Future Research Directions of Corporate Social Responsibility Practices in Banking and Finance Sector: A Bibliometric Analysis Using Biblioshiny and VOS Viewer

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Abstract

Corporate Social Responsibility (CSR) encompasses the deliberate and responsible attempts by companies to ensure that their operations have a positive impact on the environment and society's well-being. In banking and finance, the theoretical importance of CSR is undisputable due to its rigorous implementation. This paper aims to review CSR literature in the banking and finance sector, using bibliometric analysis to identify the significance and provide thematic directions for further research on CSR practices. The bibliometric dataset analyzed consisted of 920 articles published from 2004 to 2025, retrieved from the Scopus database. Bibliometric analysis techniques, including network analysis of citations, co-authorship, co-occurrence analysis, and bibliographic coupling, were utilized to discover the intellectual structure and future research directions in the area. The R Studio Bibliometrix package (Biblioshiny) and VOS viewer software were utilized to conduct the bibliometric analysis and visualize the data. The analyses revealed publication trends, key authors, terms, relevant sources, countries, and the collaboration pattern among the researchers. Further, the study identified the existing social and intellectual framework and suggested thematic directions for future research. The findings will help academicians understand the current research progression and future directions in CSR research in the banking and finance sector, contributing to the advancement of the research domain.

Keywords: CSR; Bibliometric Analysis; Banking Sector; Finance Sector; Network Analysis.

1. Introduction

The concept of Corporate Social Responsibility (CSR) refers to the conduct of business in a manner that is ethical and responsible, striving for profitability while adhering to legal standards and contributing to society. CSR encompasses adherence to ethical values along with contributions to society's well-being via donations, volunteer time, and the application of talent (Carroll, 1999). Due to its multidimensional nature, CSR places businesses in an ever-evolving environment shaped by various societal issues. Thereby influencing the business's ability to operate successfully.

The philosophy and concept of CSR have continuously evolved, becoming a global trend during the past decades (Bani-Khalid & Ahmed, 2017; Carroll & Shabana, 2010). The origins of modern CSR are traced to the mid-1950s, with the growing concern for businesses to commit beyond profit-making and take into account their stakeholders (Carroll, 1999). At the same time, authors like Friedman (1962) argued that the primary responsibility of business was towards its shareholders, and the use of resources to obtain long-term profits without fraud.

However, theoretical developments in CSR marked a shift from profit maximization to stakeholder orientation. The stakeholder theory suggests businesses manage the demands of all stakeholder groups, not just the shareholders (Freeman, 1984). This stakeholder perspective was widely adopted and had a significant impact on the theories governing CSR. The legitimacy theory stemmed from the expectations of society on how businesses should conduct their operations (Deegan, 2002). The sustainable development framework further emphasized CSR with the focus on sustainability, accountability, innovation, and social expectations (Fallah Shayan et al., 2022).

In recent years, various sectors worldwide, including banking and finance, have embraced the concept of CSR, recognizing the significant impact of CSR on their operations, encompassing both performance and long-term sustainability (Weber et al., 2014). This growing interest in CSR led international financial institutions to take on a standard-setting role. Involvement of the International Financial Corporation led to the introduction of the sustainability framework to standardize CSR. While major banking institutions launched the Equator principles,

serving as a baseline to classify investment projects based on their environmental and social risks (Matei & Voica, 2013). The establishment of the Global Reporting Initiative further increased the CSR disclosure in the sector. The challenges posed by the global financial crisis also changed the philosophy of banks, incorporating responsible practices. These factors, coupled with the rise in sustainable development, led to increased adoption of CSR in the banking and finance sector.

Compared to other economic sectors, the banking and finance sector impacts a large variety of people and is characterized by stricter regulations (Yamak & Süer, 2005). As a result, CSR practices in this sector also differ from those in other economic sectors. Placing greater emphasis on indirect impact in relation to responsible lending, investment, supplier policies, and supply chain management (Lentner et al., 2015). An in-depth understanding of the critical elements within the CSR framework would help organizations adhere to CSR principles, thereby enhancing customer satisfaction and improving profitability (Yeung, 2011). Hence, by exploring recent themes and diverse perspectives, the nature and evolution of CSR within banking and finance can be better understood.

The remainder of the paper is structured as follows: Section 2 reviews the significant literature, followed by Section 3, which outlines the research methodology adopted. Section 4 presents the findings of the bibliometric analysis. Section 5 presents the discussions and practical and policy implications of the study. Finally, Section 5 concludes with outlining the limitations and scope for future research.

2. Literature Review

In a scientometric and bibliometric study of CSR within business and economics, Morales-Parragué et al (2022) Found that CSR was closely linked to general management domains such as finance, marketing, operations, and human resources. Highlighting the need for further in-depth research in more specialized areas. Numerous authors have conducted bibliometric studies on CSR literature across various sectors, including modern business. (Gorski & Dumitrașcu, 2024), tourism (Yoopetch et al., 2023), family firm sector (Citterio et al., 2024), airline industry (Sorsa & Bona-Sánchez, 2024), creative and cultural industry (Kovaitė et al., 2022), and the hospitality industry (Peng et al., 2023). Specific to banking and finance, bibliometric studies by Hamid et al. (2022), Zainuldin and Lui (2022), and Hassan et al. (2023) Have provided valuable insights into CSR literature.

Hamid et al. (2022) Examined the evolution of CSR literature within finance and economics, focusing on the bibliographic coupling of CSR literature to explore the conceptual structure of each theme. However, this study primarily focused on the theme of CSR in finance and economic literature. Hence, it lacked the in-depth assessment of the state of research on CSR in the banking and finance sector.

In their decade-based study on CSR literature in the banking sector, Zainuldin and Lui (2022) Underscored the need for more bibliometric and innovative studies that employ different methodologies to enhance CSR guidelines in the banking industry. While this study provided insights into CSR in the field, it had limited data coverage. Furthermore, the exclusion of key recent literature provided a partial representation of the developments in this research field. Similarly, Hassan et al. (2023) Conducted a bibliometric and scientometric analysis evaluating CSR literature within the banking sector. They provided an overview of CSR practices employing citation and co-citation analyses to uncover the themes in CSR literature. This study also faced the issue of limited data coverage, in addition to the excessive reliance on keyword analysis to predict emerging themes and thematic evolution in the field.

Although several researchers have conducted bibliometric studies in the field of CSR across various sectors, there is a notable gap in bibliometric studies explicitly focusing on CSR within the banking and finance sector. Additionally, prior bibliometric studies have limited coverage up to 2021, therefore failing to capture the recent developments in CSR within the field. Incorporating the recent publications is crucial for a comprehensive evaluation of CSR research in the banking and finance sector. Ensuring that the findings align with the latest discussions and developments. The current study employed the bibliometric analysis to offer insights into emerging themes and future directions. Hence, the present study tries to address this gap in the literature by incorporating the most recent publications. This study conducts a bibliometric analysis of CSR in the banking and finance sector from 2004 to 2025.

