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Mapping ESG, Green Finance, and Sustainable Financial Performance Research: Trends, Challenges, and Prospects

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ABSTRACT

The study employed a quantitative bibliometric methodology, analyzing data from the Scopus database covering the period 1990 to 2024. A total of 2,952 documents were processed using OpenRefine, RStudio, and VOSviewer. The results demonstrate significant growth, with the majority of contributions originating from China, the United States, and the United Kingdom. China is identified as the most influential contributor, with 296 articles, 8,980 citations, and leadership in international collaborations, with 111 multi-country publications. Leading journals in this area include the Journal of Cleaner Production and Business Strategy and the Environment. Major research themes include corporate social responsibility, integrated reporting, environmental accountability, and green finance. However, the literature remains geographically concentrated, with minimal representation from emerging economies. To address this limitation, it is necessary to expand ESG strategies beyond regulatory compliance by adopting innovative practices. Enhancing research capacity and sustainability infrastructure in developing economies is also required to support global policy objectives. Civil society and advocacy organizations should promote broader participation and equity in financial decision-making. Furthermore, increasing diversity in authorship and research topics is essential to reflect the complexities of sustainability in finance. Future research should explore innovative topics, including the connections between biodiversity finance and inclusive finance.

Keywords: Sustainable Financial Performance, ESG, Corporate Social Responsibility, Green Finance
JEL Classifications: Q56, O13, M14, G34

1. INTRODUCTION

Currently, the world is facing several significant challenges, including the prolonged Russia versus Ukraine war, intensifying U.S versus China trade competition, and persistent issues related to natural resources and the environment (Phan et al., 2025). The increasing global challenges caused by climate change and environmental degradation have sparked extensive discussion about the urgent need for sustainable development, especially within the financial sector. In addition to natural events, human activities, particularly those related to industrial and economic growth, have significantly contributed to rising greenhouse gas emissions, deforestation, and sea level rise. These issues threaten the ecological balance and impact socioeconomic systems (Boudreau et al., 2022; Dasandara et al., 2023; Porter and Linde, 1995). Climate change poses a significant threat to achieving the Sustainable Development Goals (Bakry et al., 2023; Nurbaiti et al., 2024; Phan et al., 2025). The Paris Agreement (2015) and the United Nations' 2030 Agenda for Sustainable Development are crucial frameworks that urge businesses and financial institutions to incorporate decarbonization and sustainable practices into their operational strategies. These concerns have grown in importance for businesses as a result of demands from stakeholders, such as customers, competitors, regulators, non-governmental organizations, and employees, for increased focus on social and environmental sustainability in corporate operations (Carter and

Easton, 2011; Phan et al., 2025). As these issues gain importance on both international and national levels, including in Indonesia, there is an increasing demand for innovative financial mechanisms that can support both profitability and environmental integrity. A study Lopes and Basso, (2024) found that eco-innovation is instrumental in enhancing operational performance. Furthermore, the study highlights the significant impact of environmental practices on companies' financial outcomes, providing new insights into the relationship between environmental innovation and organizational financial health.

In recent years, the role of financial institutions and corporations in promoting sustainability has been subject to increased scrutiny. Corporate sustainability performance, which was once considered secondary to business success, has now become a central strategic priority. This shift is driven by institutional pressures, regulatory changes, and evolving stakeholder expectations (Lebelhuber and Greiling, 2022; Skouloudis et al., 2019). In Indonesia, rapid industrialization has increased environmental vulnerabilities, making it essential to integrate sustainability into financial operations. This integration is not just a regulatory requirement but a societal necessity. Green finance is essential for addressing global environmental challenges, mitigating climate change, reducing greenhouse gas emissions, promoting renewable energy investments, and supporting long-term economic growth (Farihah et al., 2024; Stern, 2007). Green investments and sustainable economic systems are recognized as effective strategies for mitigating climate-related risks, managing institutional challenges, and ensuring long-term business viability (Campiglio, 2016; D'Orazio and Popoyan, 2019; Hafner et al., 2020).

This study seeks to explore the intersection of sustainability and finance, providing a new examination of sustainable financial performance through a bibliometric approach. Although global interest in environmental, social, and governance (ESG) factors has increased, few systematic reviews have mapped the intellectual and conceptual landscape of sustainable financial performance. Previous research has demonstrated the financial benefits of ESG adherence, the rise of integrated reporting, and the influence of financial institutions on sustainable economic systems (Hussain et al., 2018; Issa, 2024; Marzuki et al., 2023). However, limited studies have used bibliometric methods to analyze research trends, identify leading contributors, and reveal conceptual gaps in this evolving field. This article addresses this gap by conducting a comprehensive bibliometric analysis with three objectives: mapping research trends in sustainable financial performance, identifying the most influential scholars and publications, and pinpointing gaps and emerging themes in the literature (Alshater et al., 2022; Kashi and Shah, 2023). The concept of green finance has its roots in the green economy, which was first discussed in the late 1980s, when Western countries began to recognize the severe environmental impacts of rapid industrialization (Pearce et al., 2013). Green finance describes the allocation of funds for projects that improve the environment while adhering to sustainable development principles. These advantages include lowering greenhouse gas emissions, enhancing resource efficiency, lowering air, water, and soil pollution, and mitigating and adapting to climate change (Khan, 2024).

Although empirical and theoretical research in this area is expanding, clarity remains limited regarding thematic development, intellectual foundations, and principal contributors. This lack of clarity restricts policymakers, scholars, and practitioners from formulating strategies that integrate financial objectives with sustainable development goals. The study employs a qualitative bibliometric methodology, synthesizing data from established academic databases to delineate the landscape of research on sustainable economic performance. This methodology facilitates the identification of foundational publications, dominant research themes, and influential scholars, and it highlights research gaps that require further exploration. By applying co-citation and keyword analysis, the study aims to construct a comprehensive knowledge framework to guide both academic research and practical implementation in sustainable finance.

