusion.

5 Conclusion and future directions

This bibliometric analysis of research on sustainable digital banking from 2014 to February 2025 showcases a rapidly evolving field that's experiencing significant growth and changing research priorities. The remarkable jump in publications, from just 6 in 2014 to a whopping 796 in 2024, clearly highlights the increasing interest in this exciting intersection of technology, finance, and sustainability. This surge can likely be attributed to several factors, including the rise of fintech, heightened regulatory scrutiny of sustainable practices, the fast-paced digital transformation in the banking sector driven by the COVID-19 pandemic, and a growing global emphasis on environmental, social, and governance (ESG) considerations. The analysis of journal citations underscores the impact of key publications like Technological Forecasting and Social Change, Sustainability, and the International Review of Financial Analysis. While Technological Forecasting and Social Change shows a high citation impact per publication (71.86), Sustainability shines with its impressive volume of publications (140). This indicates a variety of approaches within the field, with some journals concentrating on high impact, potentially more specialized research, while others offer a broader platform for a wider array of studies. The network analysis of journals (Figure 3) further illustrates the interconnectedness of research in this area, with International Review of Financial Analysis Journal showing the strongest overall link strength (258). Identifying influential authors, such as Brian M. Lucey (11publications, 797 citations), highlights key

contributors who are shaping the direction of the field. The co-authorship network shown in (Figure 5) really highlights how collaborative research can be and at the geographical landscape, China, the United Kingdom, and the United States are at the forefront in terms of research output and citation impact, as detailed in Table 3. This clearly shows where a lot of research activity is happening. However, we shouldn't overlook the contributions from other countries, like India with an impressive publication of 116 and Italy with publications of 115 (Table 3), which also point to a growing global interest in this area. Additionally, the impressive citation count from the University of Economics Ho Chi Minh City (Table 2) emphasizes the significant role that institutions outside the usual Western research hubs are playing. Moving on to the keyword co-occurrence analysis in Figure 6, we can see a clear shift in research themes over time. Initially, the focus was on traditional banking performance metrics, but more recent studies are increasingly weaving in topics like fintech, AI, blockchain, sustainability, and ESG factors. This change reflects a broader transition from merely assessing how digitalization affects existing banking models to investigating how new technologies can foster sustainable financial practices. The rise of these themes highlights the growing importance of sustainability in the realm of digital banking research.

Future Directions.

This study opens several exciting paths for future research.

- Delving deeper into specific technological advancements.

While we've touched on the significance of AI, blockchain, and cryptocurrency, there's plenty of room for further exploration into how these technologies can be applied and what they mean for sustainable digital banking. For instance, conducting a comparative analysis of the sustainability impacts of various blockchain implementations in financial services could yield valuable insights.

- Examining the regulatory landscape.

The growing attention on sustainable finance calls for a closer look at how different regulatory frameworks affect the uptake of sustainable digital banking practices. By conducting comparative studies across various jurisdictions, we can gather some insightful information.

- Investigating financial inclusion.

Digital banking has the potential to enhance financial inclusion, especially in communities that often get left behind. It's important to explore the challenges and opportunities that arise when we leverage digital technologies to promote greater financial equity.

- Addressing ethical issues.

The swift rise of new technologies in finance brings up ethical questions about data privacy, algorithmic bias, and the risk of misuse. Future research should focus on these ethical considerations to ensure that sustainable digital banking solutions are developed and implemented responsibly.

- Longitudinal research.

Following the development of specific research themes and technologies over time through longitudinal studies can provide us with valuable insights into the long-term effects of sustainable digital banking initiatives.

- Broadening geographical focus.

While this study has covered a wide array of countries, there's still a need to explore under-represented regions to get a fuller picture of global trends and challenges.

- Using qualitative research methods.

Pairing the bibliometric approach with qualitative methods like case studies or interviews could enrich our understanding of real-world challenges and opportunities tied to sustainable digital banking.
By tackling these research gaps, future studies can help us gain a more nuanced and comprehensive view of the ever-changing landscape of sustainable digital banking, ultimately guiding the creation of more sustainable and inclusive financial systems.