This analysis aims to build upon existing research by examining the current intellectual structure, identifying trends and patterns, and offering future directions to CSR within the banking and finance sector. The findings of this bibliometric analysis are intended to assist policymakers, academicians, and practitioners.

The two main objectives of the study are:
1) To analyze and map the intellectual structure of CSR literature in the banking and finance sector.
2) To identify the emerging trends, themes, and gaps in CSR literature within this sector from 2004 to 2025.

3. Research Methodology

This study aimed to map the present state of CSR research in the banking and finance sector and identify future trends. A multi-method approach was employed to analyze and visualize patterns within the large body of literature, combining quantitative methods such as descriptive statistics, data visualization, and network analysis. Bibliometric analysis is an established scientific tool for evaluating scientific output, particularly in library science and applied fields. (Ellegaard & Wallin, 2015). It is an important research tool for uncovering current trends in literature and revealing emerging thematic directions for future research in a research area. (Radha & Arumugam, 2021).

3.1. Source of data

The primary task of bibliometric analysis involved selecting an appropriate database for literature extraction. The Scopus database is widely considered the largest database with curated abstracts and citations, offering extensive coverage of scientific and peer-reviewed journals, conference proceedings, and book chapters while maintaining high-quality indexed data. (Baas et al., 2020). Hence, the Scopus database was selected for the present study. The bibliometric workflow guideline proposed by Zupic and Cater (2015) It was followed, providing a structured methodology for conducting this bibliometric analysis. This workflow comprises five important steps: data acquisition, refining, analysis, visualization, and interpretation. These steps are illustrated in Fig. **1**.
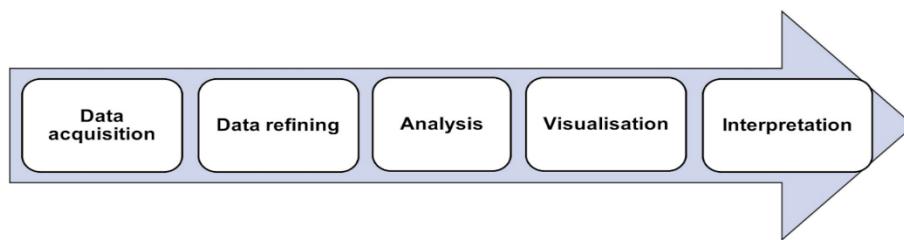
Fig. 1: Workflow of the Bibliometric Study.

Fig. **2** Depicts the flow diagram for the bibliometric study conducted. The first stage of data collection involved identifying relevant key-words needed to retrieve bibliometric data from the database. These keywords were adapted from the literature review and from the work of Zainuldin and Lui. (2022). These selected keywords included "corporate social responsibility", "CSR", "business social responsibility", "bank*", "banking sector", and "finance sector". A document search was then executed using the selected keywords, along with "AND" and "OR" logical operators and quotation marks to refine the search results.

The exact search query employed was TITLE-ABS-KEY (("corporate social responsibility" OR "csr" OR "business social responsibility") AND ("bank*" OR "banking sector" OR "finance sector")). This keyword search returned an initial dataset of 2,027 documents from the Scopus database.

The next step involved refining the search results by limiting the search to language "English" and document type "article". Furthermore, only papers relevant to the subject area were included, leading to a total of 1,274 articles. These articles were further scrutinized based on their titles and abstracts. Furthermore, articles that focused on general CSR, offered no sector-specific insights or had multi-sectoral analysis were considered irrelevant to the current study objectives and were diligently removed. This study included studies that explicitly focused on CSR within the banking and finance sectors. Additionally, documents with duplicate entries or with missing essential metadata were carefully removed. Following this elimination process, a refined sample of 920 documents was selected for further analysis.
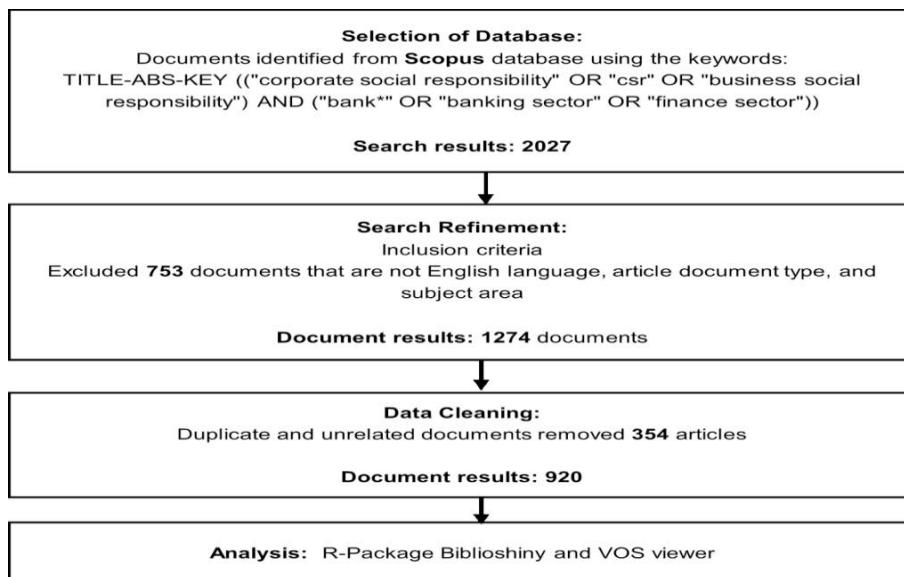

Fig. 2: Methodology Framework of the Bibliometric Study.

3.2. Bibliometric tools

Bibliometric analysis provides an overall picture of the research field, revealing significant papers, authors, sources, journals, and collaboration patterns in a research field, and uncovering the trends and future directions by examining the past literature. It involves the quantitative study of bibliometric data. (Merigó & Yang, 2017). The refined data extracted from the Scopus database were then analyzed using various bibliometric tools. The tools employed for the bibliometric analysis were R Studio version 4.2.2, the Bibliometrix tool package (Biblioshiny app for Bibliometrix), and VOSviewer version 1.26.20.

Bibliometrix is an open-source tool designed explicitly for comprehensive science mapping analysis, making it a recommended workflow for bibliometric studies. It is particularly well-suited for current science mapping scenarios where empirical contributions are emphasized, often resulting in large, segmented, and sometimes controversial research streams. (Aria & Cuccurullo, 2017). Using the Biblioshiny package, the bibliometric analysis generated results on annual scientific production, the most relevant sources, authors, key countries, frequently occurring keywords, and word cloud visualization.

VOSviewer is a software tool used for constructing and visualizing bibliometric maps, developed by Van Eck and Waltman. (2010). Graphical representations of bibliometric maps help display large bibliometric datasets in an easy-to-interpret way. Network visualization utilizes nodes and edges. Nodes represent entities like authors, journals, or keywords, while edges indicate the relationships between these nodes. The links indicated a relationship or connection between nodes, while the link size represented the strength of the relationship. Nodes that are closely related are grouped into clusters, with each cluster assigned a distinct color by VOSviewer. These clusters help to identify the similarity or relatedness of items within the dataset. (Van Eck & Waltman, 2010).