It utilizes bibliometric methods to examine the evolution of sustainable financial performance concepts and their connections to environmental, social, and governance (ESG) frameworks, stakeholder theory, and integrated reporting. Citation network and thematic cluster analyses demonstrate a transition in academic focus from isolated assessments of corporate responsibility to integrated models that address both financial and environmental outcomes. While prior literature presents numerous case studies and theoretical analyses, it seldom consolidates these findings into a unified framework for guiding future research and practice. This investigation builds on existing research regarding the influence of ESG compliance, corporate social responsibility, and environmental ethics on financial results. Empirical studies show that organizations with robust sustainability practices frequently achieve higher market valuations and lower risk (Baah et al., 2024; Perdana et al., 2023). In Indonesia, companies adopting proactive environmental strategies have reported enhanced financial performance, underscoring the practical importance of sustainability integration (Hanjani and Kusumadewi, 2023). These results collectively indicate that sustainable financial performance is a significant determinant of corporate success.

This article examines the scholarly landscape of sustainable financial performance using systematic bibliometric analysis. The study maps intellectual structures, identifies leading contributors, assesses research trends, and highlights thematic gaps. It integrates fragmented findings into a cohesive framework, providing a comprehensive overview of the relationship between sustainability and financial imperatives. This approach is justified by the increasing recognition that sustainability is essential for financial stability and competitiveness. The analysis clarifies the academic discourse and offers guidance for future research, supporting scholars, institutions, and policymakers in developing strategies that align economic objectives with environmental stewardship. The study reviews a global body of academic literature, with a specific focus on developments in Indonesia, thereby connecting international perspectives with national priorities in sustainable finance.

2. LITERATURE REVIEW

A review of sustainable finance has become an integral component of both corporate strategy and academic inquiry. Central to understanding sustainable financial performance are three theoretical frameworks such as stakeholder theory, corporate social responsibility (CSR), and the resource-based view (RBV). Stakeholder theory emphasizes that aligning corporate actions with stakeholder interests enhances legitimacy and improves financial performance through increased trust and support (AL-Janabi et al., 2024; Cassely et al., 2020). CSR extends this notion by suggesting that firms proactively engaging in socially and environmentally responsible behavior are rewarded with stronger financial returns and reputational capital (Fatoki, 2019; Indriastuti and Chariri, 2021). Concurrently, the resource-based view supports the integration of ESG criteria as intangible assets that yield a competitive advantage. From this perspective, sustainability-related practices, such as transparent reporting and environmental stewardship, are valuable resources that differentiate firms in competitive markets (Lei and Yu, 2024; Yilmaz, 2021). This is corroborated by findings that link sustainability disclosures with enhanced market valuation and risk mitigation (Luo et al., 2022).

These theoretical perspectives collectively support the idea that sustainable practices are not peripheral to financial performance but rather central to long-term value creation. Empirical studies have operationalized sustainable financial performance by combining ESG metrics, CSR initiatives, and traditional financial indicators. The literature consistently finds positive associations between sustainability engagement and firm performance across multiple sectors and geographies. For example, studies report that companies implementing sustainable banking and green investment strategies show improvements in return on assets, earnings yield, and overall operational efficiency (Anantadjaya et al., 2024; Krisciukaityte et al., 2023; Yilmaz, 2021). These improvements are often linked to adherence to sustainability reporting frameworks like the Global Reporting Initiative (GRI-G4), which foster transparency and stakeholder confidence (AL-Janabi et al., 2024).

Green finance is integral to achieving long-term sustainability objectives. Green financial instruments such as green bonds, sustainable loans, and investment portfolios that incorporate environmental, social, and governance (ESG) criteria allow firms to align financial performance with environmental responsibility. These instruments contribute to reduced market volatility, improved risk-adjusted returns, and enhanced corporate reputation and investor confidence (Mohanty et al., 2023). Furthermore, green finance links financial incentives with societal and environmental goals, thereby reinforcing the corporate sustainability agenda (García-Sánchez and Noguera-Gámez, 2017; Issa, 2024). Corporate governance and stakeholder engagement influence the relationship between green finance and financial performance. Transparent governance structures that support ESG disclosures and facilitate stakeholder dialogue lead to improved ESG ratings and demonstrate corporate accountability (Baltas and Mann, 2024; Nguyen, 2024). Collectively, these practices enhance firm competitiveness and encourage responsible capital allocation by institutional investors (Khan et al., 2021; Kuo et al., 2023).

However, adopting sustainable financial strategies presents challenges. The absence of a universal definition of green finance, for example, creates policy fragmentation and compliance ambiguities (Mohanty et al., 2023). Differing regulatory frameworks across countries also complicate consistent sustainability practices, raising compliance costs and reducing investor confidence (Galeazzo et al., 2024; Lei and Yu, 2024). Weak infrastructure for monitoring and verifying sustainability further limits standardized metrics and third-party assurance, reducing the credibility of ESG disclosures and making it difficult for stakeholders to evaluate outcomes (Galeone et al., 2023; Tanjung, 2023). Firms also struggle to balance short-term financial targets with long-term sustainability, especially without strong accountability frameworks (Perdana et al., 2023).

