

The Performance Conundrum in Sustainable Finance: A Bibliometric Analysis of Environmental, Social and Governance (ESG) Investing Returns

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Abstract

A 'conundrum in sustainable finance' represents a paradox or intricate challenge, such as the need to balance short-term profits with long-term ESG objectives, address concerns about greenwashing alongside authentic impact, or navigate the equilibrium between high transition costs and regulatory demands. This study seeks to analyze and integrate existing research to delineate its intellectual progression, thematic development, and prospective directions. A bibliometric review registered with PRISMA was conducted in conjunction with science mapping and performance analysis. The study utilized the Scopus database for data extraction covering the period from 2010 to 2025 to examine 1,520 publications on three key expressions: 'Sustainable finance,' and 'ESG investing,' or 'conundrum'. The researchers performed scientific mapping on citation analysis, bibliographic network of journal sources, countries, and co-occurrence of keywords using VOSviewer software. The findings indicated that year 2025 had witnessed the highest 567 documents and 11042 citations. The most prolific authors leading the analysis were Mhlana, D. and Strauß, N. with 9 publications each. The results revealed a domain marked by exponential growth, heightened sophistication, and ongoing fragmentation. The performance conundrum in sustainable finance represents not only an empirical challenge but also highlights underlying conceptual, methodological, and paradigmatic complexities. This study contributes to the field of sustainable finance by analysing the current landscape and suggesting future pathways, eventually leading to a more robust, transparent, and impactful domain that can effectively inform investors, guide policymakers, and address urgent sustainability challenges.

Keywords: sustainable finance, Environmental Social and Governance, ESG investing, performance conundrum, bibliometric analysis, Scopus

1. Introduction

Sustainable Finance can generally be understood as 'any form of financial service integrating environmental, social and governance (ESG) criteria into the business or investment decisions for the lasting benefit of both clients and society at large' (Swiss Sustainable Finance, 2019). Sustainable Finance is widely portrayed as a leverage and solution to achieve the SDGs by 2030 (United Nations, 2020) (Strauß, 2022).

The research by (Varghese et al., 2025) examined the principle of a circular economy grounded in industrial ecology. Industry 5.0 possesses the capacity to enhance Sustainable Development Goals (SDG-9) by promoting innovation, facilitating inclusive and sustainable industrial practices, and developing resilient frameworks, transcending just profit-driven productivity.

1.1 The Advancement of Sustainable Finance and the necessity for ESG

One of the most significant developments in modern finance is the use of Environmental, Social, and Governance (ESG) aspects in making investment decisions. Sustainable investing started out as a small practice with less than \$1 trillion in assets in 2000. Now, it's a \$35 trillion global market, and experts anticipate it will grow to \$50 trillion by 2025, which is about one-third of all global assets under management (Global Sustainable Investment Alliance, 2022); (Tanaka & Tanaka, 2022). This rapid growth has been fueled by a number of factors coming together like

stricter regulations, more demand from investors, especially younger generations, more awareness of systemic risks like climate change, and more proof that ESG factors can have a big effect on a company's bottom line. The findings of (Billio et al., 2021) indicate a clear necessity for an accurate description of ESG investment evaluation standards.

However, there is a basic and ongoing contradiction at the foundation of this phenomenal growth: even though an enormous amount of money has been invested into ESG-labeled products, there is still no agreement among academics and practitioners about how well they perform financially. According to (Adams C. & Abhayawansa S. (2022), the demands for standardized 'sustainable reporting' criteria are based on misconceptions. The notion that an urgent need exists for a global sustainability standard-setting agency is a fallacy. Financial materiality should not be the primary consideration in determining sustainability disclosures. Investor requirements cannot be fulfilled solely by consistent and comparable indicators. Demands for harmonization neglect the requirements of non-investor stakeholders. This 'performance conundrum' constitutes the primary enigma this research examines not by contributing an additional empirical study to the multitude already scrutinizing ESG returns, but by methodically assessing the academic literature that generates these conflicting results.

1.2 The Performance Conundrum: Conflicting Evidence and Competing narratives

A "conundrum in sustainable finance" refers to a contradiction or intricate difficulty, such as matching short-term profitability with long-term ESG objectives, addressing concerns of greenwashing alongside authentic effects, or balancing substantial transformation costs against regulatory demands. It signifies the competing agendas and intrinsic inconsistencies within the sustainable investing arena.