4. Results

With the bibliometric data sorted, the next step involved the analysis of the prepared data. The bibliometric analysis techniques included descriptive analysis and network analysis. The findings and interpretations of the analysis performed are presented in this section.

4.1. Main information

The final bibliometric dataset consisted of 920 documents from 2004 to 2025. The main information generated from the bibliometric data by the Bibliometrix package showed an average publication growth rate of 17.2% from 365 sources. This indicates CSR within banking and finance is a progressing research area with ample scope for further allied research.

The average citations per document was 35.73. It indicates the significance of studies within the field. Of the 2,175 authors identified, 99 were sole authors, and the remaining 2,076 authors collaborated. With an average of 2.89 co-authors per document. The presence of 28.37% international co-authors shows global reach, with cross-country collaborations. This highlights the worldwide research interest and scope in CSR within banking and finance.

4.2. Annual scientific production

The volume of CSR literature specific to the banking and finance sector had notably increased from 2004 to 2025, as illustrated in Fig. **3**. The earliest article that met the inclusion-exclusion criteria dates back to 2004. Remarkably, in 2005, no research publication met the inclusion criteria in this field.

Initially, the publication growth rate in this field remained low but active, characterized by fluctuating publication output in the early years. However, the number of publications notably increased after 2008. This trend in CSR literature in banking and finance seems to coincide with the global financial crisis, reflecting the increased interest in CSR among academia during the period (Simionescu & Dumitrescu, 2014).

With the launch of the Sustainable Development Goals (SDGs) in 2015, there has been an increase in global conversations on sustainability. The increase in publications during this period may be attributed to the popularity of sustainability research, but it is not necessarily linked to the establishment of SDGs. This reveals the continued relevance of CSR in banking and finance post-2015 (Latapí Agudelo et al., 2019; Siddique et al., 2023). A similar trend was also observed by Zainuldin and Lui. (2022).

In 2020, there was a remarkable surge (128%) in annual publications, with 107 articles released compared to the 47 published in the previous year. This proliferation of publications indicated the rise in research interest in CSR due to the pandemic, with authors across various fields exploring the impacts and implications of COVID-19 on CSR. (Nahar & Mohamad, 2023). The peak was reached in 2023 when the annual publication soared to 117. The year 2025 exhibited fewer publications, primarily due to the timing of data extraction.
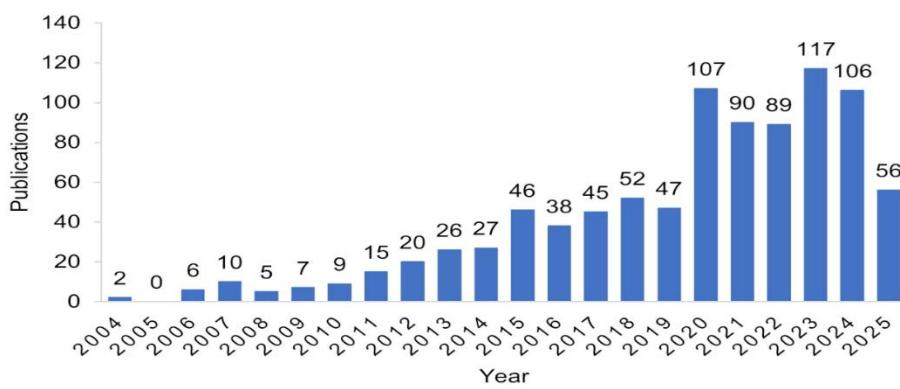
Fig. 3: Number of Publications Per Year.

4.3. Top influential authors

Table 1 Presents the ten most relevant authors who have made significant contributions to the field of CSR research in the banking and finance sector, along with their impact factors. Each author's contribution is indicated by total publications and their corresponding h-index and g-index. The h-index serves as a measure of citation impact. While the g-index is the enhancement of the h-index and evaluates overall citation performance (Rousseau, 2006).

Author Pérez A. stood out as the highest contributor to the field with 19 articles and boasted the highest impact factor. An h-index of 16 reflects the author's lifetime achievements, and a g-index of 19 indicates the presence of highly cited articles. Pérez A. accounted for 2.1% of the total articles produced in this area. Fatma M. was the next highest contributor to the field, with 16 articles, an h-index of 11, and a g-index of 16. Whose contribution to the field accounted for 1.7% of the total publications. Followed by Del Bosque I.R. and Khan I., who had accounted for more than 1% of total articles. Ahmad N., Hassan M.K., Hur, W.M., Hussainey K., Palazzo M., and Rahman Z. were the other prominent authors. Together, the top ten authors contributed 10.2% of all the CSR literature in the banking and finance sector.

Table 1: Top Ten Influential Authors Based on the Number of Articles Published

Rank	Author	Article	%	h-index	g-index
1	Pérez A.	19	2.1	16	19
2	Fatma M.	16	1.7	11	16
3	Del Bosque I.R.	15	1.6	14	15
4	Khan I.	12	1.3	9	12
5	Ahmad N.	9	1.0	9	9
6	Hassan M.K.	5	0.5	5	5
7	Hur W.M.	5	0.5	5	5

8	Hussainey K.	5	0.5	5	5
9	Palazzo M.	5	0.5	3	5
10	Rahman Z.	5	0.5	5	5

4.4. Most relevant sources

Table 2 Presents the ten most relevant sources with significant publications on CSR research in the banking and finance sector.
Sustainability (Switzerland) was the largest publisher of CSR literature on banking and finance, with 85 published articles. The journal published 9.2% of the total publications. Furthermore, the journal has the highest impact factor of h-index (32) and g-index (50), indicating its popularity among CSR researchers. Sustainability is a highly regarded, cross-national, open-access journal providing an advanced forum for multidisciplinary studies related to sustainability and sustainable development. The journal is indexed with the Scopus database and has Quartile rankings. Given that this journal focuses on publishing papers that integrate socio-economic, scientific, and policy approaches to sustainable development, it may have led to its popularity among CSR researchers.
International Journal of Bank Marketing, Social Responsibility Journal, Corporate Social Responsibility and Environmental Management Journal, and the Journal of Business Ethics were among the top influential sources. With each journal having contributed 5% of the total publications. These journals were highly reputed with indexing and Quartile rankings. This indicates that these journals have significant contributions to CSR research in banking and finance and are highly regarded by the academic community.
Together, the top ten journals in this area published 33.7% of all articles produced, highlighting their influence and prominence in the field.