Despite significant growth in the literature on sustainable finance, systematic reviews reveal several unresolved issues. The scarcity of quantitative assessments and bibliometric analyses constrains the comprehensive evaluation of scholarly progress (Dervi et al., 2022; Mohanty et al., 2023). Furthermore, most studies focus on single-country contexts and lack comparative perspectives, which limits understanding of how regional governance and regulatory differences affect the implementation of sustainable financial strategies (AL-Janabi et al., 2024; Perdana et al., 2023). Ongoing transparency challenges in sustainability reporting also complicate the field. The prevalent reliance on self-regulation underscores the necessity for third-party verification and regulatory oversight to enhance the reliability of sustainability disclosures. Vigneau and Adams, (2023) argue that self-regulation often fails to ensure accountability, as firms may selectively disclose favorable ESG information while omitting detrimental impacts. This gap underscores the importance of third-party verification and regulatory oversight to enhance the integrity of sustainability disclosures.

Moreover, while integrated governance structures are considered essential for sustainability, their operational mechanisms are still not well understood. It remains unclear how governance committees influence the adoption of corporate social responsibility and environmental, social, and governance practices, or how these factors impact firm performance. These areas warrant further investigation (Lei and Yu, 2024; Orazalin et al., 2024). The literature on sustainable financial performance provides a complex yet coherent framework that connects sustainability practices to improved financial outcomes. The intersection of stakeholder theory, CSR, and the resource-based view emphasizes the strategic importance of sustainability in financial decision-making. Empirical studies indicate that integrating ESG practices can lead to risk mitigation and value creation, particularly when backed by transparent governance and robust regulation. However, several gaps still exist, including the need for measurement standardization, cross-regional comparisons, and an assessment of the effectiveness of governance mechanisms.

3. MATERIALS AND METHODS

This study employs a bibliometric approach to analyze the development and thematic structure of research on sustainable financial performance from 1990 to 2024. The methodology comprises several systematic stages, ranging from data collection to interpretation, designed to provide a comprehensive overview of scientific trends, influential contributors, and conceptual networks in this field. The methodological framework follows best practices in bibliometric analysis by combining both quantitative and qualitative data treatment.

The initial phase of this research involved retrieving bibliographic data from the Scopus database. A data search was conducted on December 31, 2024, using the keyword "sustainable financial performance." The Scopus database was selected due to its broad interdisciplinary coverage and reliability in indexing peer-reviewed scientific literature (Pimonenko et al., 2022). To ensure the relevance and quality of the dataset, inclusion criteria were applied: (1) publication language limited to English; (2) time frame from 1990 to 2024; and (3) subject areas restricted to Business, Management, Accounting, Economics, Econometrics, and Finance. As a result, a total of 2,964 documents were extracted, comprising 2,422 journal articles, 233 conference proceedings, and 285 books.

The second stage involved data cleaning to remove redundancies and inconsistencies that could introduce bias. OpenRefine was used to process the data, following the techniques recommended by (Larsson, 2013; Verborgh and Wilde, 2013). Data refinement focused on standardizing terminologies, eliminating duplicate entries, and resolving inconsistencies in author names and institutional affiliations. A refined dataset was exported in CSV format to serve as the basis for bibliometric mapping and analysis.

The third stage involved bibliometric analysis conducted using RStudio (Bibliometrix package) and VOSviewer. RStudio was employed to manage and statistically analyze the dataset, utilizing its powerful visualization capabilities and programming flexibility. VOSviewer was used to generate visual bibliometric networks, including co-authorship, keyword co-occurrence, and citation relationships (Mohanty et al., 2023; Pimonenko et al., 2022). These tools were selected for their respective strengths in handling large-scale bibliographic data and visualizing intellectual structures. The combination enables the identification of clusters, patterns, and emerging themes, providing both macro- and micro-level insights into the field of sustainable financial performance (Marzuki et al., 2023).

The final stage of the methodology involves interpreting the results derived from bibliometric visualizations and statistical metrics. Each cluster or trend identified was further analyzed to assess its relevance to the evolution of sustainable financial performance research. To enhance the robustness of findings, triangulation was used by comparing results across different bibliometric techniques. In addition, validation was ensured through cross-checking influential works with citation databases and recent literature reviews (Chen and Scholtens, 2018; Lakshan et al., 2021).

A limitation of this method is that it first restricts the dataset to Scopus-indexed. Secondly, bibliometric indicators like citation counts do not necessarily reflect research quality but rather visibility and popularity. Lastly, while keyword-based search strategies provide precision, they may also omit studies employing synonymous terms. Nonetheless, these limitations are mitigated by transparent methodological documentation, robust data handling practices, and the triangulation of multiple analysis techniques. The multi-stage process ensures methodological integrity and provides valuable insights for scholars, practitioners, and policymakers navigating this dynamic field. Future research could expand the dataset scope and incorporate alternative databases to increase generalizability.

4. RESULTS AND DISCUSSION

4.1. Final Database

The bibliometric dataset comprises 2,952 scientific publications extracted from the Scopus database, spanning the years 1990 to 2024. These publications were authored by 7,111 unique individuals, with an average of 2.85 authors per document. Notably, 25.58% of the publications involve international co-authorship, indicating a moderate level of global collaboration. The documents include 2,434 journal articles, 257 conference proceedings, 261 books, and a book chapter. In total, these sources contain 147,795 references and 7,214 unique author-defined keywords. The annual publication growth rate was recorded at 18.87%, underscoring a sharp increase in interest over time. Table 1 shows a descriptive analysis of the dataset.