The financial performance of ESG investing presents a landscape of conflicting evidence. A lot of research and meta-analyses show that organizations with strong ESG profiles do better than their competitors. (Friede et al., 2015a) in their groundbreaking meta-analysis of more than 2,000 empirical research determined that almost 90% identified a non-negative correlation between ESG and financial achievement, with the majority indicating favourable results. (Khan et al., 2016) similarly shown that investments in firms exhibiting robust performance on major ESG concerns yielded substantial alpha, whereas success on immaterial issues did not have a comparable effect. On the other hand, a growing volume of research calls these conclusions into challenge. A recent extensive analysis conducted by (Berk & van Binsbergen, 2021);(Van Binsbergen & Brøgger, 2025) revealed no indication that ESG funds outperform conventional funds when fees are taken into consideration. Pedersen, Fitzgibbons, and Pomorski in 2021 contend that ESG preferences may influence asset prices, although may not inherently result in outperformance. The discussion encompasses theoretical underpinnings, with several academics challenging the capacity of ESG investment to yield alpha in efficient markets (Zerbib, 2019) or positing that any perceived outperformance is actually indicative of omitted risk concerns (Görgen et al., 2020);(Riordan, n.d.). This conflicting evidence gives rise to what we refer to as "the performance conundrum"; How can a domain characterized by substantial resource deployment and intensive research endeavours remain so fundamentally polarized over its essential financial proposition?

1.3 Aim of study: Research Questions

This research conducted a comprehensive bibliometric analysis of the academic literature on the returns of ESG investing and Sustainable Finance and framed the following Research Questions (RQs):

- **RQ 1:** Who are the most prolific authors?
- **RQ 2:** Which articles garnered the highest number of citations throughout the predominant years?
- **RQ 3:** What are the annual documents from leading journal sources?
- **RQ 4:** What are the most prominent affiliations for publishing pertinent papers?
- **RQ 5:** Which nations have produced the greatest number of publications?
- **RQ 6:** Which is the leading Scopus subject categories?
- **RQ 7:** What are the highest citations by author and the document types associated with them?
- **RQ 8:** Which of the leading sources exhibits the highest degree of bibliographic integration?

- **RQ 9:** Which countries possess the most extensive bibliographic linking networks?
- **RQ 10:** What are the most frequently occurring keywords in article publication?

2. Literature Review

2.1 ESG Performance & Concerns

ESG concerns can be big sources of operational, regulatory, reputational, and financial risk. Companies with good ESG profiles may have fewer problems, pay less in regulatory fees, and be better able to handle crises (Godfrey et al., 2009);(Albuquerque et al., 2019).

ESG performance may indicate the overall quality of management, transparency, and a long-term focus, which might help level the playing field and minimize the cost of capital (Cheng et al., 2014);(Grewal et al., 2025).

(Friede et al., 2015a) analysed more than 2,000 empirical research from 1970 to 2014, discovering that about 90% indicated non-negative outcomes, with a significant majority indicating favourable effects.

Clark, Feiner, and Viehs in 2015 after looking at more than 200 research, they found that excellent ESG standards cut the cost of capital and make operations run more smoothly.

(Khan et al., 2016) discovered that companies that did well on important ESG concerns did far better than those that did well on less important issues.

(Gunnar Friede, 2019); (Friede et al., 2015b) examined an updated meta-analysis of more than 2,200 papers demonstrated that the beneficial association between ESG and CFP is strong across different geographies and time periods.

Early research emphasized socially responsible investment (SRI) as an ethical option, with discussions focused on whether investors need to endure potential financial sacrifices, studies on performance at this time had conflicting results (Sparkes, 2001).

2.2 ESG Integration (2000-2025)

The Rise of the Business Case (2000–2010)

The UN Principles for Responsible Investment (2006) were the first step toward making responsible investment more common. Research progressively highlighted the "business case" for ESG, focusing on specific processes such as risk mitigation and innovation (Eccles et al., 2011);(Flammer, 2013).