Table 2: Top Ten Relevant Sources Based on the Number of Articles Published

Rank	Source	Article	%	h-index	g-index
1	Sustainability (Switzerland)	85	9.2	32	50
2	International Journal of Bank Marketing	47	5.1	27	45
3	Social Responsibility Journal	46	5.0	19	30
4	Corporate Social Responsibility and Environmental Management	45	4.9	24	45
5	Journal of Business Ethics	26	2.8	22	26
6	Banks and Bank System	17	1.8	5	8
7	Cogent Business and Management	15	1.6	7	13
8	Corporate Governance (Bingley)	11	1.2	9	11
9	Corporate Ownership and Control	9	1.0	6	9
10	Journal of Asian Finance, Economics and Business	9	1.0	6	9

4.5. Most productive countries'

Table 3 Shows the top ten most productive nations based on their research output. With 209 articles, Spain contributed the most to CSR research in the banking and finance sector. The country produced 8.3% of the total research publications in the area. Followed by Malaysia, with 204 articles, having produced 8.1% of the total publications.
Both Spain and Malaysia have implemented stringent regulatory frameworks on sustainability reporting, which has stimulated the discourse on CSR. Furthermore, the presence of multiple highly reputable institutions in these nations further reinforces their academic contribution to CSR research in the field. (Hassan et al., 2023; Zainuldin & Lui, 2022). The sustainability compliance requirements and institutional support may have driven the increased interest in studies on CSR within the banking and finance sector.
China, Indonesia, Italy, Pakistan, India, the United Kingdom (UK), Australia, and the United States of America (USA) were among the top countries according to research output. This indicates that CSR research is of interest to both developed and developing nations and has garnered global interest. The top countries produced 58% of the total CSR literature published on the banking and finance sector.

Table 3: Top Ten Countries Based on Publication

Rank	Country	Article	%
1	Spain	209	8.3
2	Malaysia	204	8.1
3	China	187	7.5
4	Indonesia	166	6.6
5	Italy	166	6.6
6	Pakistan	130	5.2
7	India	121	4.8
8	UK	108	4.3
9	Australia	94	3.8
10	USA	77	3.1

4.6. Keyword analysis

Table 4 Presents the top keywords utilized by authors and the top keywords generated as per the Scopus database. The top-most frequently identified author keywords were "corporate social responsibility", "CSR", "bank", "corporate governance", and "banking sector". Among these, "corporate social responsibility" was the most commonly used keyword, appearing 472 times. Other popular keyword themes include "corporate governance", "financial performance", "sustainability", and "Islamic banking", highlighting their popularity within the CSR literature.
CSR has been linked to corporate governance as both CSR and corporate governance have interconnected goals, forming a mutually reinforcing two-way relationship (Jamali et al., 2008). Effective CSR requires strong internal governance, while commitment to CSR is essential for effective governance, making governance an integral part of the CSR domain.
Researchers have been interested in exploring the relationship between CSR and financial performance for a long time. Numerous studies have analyzed the impact of CSR policies on financial performance indicators (Cochran & Wood, 1984). This trend is reflected in the CSR literature on the banking and finance sector, where the effect of financial institutions' CSR on their financial performance is examined. The CSR concept has evolved towards sustainability with the rise in discourse on sustainable development. The popularity of the theme indicates

the increase in focus on studies examining sustainable banking through the CSR dimensions of society and environmental issues (Siddique et al., 2023).

Similarly, Islamic banking has also been a major research interest in the field. Islamic banks' responsibilities are dictated under the teachings of Shariah and are inherently expected to be socially responsible with a strong emphasis on social justice and welfare (Zafar & Sulaiman, 2019). This unique characteristic makes it a popular research theme in the CSR literature in the banking and finance field.

Table 4: Top Ten Keywords Based on Occurrence

Rank	Author Keywords	Frequency	Keywords Plus	Frequency
1	Corporate Social Responsibility	472	Corporate Social Responsibility	117
2	CSR	136	Banking	106
3	Banks	105	Sustainability	36
4	Corporate Governance	69	Perception	22
5	Banking Sector	61	Pakistan	19
6	Financial Performance	54	Stakeholder	18
7	Sustainability	52	Sustainable Development	15
8	Banking	51	Financial System	13
9	Banking Industry	49	Questionnaire Survey	13
10	Islamic Banks	49	Business	12

The frequency of these author keyword occurrences is visually represented using a word cloud, as shown in

(A), where the text size indicates the frequency of use; larger text signifies more frequent use of the keyword.

Fig. 4: A) Word Cloud of Author Keywords.

Keywords Plus are the keywords algorithmically generated by the database, capturing hidden trends not fully captured through popular author keywords.

(B) illustrates the word cloud of the generated keywords Plus. The keywords "corporate social responsibility", "banking", "sustainability", "perception", "Pakistan", and "stakeholder" were among the top generated keywords. "Sustainable development", "financial system", "questionnaire survey", and "business" were the frequently generated other keywords, indicating the key themes in the field of study.

Fig. 4: B) Word Cloud of Keywords Plus.

4.7. Co-word analysis

The co-occurrence of keyword analysis was employed to gain insights into the knowledge structure and core theme in literature, helping to identify relevant keywords from publications that can inform future research directions. (Donthu et al., 2021). The co-word analysis revealed that of the 2052 keywords identified, 102 items met the threshold limit of at least five occurrences. These items were grouped into five clusters, with the largest comprising 43 items.

For the ease of analysis and visualization, related keywords like "corporate social responsibility", "CSR", and "social responsibility" were coupled together under the keyword corporate social responsibility. Keywords related to Islamic banks and sustainability were clubbed under "Islamic banking" and "sustainable development" respectively. Similarly, bank-related keywords were coupled under the term "banking".

The

Table **5** Displays the keywords identified from the co-occurrence analysis, based on the number of occurrences. Notably, the keyword "corporate social responsibility" had the highest link strength of 1045, occurring 637 times. Followed by the keyword "banking" occurring 317 times with a link strength of 683. Sustainable development, corporate governance, and Islamic banking were among the other popular keywords identified by the authors within the research area. A similar pattern was observed in the keyword analysis, where these keywords dominated.

Table 5: Top Ten Keywords of Co-Word Analysis

Rank	Keywords	Occurrence	Total link strength
1	Corporate Social Responsibility	637	1045
2	Banking	317	683
3	Sustainable Development	84	195
4	Corporate governance	69	163
5	Islamic Banking	76	135
6	Financial Performance	54	97
7	Bangladesh	31	70
8	ESG	24	58
9	Stakeholder	22	57
10	Disclosure	21	56

Fig. **5**(A) presents the network map illustrating the five clusters of co-word analysis. Cluster one, represented in red, was the largest cluster with 29 items. Major items within the cluster were corporate governance, financial performance, Bangladesh, and CSR disclosure. This cluster focuses on studies investigating the effect of board characteristics on financial performance and CSR disclosure within the banking and finance sector. Corporate governance plays a significant part in CSR reporting standards, while the quality of disclosure is found to influence financial performance (Chijoke-Mgbame et al., 2020; Mangantar, 2019).

The second largest cluster, shown in green, comprised major keywords like banking, sustainable development, ESG, and stakeholders. The cluster emphasizes the interrelated framework of integrating sustainability and ESG principles in banking, focusing on stakeholder integration as a driver of sustainability in the field. (Gorski & Dumitrașcu, 2023; Zairis et al., 2024).