4.2. Most Influential Countries and Cited Countries

Figure 1 shows the author's correspondence with various countries for each publication and the author's collaboration. It includes single-country publications (S.C.P.; one-country collaboration) and multiple-country publications (M.C.P.; collaboration between countries). As shown in Figure 1, the level of international collaboration varies considerably across countries, with China and the USA demonstrating stronger cross-national partnerships than India. Although India has a high publication output, its international collaboration rate is relatively low at 13.8%, compared to China

Table 1: Descriptive analysis

Description	Results
Main information about data	
Timespan	1990:2024
Sources (Journals, Books, etc)	1034
Documents	2952
Annual growth rate %	18,87
Document average age	5,45
Average citations per doc	27,93
References	147795
Document contents	
Keywords plus (ID)	5859
Author's keywords (DE)	7214
Authors	
Authors	7111
Authors of single-authored docs	456
Authors collaboration	
Single-authored docs	491
Co-authors per doc	2,85
International co-authorships %	25,58
Document types	
Article	2434
Book chapter	261
Conference paper	257

Figure 1: Most collaboration countries with scientists from other countries

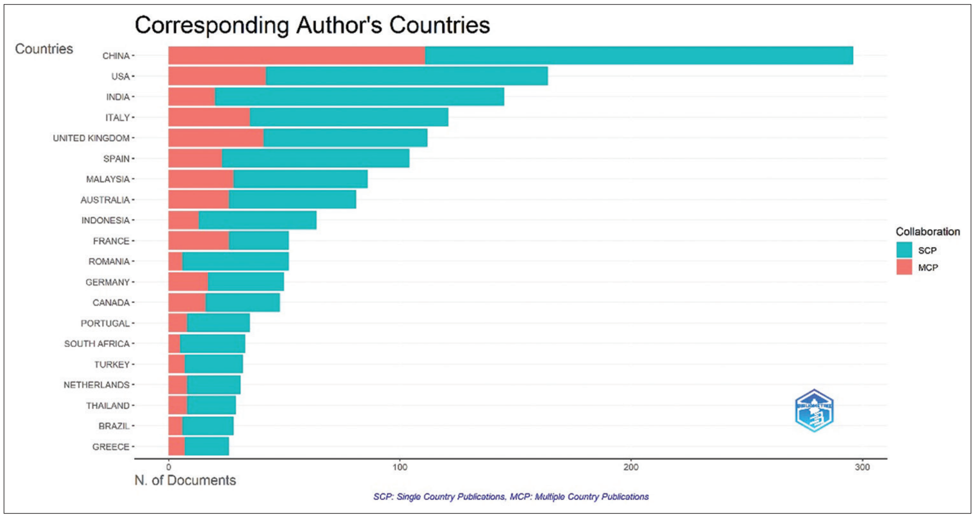

Figure 2: Top ten most cited countries

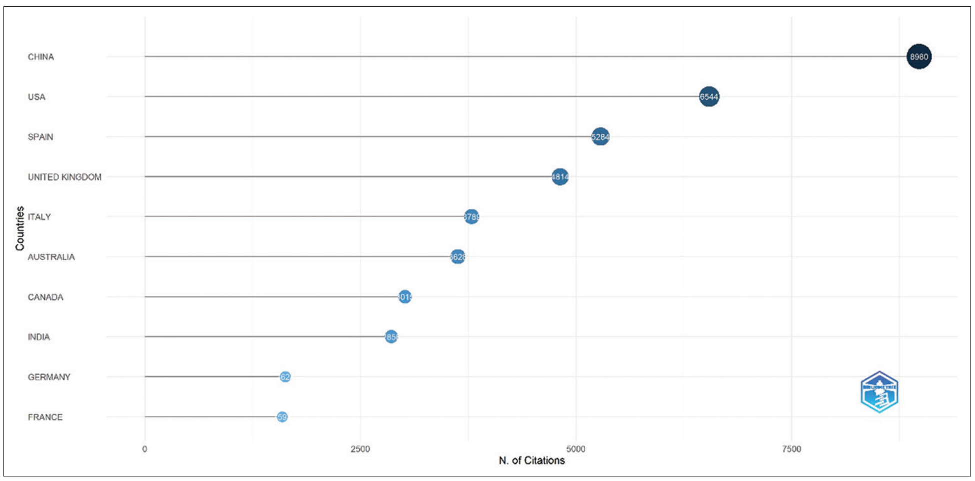

Table 2: Top twenty most influential countries in sustainable financial performance

Country	Articles	Articles %	SCP	MCP	MCP %
CHINA	296	10	185	111	37,5
USA	164	5.6	122	42	25,6
INDIA	145	4.9	125	20	13,8
ITALY	121	4.1	86	35	28,9
UNITED KINGDOM	112	3.8	71	41	36,6
SPAIN	104	3.5	81	23	22,1
MALAYSIA	86	2.9	58	28	32,6
AUSTRALIA	81	2.7	55	26	32,1
INDONESIA	64	2.2	51	13	20,3
FRANCE	52	1.8	26	26	50
ROMANIA	52	1.8	46	6	11,5
GERMANY	50	1.7	33	17	34
CANADA	48	1.6	32	16	33,3
PORTUGAL	35	1.2	27	8	22,9
SOUTH AFRICA	33	1.1	28	5	15,2
TURKEY	32	1.1	25	7	21,9
NETHERLANDS	31	1.1	23	8	25,8
THAILAND	29	1	21	8	27,6
BRAZIL	28	0.9	22	6	21,4
GREECE	26	0.9	19	7	26,9

(37.5%) and the United Kingdom (36.6%). Furthermore, Table 2 ranks the top twenty countries contributing to SFP research.