Integration and Sophistication in the Mainstream (2011–2018)

ESG integration became institutionalized, with research concentrating on materiality (Khan et al., 2016), factor investing (Pedersen et al., 2021), and impact quantification. The discussion changed from if ESG is important to how and when it is important.

Critical Examination and Differentiation (2019-Present)

Recent literature demonstrates increasing sophistication and critical analysis, encompassing investigations on greenwashing (Lyon & Montgomery, 2015).

According to (Pimonenko et al., 2020), stakeholders are inclined to invest in sustainable enterprises and initiatives, customers favour eco-friendly products over conventional alternatives, and both investors and consumers refrain from associating with unethical green businesses.

ESG rating divergence, studies indicate that the criteria used to identify sustainable investments in the financial sector are interpreted and comprehended in various ways, leading to differing outcomes (Berg et al., 2020), and nuanced performance evaluations across many ESG aspects (Serafeim & Yoon, 2021).

2.3 Green initiatives

As per (Mbokane & Modley, 2024) an essential strategy to tackle unsustainable consumption is green consumerism. Eco-conscious shoppers acquire and employ environmentally friendly items. Environmentally concerned consumers support products that present minimal danger to human health or environmental damage. The research advocated for heightened ecological awareness among pupils.

The results of the research by (Joseph-Varghese et al., 2025) indicated that green innovation, driven by a commitment to sustainability, resulted in the creation of new products and services for environmentally concerned consumers. Future environmentally conscious decisions may be facilitated by real-time monitoring of environmental impacts, resource optimization, and the establishment of sustainable supply chains for enterprises.

2.4 ESG Investments

According to (Kräussl et al., 2024), examining equilibrium models that account for diverse preferences regarding ESG investments, it is anticipated that green assets will yield lower returns over the long term when compared to their non-ESG equivalents. In the short term, ESG investments have the potential to surpass non-ESG investments via multiple avenues. The empirical findings regarding the relative performance of ESG investments are varied. Their evaluation revealed substantial empirical support in existing studies indicating that investors exhibit a preference for ESG, and their actions can lead to positive social outcomes through active engagement. The transition to more sustainable policies within companies is driven by the heightened market values and reduced capital costs associated with environmentally friendly firms, influenced by investor preferences. Investors increasingly prioritize sustainability and willing to forgo returns for the sake of societal impact. However, they encounter the challenge of greenwashing, which hinders the efficient reallocation of capital from less sustainable assets to genuinely green investments.

2.5 Sustainable Finance

The investigation by (Gómez Sánchez & Tobon, 2025) explored the perspectives and actions of young investors regarding sustainable finance, emphasizing the disparity between awareness and practical investment decisions. The results indicated a notable gap: although there was a high level of environmental awareness and understanding of sustainable finance, these elements did not automatically lead to preferences for sustainable investments. Significant obstacles consist of a reluctance to take risks, the perception of elevated costs, and a scarcity of appealing ESG investment opportunities.

The study involved a comprehensive examination of sustainable finance literature, utilizing big data analytics and machine learning techniques to analyse scholarly research. This study examined the most impactful articles, leading journals, key authors, institutions, and countries, along with the methodological approaches and research settings pertinent to sustainable finance research (Kumar, et al., 2025). This study uncovered insights into seven key themes within the realm of sustainable finance research: socially responsible investing, climate financing, green financing, impact investing, carbon financing, energy financing, and the governance of sustainable financing and investing. The study put forward a range of recommendations for advancing future research in sustainable finance. These suggestions encompassed the development and dissemination of innovative financing instruments, enhancing the profitability and returns associated with sustainable finance, increasing the sustainability of finance itself, creating cohesive policies and frameworks, addressing the issue of greenwashing in corporate sustainability reporting, applying behavioural finance principles to sustainable finance, and harnessing cutting-edge technologies like artificial intelligence, blockchain, the internet of things, and machine learning to support sustainable finance initiatives (Kumar, et al., 2025).

3. Methodology

The review was conducted following the PRISMA methodology, which provides a comprehensive framework for executing systematic reviews and meta-analyses transparently, reproducibly, and exhaustively (R. Raman et al., 2023). The study utilizes bibliometric analysis to solve the research issues, employing data sourced from the Scopus database covering the years 2010 to 2025.