And the third cluster, represented in blue, contains keywords that highlight the marketing aspects of CSR, with major keywords including customer loyalty, corporate reputation, and customer satisfaction. The fourth cluster, shown in purple, focuses on major themes of business, corporate social performance, and ethics. This cluster emphasizes the research studies examining the relationship between ethical practices and social performance. Integrating CSR and business ethics acts as a useful tool for enhancing social performance in banking and finance. Whereas the fifth cluster, shown in pink, comprised major themes including trust, loyalty, and satisfaction. This cluster and the third cluster have overlapping themes, focusing on marketing aspects of CSR.
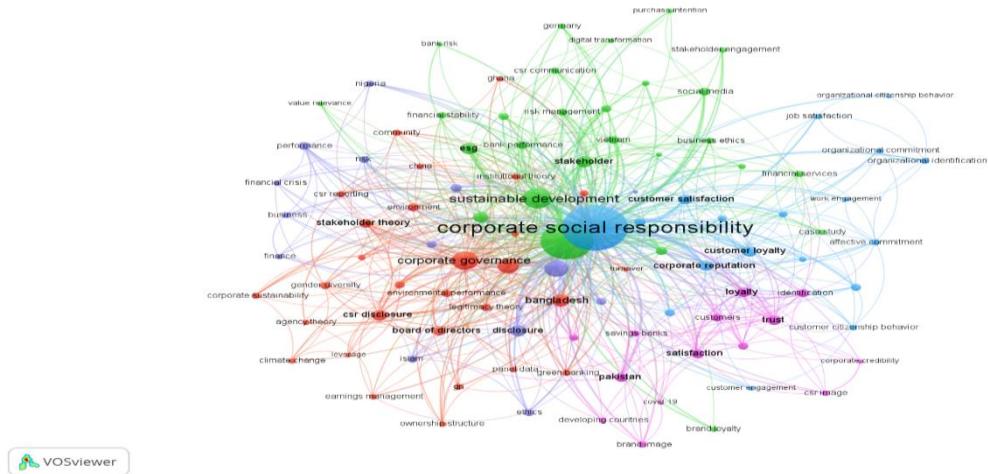
Fig. 5: A) Network Map of Keywords Co-Occurrence Analysis.

The overlay visualization was used to map the temporal evolution of CSR research in the banking and finance sector. Fig. Shows the overlay network map of keyword co-occurrence analysis. Lighter hues (green and yellow) indicate recent themes and future directions in research, while darker hues (blue and purple) represent established themes based on keywords.

The early CSR literature concentrated on themes of Islamic banking, ethics, foundational theories, and CSR disclosure in developing countries. This trend shifted to themes focusing on CSR and stakeholder outcomes, and corporate governance. Frequently occurring keywords in recent studies include bank performance, financial stability, ESG, panel data, social identity, customer engagement, corporate governance, Covid-19, and corporate sustainability, among others, indicating the evolution of the domain.

The emerging themes in the field include digital transformation, green finance, bank performance, and financial stability. These emerging themes provide promising avenues for future research in CSR by linking sustainability and technological innovation in the banking and finance sector.
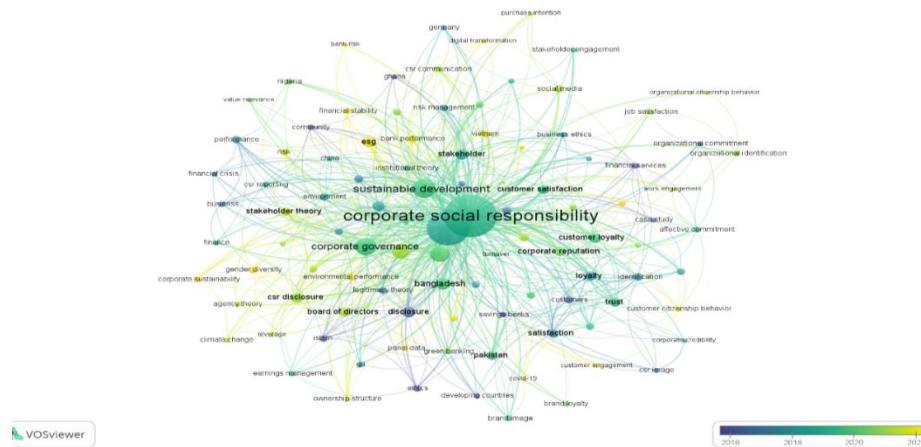
Fig. 5: B) Overlay Visualization of Keywords Co-Occurrence Analysis.

4.8. Citation analysis

Citation analysis measures the influence of an author in the academic field, with a higher citation index indicating greater influence. This analysis is instrumental in identifying the researchers who have made major contributions to the research field. (Feng et al., 2017). For this study, a threshold was established, requiring a minimum of twenty citations. Out of 920 documents extracted, 380 met this criterion. Table 6 Presents the top five influential publications based on citations in the research area.

Table 6: Top Five Documents of Citation Analysis

Rank	Author(s)	Title and Year	Citation
1	Goss and Roberts (2011)	The impact of corporate social responsibility on the cost of bank loans	1301
2	Brammer et al. (2007)	The contribution of corporate social responsibility to organizational commitment	958
3	Jizi et al. (2014)	Corporate Governance and Corporate Social Responsibility Disclosure: Evidence from the US Banking Sector	731
4	Wu and Shen (2013)	Corporate social responsibility in the banking industry: Motives and financial performance	596
5	Pomering and Dolnicar (2009)	Assessing the Prerequisite of Successful CSR Implementation: Are Consumers Aware of CSR Initiatives?	451

Fig. Depicts the network map of citation analysis based on citations. In this visualization, the size of each node indicates the total number of citations received. The largest set of related items comprised 314 items, distributed across nine clusters. The largest cluster with 58 items is shown in red.

The most cited article was by Goss and Roberts. (2011) Who investigated the connection between CSR and bank debt, offering a fresh perspective on CSR and performance through the lens of lenders. This study opened up a new research direction on the monitoring role of banks in implementing value-crating CSR activities by borrowing firms. Following this, the influential study by Brammer et al. (2007) Explores the relationship between organizational commitment and employee perceptions of CSR within the framework of social identity theory.

Jizi et al. (2014) Delve into the effect of corporate governance on the quality of CSR disclosure, particularly examining the role of the board of directors in US-listed banks, thereby bridging a gap in the literature regarding the relationship between corporate governance and CSR in the banking sector. Additionally, Wu and Sen (2013) Focus on the relationship between CSR and financial performance.

While the work of Pomering and Dolnicar (2009) Highlights the association between CSR and consumer engagement, further contributing to the discourse in this field.