Figure 2 lists the distribution of publications and citations across these countries, highlighting China's clear dominance in the field. China leads with 296 publications and 8,980 citations, followed by the United States (164 publications, 6,544 citations) and India (145 publications, 2,716 citations). Although India has a high publication output, its international collaboration rate is relatively low at 13.8%, compared to China (37.5%) and the United Kingdom (36.6%). The high citation numbers from China and the United States can be attributed to their mature research infrastructures and robust governmental support for research and development. For instance, the United States allocates 3.5% of its GDP to RandD, accounting for about 25% of global scientific output (… and Foundation, 2019; Bank, 2015, 2021; National Science Foundation [NSF], 2019). Countries such as Italy, Spain, and the United Kingdom also demonstrate significant impact through both high citation counts and robust international collaborations, reinforcing their influence in shaping the global SFP research landscape.

Figure 3: Top ten most influential authors

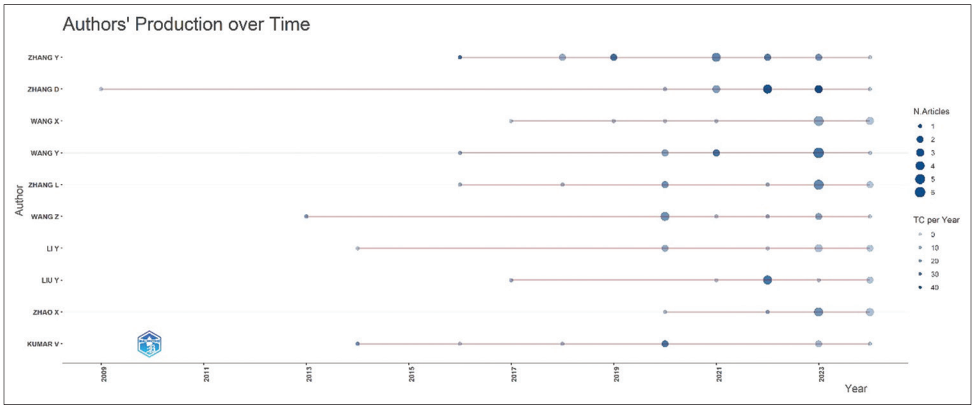

Figure 4: Three-factor analysis of the relationship among authors (left), keywords (center), and sources (right)

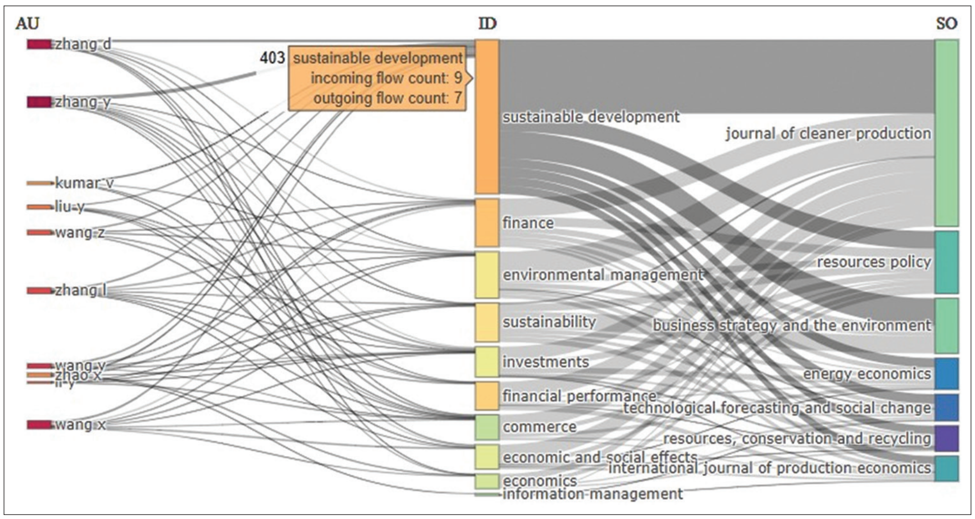

Table 3: Top ten most influential journals of sustainable financial performance

Sources	Articles	h_index	g_index	m_index	TC	PY_start
Journal of cleaner production	245	69	108	3.45	14152	2005
Business strategy and the environment	113	50	89	1.613	8055	1994
Corporate social responsibility and environmental management	75	31	58	1.938	3495	2009
Resources policy	53	15	27	0.484	815	1994
International journal of production economics	31	23	31	1.769	2608	2012
Journal of risk and financial management	31	9	19	1.5	372	2019
Energy economics	26	14	26	0.438	967	1993
Technological forecasting and social change	26	16	26	0.64	1415	2000
Cogent business and management	25	8	14	2	218	2021
Resources, conservation and recycling	23	20	23	0.769	2020	1999

4.3. Most Influential Journals

Table 3 lists the top 10 journals with the highest number of publications on sustainable financial performance. The Journal of Cleaner Production leads the top journals publishing on SFP with 245 articles and 14,152 citations, followed by Business Strategy and the Environment (113 articles, 8,055 citations), and Corporate Social Responsibility and Environmental Management (75 articles, 3,495 citations). These journals play a pivotal role in disseminating knowledge and shaping discourse on sustainable finance and ESG integration (Marzuki et al., 2023). The rise of Cogent Business and Management, which recorded 218 articles since 2021, signals an increasing diversification in the sources contributing to the field. Its recent but rapid growth suggests a heightened interest in sustainability from emerging journals and interdisciplinary platforms.

4.4. Key Authors and Scholarly Impact

Figure 3 lists the publication trends of the top ten influential authors over time. The most prolific authors in SFP research include Zhang Y (14 publications), Zhang D (13 publications), and Wang Z, Wang Y, and Zhang L (12 each). Zhang Y, who began publishing in 2016, has amassed 849 citations and an H-index of 11, the highest among peers. This suggests that Zhang Y's work resonates strongly within the academic community and aligns with emerging trends such as ESG integration and green finance (Costas and Bordons, 2007).