3.1 Bibliometric Analysis

A study by Donthu, indicated that bibliometric analysis is a systematic and rigorous approach for examining and evaluating enormous scientific data, enabling researchers to clarify the complexities of a particular field's evolution and emphasize its rising frontiers (Donthu et al., 2021). This is a quantitative assessment of various facets of the literature on a subject, intended to discern trends in authorship, publication, and secondary journal coverage, thereby illuminating the dynamics of knowledge proliferation in the respective fields of study, as articulated by (Kannan P, 2019). Bibliometric analysis is different from standard narrative reviews SLR or meta-analyses that combine findings.

An overview of performance metrics and science mapping indicators is presented as below:

3.1.1 Performance metrics:

The contributions of significant nations, emphasizing the global distribution of research activities and identifying the leading countries were analysed in this domain. This comprehensive method offers an in-depth understanding of research trends, significant contributions, and the intellectual processes within the academic community.

3.1.2 Science mapping:

These indicators employ several analytical tools to analyse the trends and structure of a research domain. We can ascertain the impact of significant publications by identifying prominent researchers and their most frequently referenced works through document-based citation analysis of leading writers. We emphasize the most cited journals to illustrate those that have substantially influenced the scientific discourse in the topic. Co-citation analysis elucidates connections among researchers' concepts by detecting patterns in the co-occurrence of references to the most frequently cited authors' works. The bibliographic coupling of universities and sources indicates collaboration among institutions through shared references, highlighting the robustness of their research networks. Likewise, by delineating shared references among nations, bibliographic coupling of countries illustrates global research collaborations. Finally, keyword co-occurrence analysis elucidates the principal research issues and their interrelations, highlighting evolving trends and emerging key terms. These indicators collectively provide a thorough understanding of the research environment through network visualizations using the VOSviewer application (version 1.6.20).

3.2 Data Source and Search Strategy:

The researchers utilized the Scopus database for data extraction. Scopus served as the primary data source which is recognized worldwide as the most extensive repository of management and social sciences literature (Zhu & Liu, 2020). The search was performed in accordance with PRISMA guidelines (Moher et al., 2009b), ensuring transparency and replicability of the procedure.

3.2.1 Search String:

The pertinent literature was assembled using certain search parameters : All field (“Sustainable Finance”) AND All field (“ESG Investment”) OR All field (“conundrum”). These phrases were intentionally selected to encompass a wide range of articles concerning the topic and its evolution thereby facilitating the development of a thorough dataset.

3.2.2 Inclusion / Exclusion criteria:

The search strategy also employed specific filters:

3.2.3 Selection process

The study obtained bibliographic data from 2010 to 2025, encompassing authors, publication years, and citations, by exporting search results in CSV format from the Scopus database. The delineation of knowledge structures, coupled with the identification of co-authorship networks and nascent research hotspots, enabled a systematic approach sufficiently robust to underpin a comprehensive analysis.

The selection process was divided into three phases:

Phase I: Identification of pertinent documents

Research papers related to were obtained from the Scopus bibliometric database. The search strategy utilized the phrases “Sustainable Finance” and “ESG Investment” or “conundrum” across all fields. The initial query produced a total of $n = 2152$ documents in English language. Records marked as ineligible by automation tools ($n = 321$) Records removed for other reasons ($n = 67$). Acknowledging that not all retrieved records aligned with the specific parameters of the study, further screening of ($n = 1764$) was performed utilizing established criteria to guarantee the inclusion of just the most pertinent publications.

Phase II: Document Screening

A multi-tiered filtering process was implemented to enhance the dataset and guarantee conformity with the study's aims. The initial phase involved limiting the scope to papers categorized under sustainable finance and the ESG investing performance dilemma, as depicted in Figure 1. Subsequently, only peer-reviewed journal papers published in English and accessible in their final forms were maintained. To enhance quality assurance, an additional manual review was conducted for records eliminated that were not directly associated with the keywords ($n = 201$). Reports ($n = 22$) were not retrieved to verify the relevance of these efforts. Reports were excluded due to the removal of duplicate records ($n = 21$). This method eliminated 244 documents.