These highly cited articles offer perspectives on major CSR themes in the banking and finance sector. Corporate performance, CSR disclosure, corporate governance, financial performance, and consumer relationships were the relevant research themes among the banking and finance sector researchers. These themes are consistent with the findings of keyword and keyword co-occurrence analyses performed.
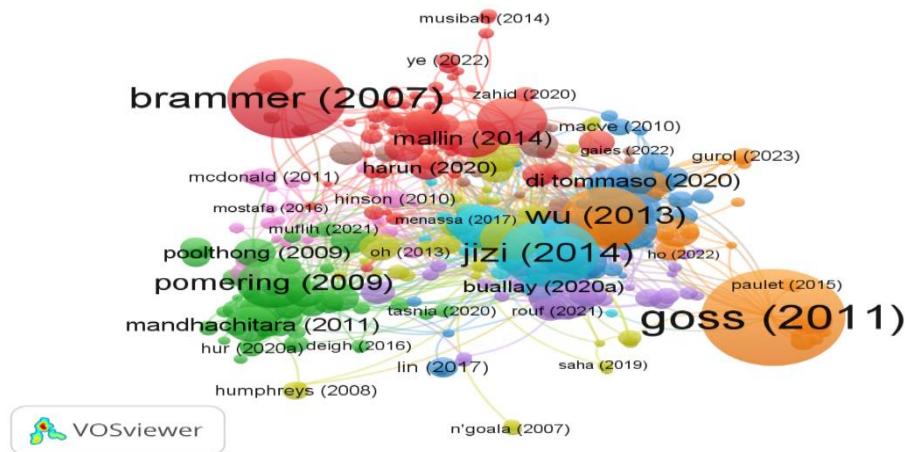
Fig. 6: Network Visualization of Citation Analysis.

4.9. Bibliographic coupling analysis

Bibliographic coupling analysis measures the relatedness of items by assessing the quantity of references shared between them. This analysis evaluates the research similarity by identifying how often two documents jointly cite other documents, which is crucial for understanding emerging trends and active research fields. (Galletta et al., 2022; Zainuldin & Lui, 2022). A qualifying limit was established for this bibliographic coupling analysis, requiring a minimum of thirty citations per document. Out of the 920 documents, 269 met this criterion. Table 7 Lists the titles, authors, publication year, and citation details of five influential articles of bibliographic coupling based on their total link strength.

Table 7: Top Five Articles of Bibliographic Coupling Analysis

Rank	Author(s)	Title and Year	Total link strength
1	Aramburu and Pescador (2019)	The effects of corporate social responsibility on consumer loyalty: The mediating effect of reputation in cooperative banks versus commercial banks in the Basque Country	691
2	Pratihari and Uzma (2018)	CSR and corporate branding effect on brand loyalty: a study on the Indian banking industry	684
3	Gangi et al. (2019)	Sustainable development and corporate governance in the financial system: Are environmentally friendly banks less risky?	655
4	Fatma and Rahman (2016)	The CSR influence on customer responses in the Indian banking sector	654
5	Khan et al. (2015)	Customer responses to CSR in the Pakistani banking industry	624

Fig. Illustrates the network map of the bibliographic coupling analysis based on citations. The relatedness of items is represented by the thickness of the links: thicker links indicate that many pairs of authors reference these articles in their publications within the banking and finance sector. (Zainuldin & Lui, 2022). A total of four clusters were identified.

The article by Aramburu and Pescador (2019), included in the second cluster, represented by green, had the highest link strength of 691. Their study focuses on conceptualizing CSR and consumer perception, investigating how banks' CSR affects consumer loyalty through corporate reputation, adopting a formative approach to identify the dimensions of CSR that develop customer relationships.

Pratihari and Uzma (2018) Also, from the first cluster, we studied the integrated effect of CSR on brand and brand loyalty within the banking context. By introducing corporate branding as a mediator, the study offers new insights and research direction on CSR and brand equity. The cluster includes articles by Fatma and Rahman. (2016) And Khan et al. (2015), which investigated the influence of CSR on customer responses in the developing nations.

The influential study by Gangi et al. (2019), from the red cluster, provided empirical evidence on the impact of banks' corporate governance on environmental engagement to attain trade-offs between sustainability and financial performance. The emerging themes identified from the bibliographic coupling analysis were consumer response, corporate governance, and sustainable development.
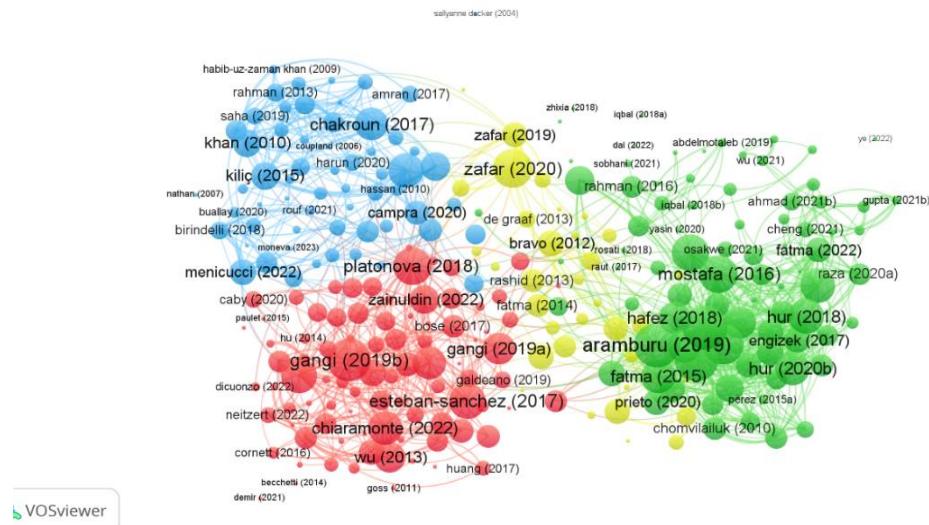

Fig. 7: Network Map of Bibliographic Coupling Analysis.

4.10. Co-authorship analysis

Co-authorship analysis is a documented form of author collaboration. (Aria & Cuccurullo, 2017). This analysis examined collaboration patterns between countries based on the number of publications. A high link strength reflects solid collaborative relationships among countries. (Lu & Wolfram, 2012). For this study, a threshold was established, requiring a minimum of two articles and at least twenty citations per country, which was met by 71 countries.

Table 8 Presents the list of top countries identified from the co-authorship analysis based on their total link strength. Notably, authors from Pakistan have the most collaborative networks with other foreign authors in the field, having a total link strength of 102.

The UK, China, Malaysia, and Saudi Arabia were the top five collaborating nations with international partners. Fig. Illustrates the density overlay of the co-authorship analysis, where the density of items influences the color of the visualized elements at each point, providing a clear representation of collaboration intensity among countries.

Table 8: Top Ten Countries of Co-Authorship Analysis

Rank	Country	Documents	Citation	Total link strength
1	Pakistan	62	2547	102
2	UK	77	4601	88
3	China	66	2381	87
4	Malaysia	92	2269	78
5	Saudi Arabia	41	754	48
6	Italy	67	3402	41
7	Bangladesh	41	1178	36
8	Australia	50	2545	33
9	South Africa	20	463	33
10	UAE	20	614	31

This network analysis revealed four major clusters, with the largest comprising twenty items. This cluster includes Malaysia, with the most cross-collaborations, 92 documents. Malaysia's strong institutional support and commitment to strengthening regulatory frameworks on sustainable CSR encourage and attract cross-border research. Followed by countries like Saudi Arabia, Bangladesh, the United Arab Emirates (UAE), and Ghana, highlighting the solid collaboration pattern among authors from these countries. The second cluster consisted of eighteen countries, including Pakistan, which had the highest total link strength of 102. This cluster included countries such as Australia, South Africa, the US, and Spain, revealing high collaboration among developed and developing countries.