Interestingly, although Zhang D began publishing earlier (2009), his citation count and H-index trail behind Zhang Y, indicating a more recent shift in scholarly influence. Authors like Agyabeng-Mensah Y and Baah C, with high M-indices despite fewer total papers, suggest impactful early-career contributions, particularly in CSR-driven financial performance (Baah et al., 2024). Other publication trends and influential authors' details are given in Figure 3.

4.5. Three-Factor and Factorial Analysis

Figure 4 shows a three-factor analysis was conducted to explore the interrelationship between authors, keywords, and sources. The analysis revealed that the most frequently occurring keywords were "sustainable development" and "finance," which appeared with strong links to journals such as the Journal of Cleaner Production and Resources Policy. Authors like Zhang Y and Wang Z prominently feature in research using these keywords, reflecting their thematic specialization. The strong keyword flow also indicates the centrality of sustainable development within the broader discourse of sustainable financial performance. This convergence reinforces prior literature emphasizing the critical role of aligning financial strategies with sustainability imperatives (Indriastuti and Chariri, 2021; Issa, 2024).

Factorial analysis in Figure 5 further supports the dominance of themes such as environmental reporting, green finance, and ESG. Journals publishing on these topics exhibit strong cross-citations, suggesting coherent research clusters. This also aligns with the rise of integrated reporting as a driver of corporate transparency and market trust (Hassan et al., 2019; Hussain et al., 2018).

As shown in Figure 6. TreeMap displays frequently appearing words in boxes that resemble a map's regions; the larger the square space, the more words are displayed. According to TreeMap's findings, sustainable development appeared in 16% of all keywords, followed by sustainability (8%), financial performance (7%), finance (4%), and CSR (4%). This analysis shows that the cumulative word growth of "sustainable development" is the highest, as shown in Figure 6.

Figure 7 also shows the authors' keyword analysis, while the statistical evaluation of authors' keywords, keywords plus, and title words helps indicate the direction of the study. The results show that the top 10 keywords are shown in the output. Sustainable development, sustainability, and financial performance are the top keywords.

4.6. Emerging Themes and Research Trends

Figure 8 shows topic trend analysis and thematic clustering using VOSviewer indicate several key shifts in the landscape. Earlier literature (1990s-2000s) focused heavily on CSR and environmental disclosures. More recent themes (2015 onward) include ESG metrics, sustainable investment, climate risk, and green bonds, reflecting a move toward strategic integration of sustainability within financial systems (Kuo et al., 2023; Mohanty et al., 2023). The main themes identified through thematic mapping include "sustainable finance," "climate risk," and "corporate governance," while emerging themes include "green fintech" and "impact investing." These evolving foci align with global policy developments such as the UN SDGs and the EU Green Deal, underscoring the convergence between policy and financial innovation.

4.7. Author Collaboration and Knowledge Networks

Figure 9 illustrates a document-coupling analysis that maps the main research clusters within the field of ESG, green finance, and sustainable financial performance. The horizontal axis (centrality) represents the influence of each cluster within the research network, while the vertical axis (impact) indicates the internal strength or density of the cluster. The visualization identifies four major clusters, dominated by themes such as sustainable development, corporate social responsibility, finance, stakeholder engagement, and environmental economics, showing how these topics are closely interconnected and form the core focus areas in current sustainability-related research.

The bibliometric network maps reveal significant collaboration clusters centered around Chinese, European, and American institutions. International co-authorship accounts for approximately 25.58% of publications, with particularly strong networks in Europe. Collaboration appears to correlate positively with citation impact, suggesting that cross-border research enhances the quality and visibility of scholarly output. This supports previous findings that interdisciplinary and international collaboration fosters innovation and knowledge diffusion (Pimonenko et al., 2022).

5. DISCUSSIONS AND CONCLUSION

The results of the bibliometric analysis reveal crucial insights into the evolution and distribution of sustainable financial performance (SFP) research, as well as its growing importance within both academic and practical spheres. As shown in the Table 4, the volume of SFP publications has steadily increased since 1990, reflecting an intensified global concern with integrating sustainability principles into financial systems. The predominance of contributions from countries such as China, the United States, and the United Kingdom is consistent with their broader scientific infrastructure and policy environments, which prioritize green investment and climate-related disclosures. This observation aligns with previous literature, which highlights that countries with stronger institutional frameworks tend to promote more advanced CSR and ESG initiatives (Alonso-Martínez et al., 2020; Farooq et al., 2021).

However, the disparity in geographic contributions also reveals a major challenge for inclusive and equitable development in SFP research. As Jeriji and Louhichi, (2021) and (Badía et al., 2022) argue, the uneven distribution of research capabilities across regions can hinder localized adaptation of sustainability strategies, especially in emerging economies like Nigeria or Indonesia. These nations often lack sufficient academic infrastructure or policy support to engage fully with the evolving global discourse,