Phase III: Conclusive selection

Considering this thorough screening, 1,520 documents were selected studies included in review as very relevant to the literature on the sustainable finance ESG investing performance dilemma as displayed in Figure 1. The chosen publications were the foundation for the ensuing bibliometric analysis.

3.3 Prisma Framework

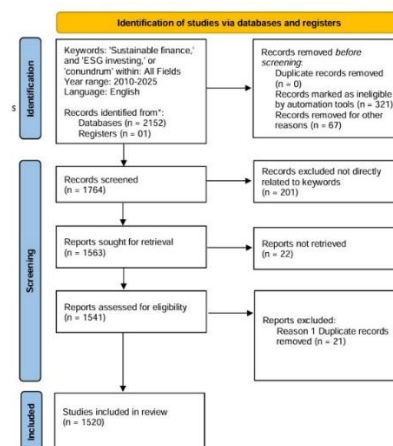


Figure 1. PRISMA Flow Diagram illustrating the Search Methodology for Bibliometric Analysis

4. Results and Discussion

A. Performance metrics

4.1 Most Prolific Authors



Figure 2. Most Prolific Authors

In Figure 2. top authors out of 100 are displayed. Mhlanga, D. is the most prominent author who has received 9 citations for the book “FinTech, Financial Inclusion, and Sustainable Development: Disruption, Innovation and Growth” in 2024. Strauß, N. has 24 citations for “Covering sustainable finance: Role perceptions, journalistic practices and moral dilemmas” in 2022, both have 9 publications each. Followed by Danilov, Y.A. who has published 7 documents with 19 citations for an article “The concept of sustainable finance and the prospects for its implementation in Russia” in 2021 followed by other authors.

4.2 Citation Overview

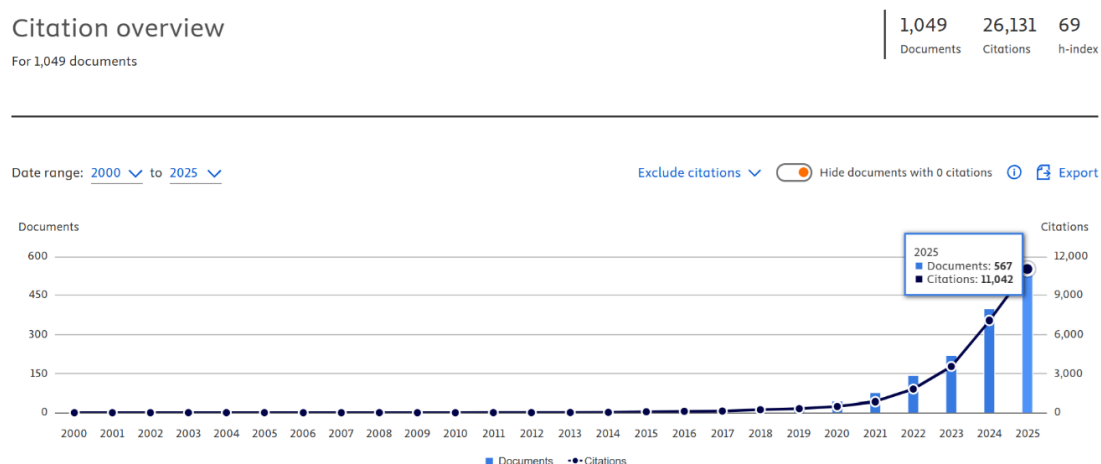


Figure 3. Citation Overview

In Figure 3. an upward surge in citations is illustrated. Year 2025 witnessed the highest with 567 documents and 11042 citations, followed by 2024 with 399 documents and 7077 citations, 2023 with 220 documents and 3534 citations, 2022 with 141 documents and 1781 citations, 2021 with 75 documents and 821 citations and so on.