The third cluster includes China, India, and Vietnam, highlighting a strong relationship between collaborating authors from the global north and south. And the final cluster consisted of the UK with the second-highest total link strength of 88, followed by Italy and Romania. This cluster primarily focused on author collaboration between developed countries.

Notably, Pakistan, China, and the UAE showed high author collaboration, indicating that authors from these countries had a tight circle of research collaborations. China's increased incentivization of research and international collaboration enables it to maintain strong collaborative networks. China and Pakistan have maintained a strong partnership, with joint initiatives like the Belt and Road Initiative and shared

sustainable development goals (Gutu et al., 2025; Hael et al., 2025). Furthermore, Pakistan and the UAE, having similar regulatory and academic evaluations, showcased research collaboration networks.

These collaborations across developed and developing countries foster enhanced global studies, facilitating generalizable and comparative findings in the field of banking and finance.
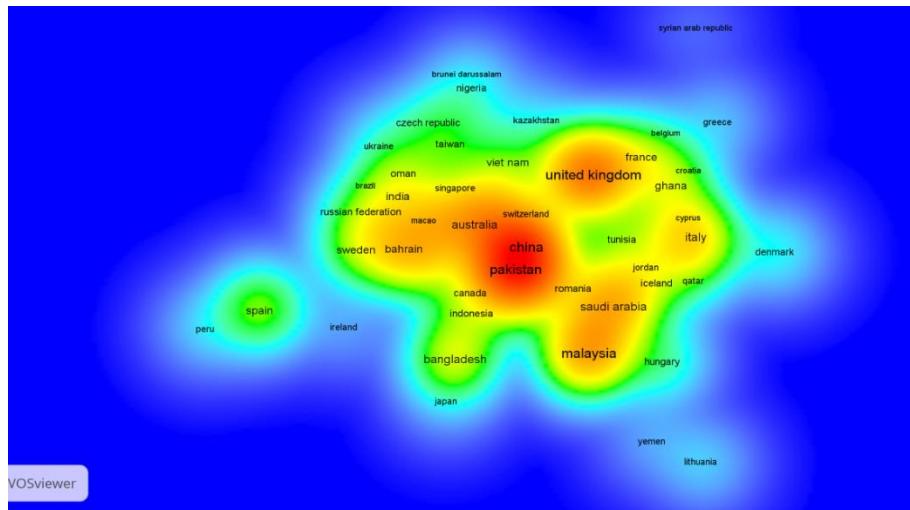

Fig. 8: Density Overlay Visualization of Co-Authorship Country Analysis.

4.11. Co-citation analysis

Co-citation analysis is the measure of two items cited together by a third paper. It indicates the similarities within the research topic. This method is instrumental in uncovering hidden patterns of author publication by identifying frequently mentioned authors who may not be active collaborators. Thereby, suggesting a common area of research. A co-citation map visually represents the intellectual structure within any field of knowledge. (McCain, 1986). To determine the structure and evolution of a domain, co-citation analysis based on the documents cited references was employed. (Galletta et al., 2022).

In co-citation analysis, a threshold limit of a minimum of twenty citations was established, resulting in 55 qualified cited references. The top five co-cited references are displayed in Table 9. This analysis revealed three distinct clusters, as illustrated in Fig. .

Table 9: Top Five Cited References of Co-Citation Analysis

Rank	Cited reference	Citation
1	Freeman, R. E. (1984). Strategic management: A stakeholder approach.	121
2	Scholtens, B. (2009). Corporate social responsibility in the international banking industry. Journal of Business Ethics, 86(2), 159–175. https://doi.org/10.1007/s10551-008-9841-x.	61
3	Sen, S., & Bhattacharya, C. B. (2001). Does doing good always lead to doing better? Consumer reactions to corporate social responsibility. Journal of Marketing Research, 38(2), 225–243. https://doi.org/10.1509/jmkr.38.2.225.18838	57
4	Carroll, A. B. (1979). A three-dimensional conceptual model of corporate performance. Academy of Management Review, 4(4), 497–505. https://doi.org/10.5465/amr.1979.4498296	53
5	McWilliams, A., & Siegel, D. (2001). Corporate social responsibility: A theory of the firm perspective. Academy of Management Review, 26(1), 117–127. https://doi.org/10.5465/amr.2001.4011987	47

The first cluster, shown in red, consisted of 28 items and was centered around the literature themes of CSR theories, financial performance, Islamic banking, and reporting. The second cluster, shown in green, consisted of themes related to CSR models, marketing values, and consumer preference. Finally, the third cluster, in blue, covered themes related to the conceptual foundation of CSR.

Authors Freeman R.E. (1984) And Scholtens B. (2009) The red cluster exhibited the highest citations, 121 and 61, respectively. High citations indicate significant co-citation of their documents. These works contributed to the essential theoretical foundation and opened up discourse on CSR in the financial sectors, making them seminal papers frequently referenced by other authors in the field.

From the second cluster, Sen S. and Bhattacharya C.B. (2001), and Carroll A.B. (1979) Ranked among the most frequently co-cited papers. Their articles focused on consumer perception of CSR and the foundational CSR model. McWilliams, A. and Siegel, D. (2001) From the third cluster, also ranked among the most frequently co-cited references. This significant paper contributed to the essential theoretical framework for CSR and firm performance.
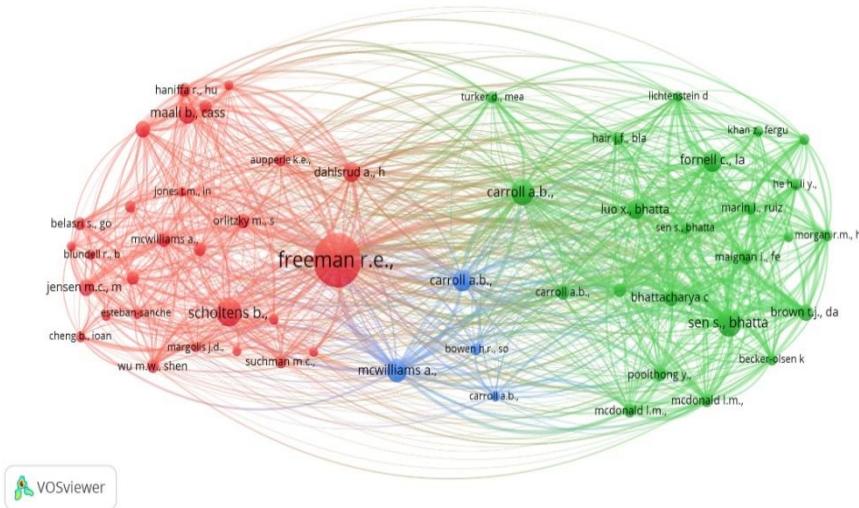
Fig. 9: Network Map of Co-Citation Analysis.