Figure 5: Factorial analysis

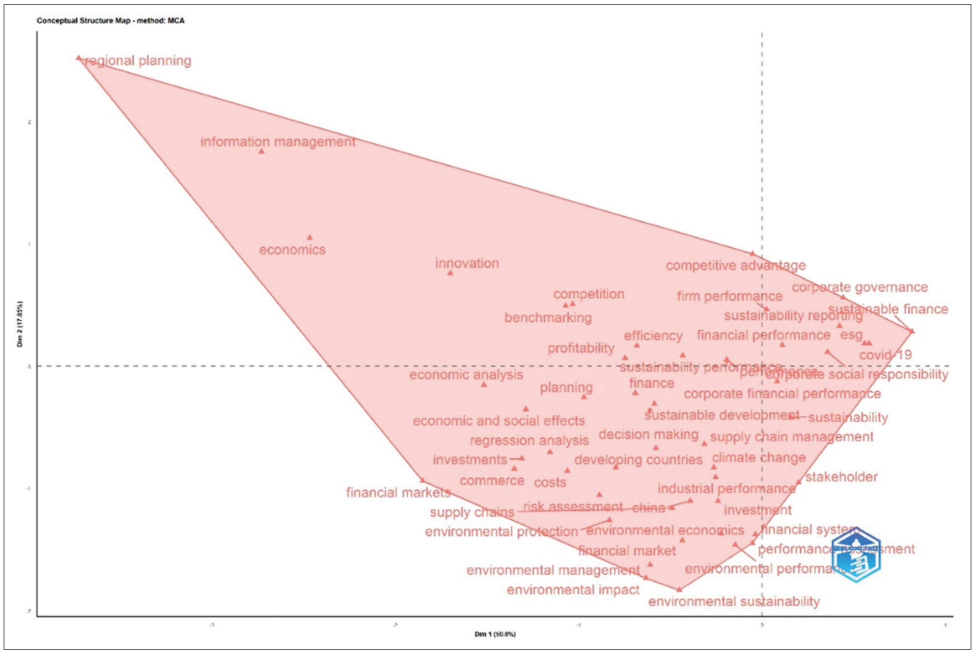

Figure 6: Treemap

Figure 7: Most relevant words

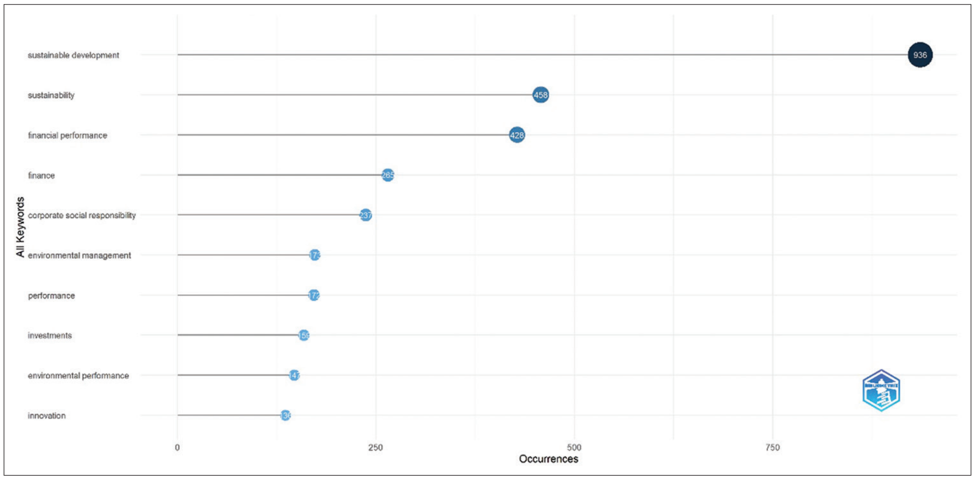

Figure 8: Trend topics

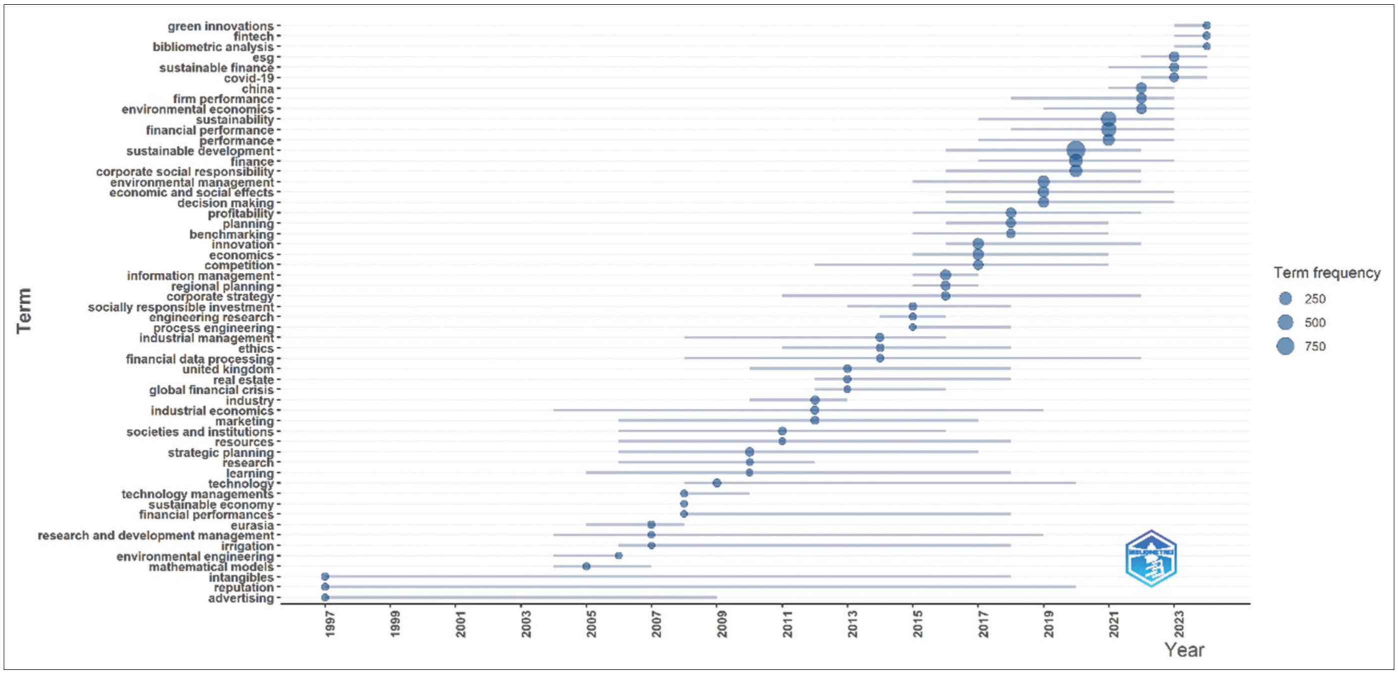

Figure 9: Clusters by documents coupling

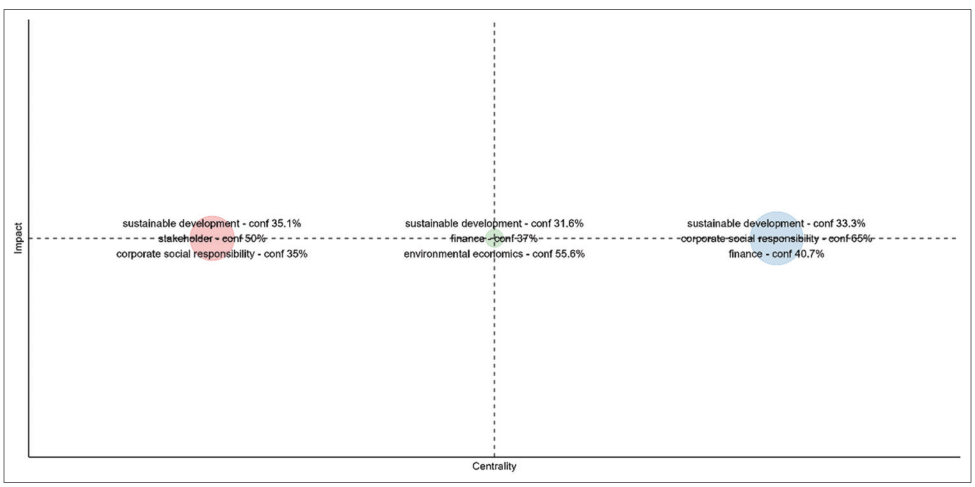

Table 4: Source authors

Author	H_Index	G_Index	M_Index	TC	NP	PY_Start
Zhang Y	11	14	1,222	849	14	2016
Zhang D	9	13	0,563	405	13	2009
Wang Z	8	10	0,667	419	10	2013
Moneva Jm	7	7	0,389	498	7	2007
Wang Y	7	12	0,778	400	12	2016
Agyabeng-Mensah Y	6	6	1,2	351	6	2020
Baah C	6	6	1,2	307	6	2020
Kumar V	6	8	0,545	466	8	2014
Mangla Sk	6	6	0,6	1044	6	2015
Mirza N	6	6	1,5	326	6	2021

which may explain their lower publication and citation figures, as indicated in the bibliometric findings. The underrepresentation of such contexts is problematic, as it leads to the dominance of high-income country perspectives and inhibits the development of context-sensitive sustainability frameworks. Accordingly, efforts to strengthen regional research capacities and encourage cross-border collaborations are essential for a more representative and globally relevant SFP landscape (Abbas et al., 2023; Raimi et al., 2021).

The findings also reaffirm the significance of integrated reporting and stakeholder engagement as strategic levers for advancing sustainable financial practices. The dominance of keywords such as "sustainable development" and "finance" in the bibliometric keyword co-occurrence analysis reveals a strong alignment between theoretical aspirations and empirical focus. Literature by Hassan et al., (2019) and Vigneau and Adams, (2023) supports this interpretation by underscoring how IR frameworks offer a comprehensive view of firm performance and contribute to greater transparency and accountability. This perspective is increasingly relevant given the growing demand from investors and regulators for holistic disclosures that combine financial and non-financial information.