4.3 Top Journal Sources

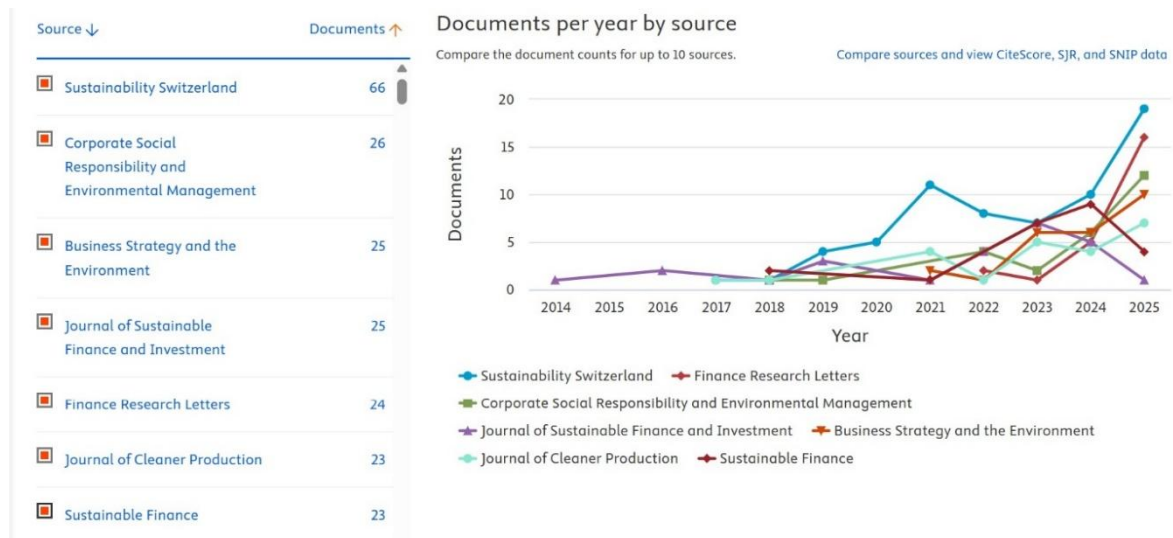


Figure 4. Documents Per Year by Source

Leading journal sources are displayed in Figure 4. ‘Sustainaibilty Swtizerland’ led with 66 documents, 19 Published in 2025 with CiteScore 7.7, SJR 0.688 and SNIP 1.113. ‘Corporate Social Responsibility and Environmental Management’ published total 26, 12 documents in 2025 with CiteScore 14.7, SJR 2.294 and SNIP 2.541. ‘Business Strategy and the Environment’ published total 25, 10 documents in 2025 with CiteScore 23.7, SJR 3.609 and SNIP 3.191 followed by others.