5. Discussion

The volume of CSR literature on the banking and finance sector has increased significantly over the past decade. The noticeable increase in the CSR literature stressed the growing importance and potential for future research relating to CSR in the banking and finance field. To thoroughly examine publication trends and collaboration patterns within this area, the present study employed bibliometric analysis, using the R Studio bibliometrics tool package (Biblioshiny), alongside VOSviewer.

Bibliometric data were extracted from the Scopus database. The extracted dataset was limited to English-language journal articles in the relevant subject area. After careful screening, a refined sample of 920 documents from 2004 to 2025 was selected for the bibliometric analysis. The publication analysis revealed a notable increase in publication output, 17.2% annual growth rate during the last decade. Notably, a tremendous increase in publications was observed in 2020, reflecting the pandemic's impact on the research domain.

Keyword analysis highlighted terms frequently used by authors. While the terms "corporate social responsibility", "CSR", "banks", "banking sector", and "banking industry" reflect the data collection strategy employed. Other than these expected keywords, "corporate governance", "financial performance", "sustainability', and "Islamic banks" were revealed to be the prominent themes in CSR research in banking and finance. These themes reflect the established scholarly conversation on CSR and governance, as well as the financial and social performance of financial institutions while adhering to sustainable impacts, highlighting the practical relevance of CSR.

The Sustainability (Switzerland) emerged as the most prominent source for CSR literature, with the top ten journals collectively accounting for 33.7% of all publications in the banking and finance sector. Spain was identified as the most productive nation based on the publication output, producing 8.3% of all the research output in the field. Indicating the nation's strong commitment to sustainability through reporting regulations that foster discussions on regulatory norms.

Pérez A. was identified as the most influential author based on the results of the influential author analysis. The author had the most publications in the field, with 19 articles. The author has contributed 2.1% of the total publication output. Whose works primarily focused on CSR initiatives, reputation management, and consumer engagement in CSR.

The citation analysis identified the articles by Goss and Roberts. (2011)Brammer et al. (2007)Jizi et al. (2014), Wu and Shen (2013), and Pomering and Dolnicar (2009) As contributors of crucial knowledge, we have the most intellectual impact on the research field.

Network visualization of co-word analysis was used to anticipate emerging research themes. The keywords "corporate social responsibility", "banking", "sustainable development", "corporate governance", and "Islamic banking" were identified as established themes in the CSR literature, indicating the extensive attention these concepts garnered among the authors. At the same time, the overlay visualization identified emerging keyword themes. Keywords such as ESG, panel data, Covid-19, bank performance, green finance, financial stability, and digital transformation indicate new dimensions in research within the field. This shift in concepts suggests that the domain is advancing.

Bibliographic coupling analysis highlighted current active themes in the CSR literature, including corporate governance, sustainable development, consumer responses, and market outcomes. Additionally, the co-authorship analysis revealed that authors from both developed and developing countries actively collaborated. It was observed that the developing countries collaborated more intensively.

The co-citation analysis identified the streams in the research area and provided a clear understanding of the intellectual structure. Most frequently co-cited references include the works of Freeman R.E. (1984) Scholtens B. (2009), Sen S. and Bhattacharya C.B. (2001) Carroll A.B. (1979), and McWilliams, A., and Siegel, D. (2001). These works indicated a strong focus on CSR theories, financial performance, consumer perception, and reporting.

Ultimately, a deeper understanding of the field through bibliometric analysis facilitates the creation of new knowledge (Donthu et al., 2021). This study opens up new avenues for future research, urging scholars to investigate the complex role of CSR in promoting sustainability, specifically in banking and finance. Through these efforts, the academic community can provide actionable recommendations that benefit both business and society.

5.1. Practical and policy implications

The growth in CSR within the banking and finance studies indicates its increased relevance. This signals to managers and policymakers to pay attention to the evolving CSR landscape, which offers opportunities and challenges for businesses, the environment, and society. The findings of this study highlight the importance of CSR in the banking and finance sector and suggest practical implications for researchers, managers, and policymakers.

Findings of the most influential sources help academics and managers identify the relevant journals for information and publishing. While the findings of significant authors and country analysis assist researchers by identifying the leading contributors of knowledge in the field and potential collaborations among developing and developed nations (Zainuldin & Lui, 2022).

The emerging theme of ESG within CSR literature highlights the need for financial institutions to evaluate their current reporting frameworks, anticipate increased regulatory transparency, and integrate sustainability indicators in reporting. Decision makers in the banking and finance sector can leverage the integration of CSR, green finance, and digital transformation to enhance financial performance and improve sustainable social outcomes. Additionally, policymakers need to develop sector-specific regulatory measures to address the challenges in digital security and data protection.

6. Conclusion

To investigate the current intellectual framework and knowledge progression in the CSR literature in the banking and finance sector, the present study employed a bibliometric analysis approach. The findings significantly emphasize critical themes such as CSR and financial performance, CSR and consumer perception, and foundational theories of CSR. These themes reflect the established scholarly conversations and indicate the practical relevance of CSR in shaping organizational strategies and stakeholder engagement. Furthermore, the analysis revealed ESG, digital transformation, and green finance as emerging themes in global CSR literature in banking and finance. These themes reflect the dynamic shift in CSR practices driven by environmental, technological, and developmental aspects of real-world events and the growing complexities of the global finance landscape. ESG and green finance reflect the shift to sustainable reporting and financial regulation. While the global research in digital transformation indicates enhanced financial performance and disclosure legitimacy.

Despite the growth of CSR literature in this field, it remains geographically skewed, with limited empirical evidence from North America, Africa, and Latin America, highlighting a contextual gap in research. As the field continues to evolve, there remains ample opportunity to foster innovative approaches to address emerging opportunities and challenges within the banking and finance sector. By refining these particular aspects of CSR, future studies can uncover richer insights, enhancing both academic understanding and practical applications in real-world contexts.

6.1. Limitations and scope for future research

Bibliometric studies face certain limitations due to their inherent descriptive and prescriptive nature. (De Bakker et al., 2005; Zainuldin & Lui, 2022). While this study employed a variety of bibliometric analyses, multiple analyses may have constrained the in-depth discussion and interpretation. Nevertheless, adopting multiple approaches in bibliometric research often reveals conclusive insights into hidden knowledge in the domain. Therefore, this limitation cannot be considered serious. Since the study considered only one database, the exclusion of other prominent databases may have resulted in the non-inclusion of some literature, which was another limitation.

CSR as a research field encourages collaboration across various disciplines and methodological approaches. It presents academicians with ample opportunities to explore how CSR can be effectively leveraged to enhance corporate resilience, ethical governance, and sustainable growth. By studying key issues in financial performance, customer perception, and environmental responsibility, the researchers can contribute to expanding the research field.

Additionally, future studies can incorporate Artificial Intelligence and machine learning for optimization and topic modelling to uncover advanced research trends in literature. Estimate network changes over time by modelling individual nodes' attributes. For further elaboration on CSR in banking and finance, other databases may be included, and methodologies such as systematic reviews can be employed.

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