Nevertheless, several gaps demand critical attention. First, while the volume of research has grown, contributions from developing countries, including Indonesia, remain modest. Second, thematic overrepresentation of certain topics (e.g., ESG disclosure) leaves others, such as biodiversity finance or social equity in green investing, underexplored. In line with calls from prior literature Dervi et al., (2022) and Orazalin et al., (2024), addressing these gaps will require both geographical and thematic diversification. Strengthening local research capacity and broadening interdisciplinary collaboration can foster a more inclusive and representative knowledge base. The bibliometric findings offer a rich, evidence-based mapping of the sustainable financial performance research landscape. They provide critical insights into how knowledge is produced, who leads the discourse, and which topics are gaining momentum, ultimately shaping the future trajectory of sustainable finance performance.

This study presents a comprehensive bibliometric analysis of sustainable financial performance (SFP) research from 1990 to 2024, revealing significant growth in scholarly interest, concentrated geographic contributions, and thematic evolution toward ESG integration, green finance, and climate-related disclosures. The findings emphasize the dominance of developed economies, key journals, and influential authors in shaping the discourse, while highlighting the underrepresentation of developing regions and emerging sustainability themes. This research contributes methodologically by mapping the intellectual landscape of SFP and empirically by identifying collaboration patterns and evolving research priorities. Its implications extend to academia, policy, and industry, offering evidence-based insights to inform regulatory frameworks, investment strategies, and institutional practices. By exposing structural gaps and proposing a diversified research agenda, the study advances the scholarly field and lays the groundwork for future investigations into inclusive, interdisciplinary, and context-driven approaches to sustainable finance.

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