4.4 Prominent University Affiliations

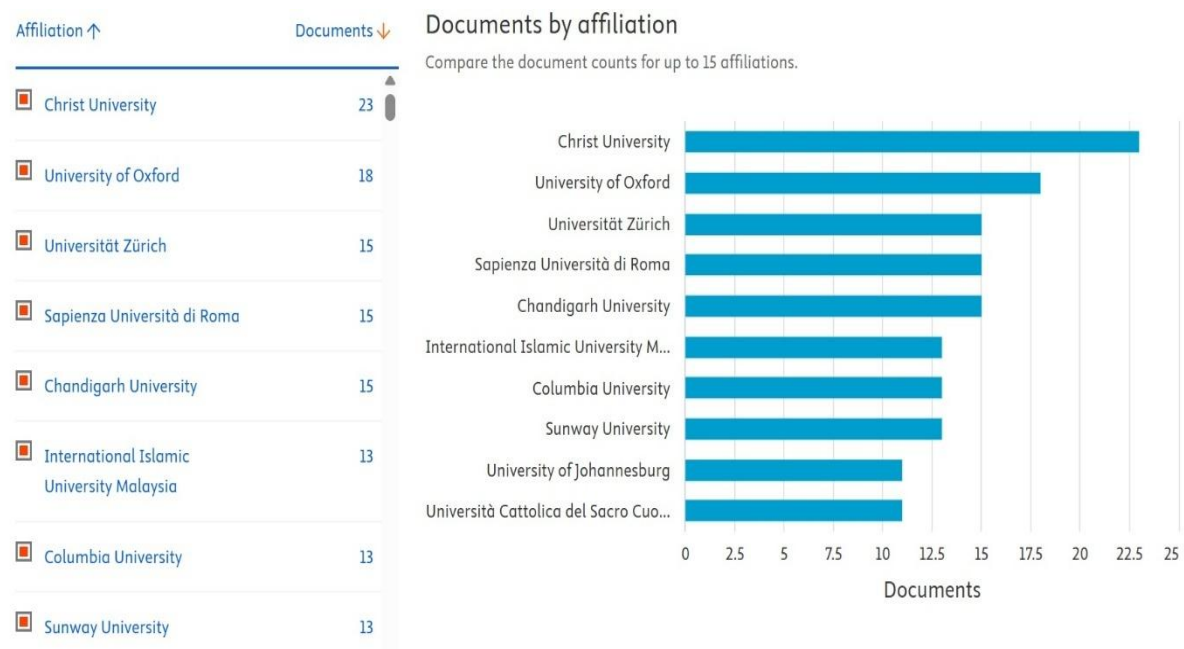


Figure 5. Top Affiliations

Christ University leads with 23 documents publication, followed by University of Oxford, 18 documents, Universität Zürich, 15 and so on.

4.5 Top Nations with Highest Publications

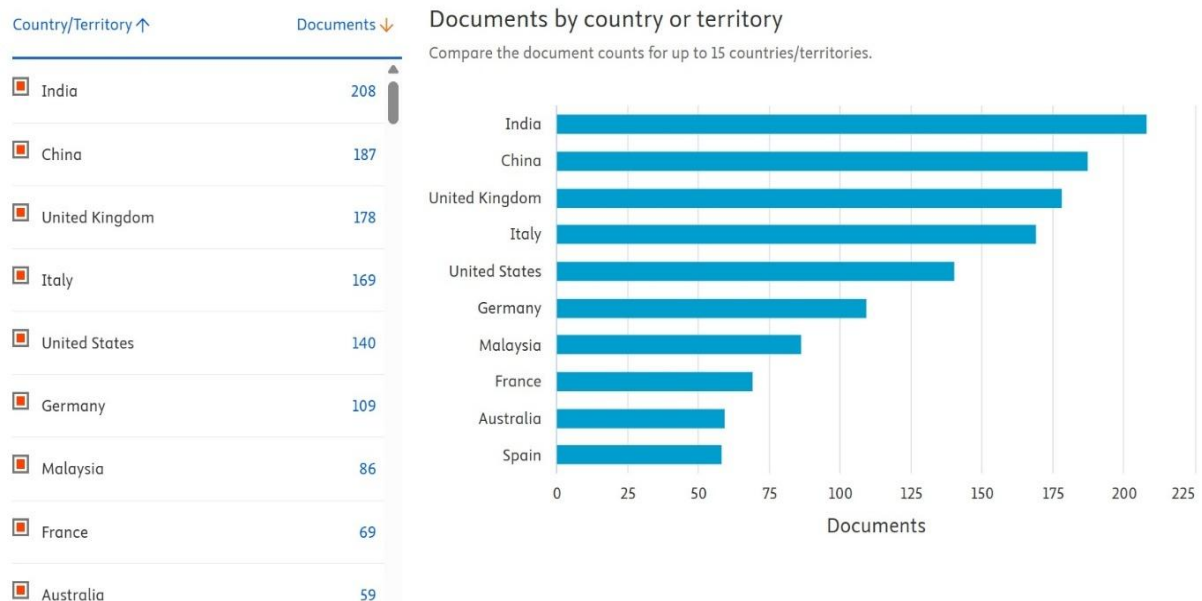


Figure 6. Top Nations with Highest Number of Publications

As represented in Figure 6. India leads the globe with 208 publications followed by China with 187 documents, UK with 178 articles followed by other nations.