References

1. Abad-Segura E., González-Zamar M.D., López-Meneses E., Vázquez-Cano E., "Financial technology: review of trends, approaches and management", *Mathematics*, 2020, 8(6), 951. https://doi.org/10.3390/math8060951
2. Osei L.K., Cherkasova Y., Oware K.M., "Unlocking the full potential of digital transformation in banking: a bibliometric review and emerging trend", *Future Business Journal*, 2023, 9(1), 30. https://doi.org/10.1186/s43093-023-00207-2
3. Onesi-Ozigagun O., Ololade Y.J., Eyo-Udo N.L., Ogundipe D.O., "Leading digital transformation in non-digital sectors: a strategic review", *International Journal of Management and Entrepreneurship Research*, 2024, 6(4), 1157–1175.
4. Kaur S.J., Ali L., Hassan M.K., Al-Emran M., "Adoption of digital banking channels in an emerging economy: exploring the role of in-branch efforts", *Journal of Financial Services Marketing*, 2021, 26(2), 107.
5. Tay L.Y., Tai H.T., Tan G.S., "Digital financial inclusion: a gateway to sustainable development", *Heliyon*, 2022, 8(6). https://doi.org/10.1016/j.heliyon.2022.e09766
6. Wanof M.I., "Digital technology innovation in improving financial access for low-income communities", *Technology and Society Perspectives (TACIT)*, 2023, 1(1), 26–34. https://doi.org/10.61100/tacit.v1i1.35
7. Dubey V., "FinTech innovations in digital banking", *International Journal of Engineering Research and Technology (IJERT)*, 2019, 8(10), 597–601. https://doi.org/10.17577/ijertv8is100285
8. Omarini A., "The digital transformation in banking and the role of FinTechs in the new financial intermediation scenario", *International Journal of Trade, Economics and Finance*, 2017, 1(1), 1–6. https://doi.org/10.19070/2643-038x-170001
9. Busch T., Bauer R., Orlitzky M., "Sustainable development and financial markets: old paths and new avenues", *Business and Society*, 2016, 55(3), 303–329.
10. Aracil E., Nájera-Sánchez J.J., Forcadell F.J., "Sustainable banking: a literature review and integrative framework", *Finance Research Letters*, 2021, 42, 101932. https://doi.org/10.1016/j.frl.2021.101932
11. Durani N., "Impact of green banking on environment: a synergistic paradigm shifts in Indian banking strategies", *International Journal of Scientific Research*, 2023, 12(6), 981–988.

12. Mir A.A., Bhat A.A., "Green banking and sustainability – a review", *Arab Gulf Journal of Scientific Research*, 2022, 40(3), 247–263. https://doi.org/10.1108/agjsr-04-2022-0017
13. Puschmann T., Hoffmann C.H., Khmarskyi V., "How green FinTech can alleviate the impact of climate change – the case of Switzerland", *Sustainability*, 2020, 12(24), 10691. https://doi.org/10.3390/su122410691
14. Jo H., Kim H., Park K., "Corporate environmental responsibility and firm performance in the financial services sector", *Journal of Business Ethics*, 2015, 131, 257–284.
15. Chueca Vergara C., Ferruz Agudo L., "FinTech and sustainability: do they affect each other?", *Sustainability*, 2021, 13(13), 7012.
16. Bayram O., Talay I., Feridun M., "Can FinTech promote sustainable finance? Policy lessons from the case of Turkey", *Sustainability*, 2022, 14(19), 12414. https://doi.org/10.3390/su141912414
17. Ozili P.K., "Impact of digital finance on financial inclusion and stability", *Borsa Istanbul Review*, 2018, 18(4), 329–340. https://doi.org/10.1016/j.bir.2017.12.003
18. Diener F., Špaček M., "Digital transformation in banking: a managerial perspective on barriers to change", *Sustainability*, 2021, 13(4), 2032. https://doi.org/10.3390/su13042032
19. Tepe G., Geyikci U.B., Sancak F.M., "FinTech companies: a bibliometric analysis", *International Journal of Financial Studies*, 2021, 10(1), 2. https://doi.org/10.3390/ijfs10010002
20. Qudah H., Malahim S., Airout R., Alomari M., Hamour A.A., Alqudah M., "Islamic finance in the era of financial technology: a bibliometric review of future trends", *International Journal of Financial Studies*, 2023, 11(2), 76. https://doi.org/10.3390/ijfs11020076
21. Gallego-Losada M.J., Montero-Navarro A., García-Abajo E., Gallego-Losada R., "Digital financial inclusion: visualizing academic literature", *Research in International Business and Finance*, 2023, 64, 101862. https://doi.org/10.1016/j.ribaf.2022.101862
22. Wang C., Si L., "A bibliometric analysis of digital literacy research from 1990 to 2022 and research on emerging themes during the COVID-19 pandemic", *Sustainability*, 2023, 15(7), 5769. https://doi.org/10.3390/su15075769
23. Ozek B., Lu Z., Pouromran F., Radhakrishnan S., Kamarthi S., "Analysis of pain research literature through keyword co-occurrence networks", *PLOS Digital Health*, 2023, 2(9), e0000331.