4.6 Top Subject Categories

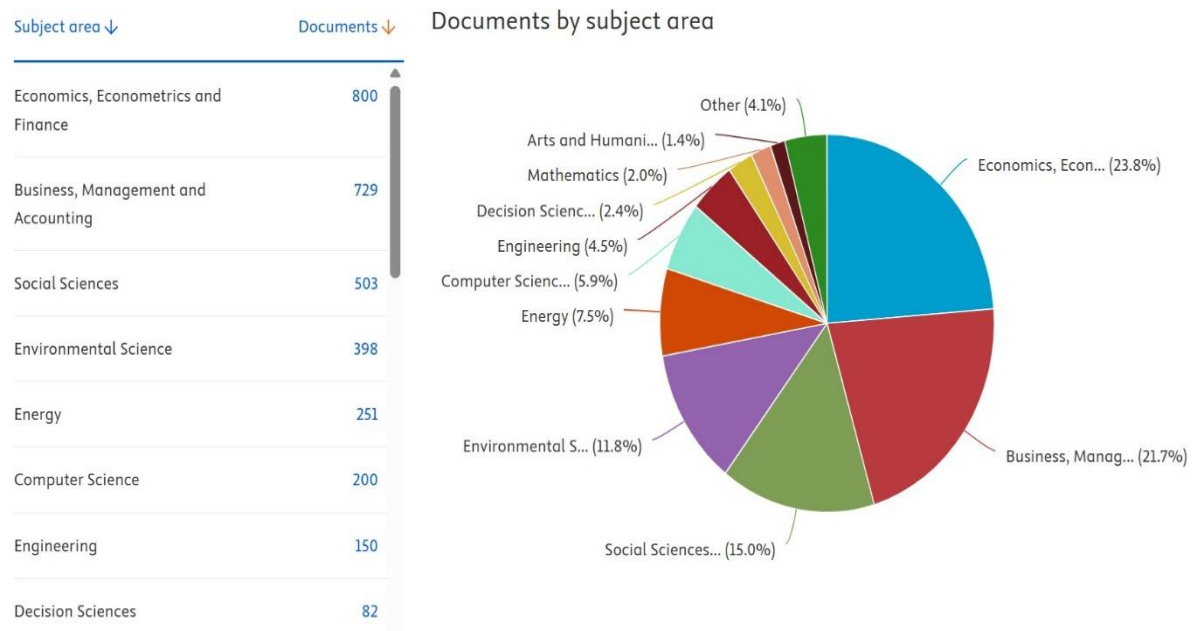


Figure 7. Top Subject Categories

Leading subject area 'Economics, Econometrics and Finance' lead with 800 documents, 'Business, Management and Accounting' with 729, 'Social Sciences' 503 and so on.

4.7 Highest Author-Wise Citations

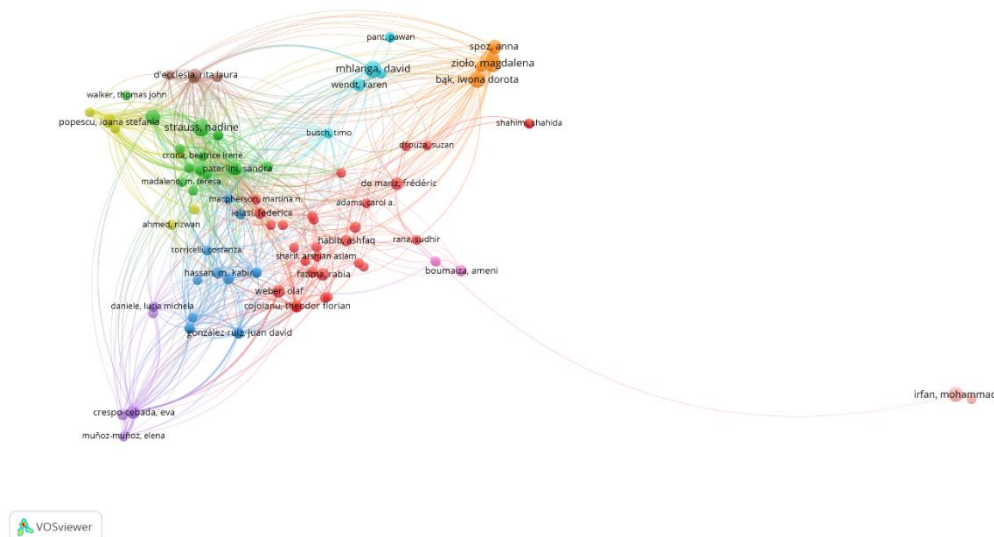


Figure 8. Highest Author-Wise Citations

Out of 3684 authors, 100 met the threshold. Figure 8. the network visualisation with cluster of top authors, documents published with citations and total link strength (TLS). The most prolific authors each with 9 documents published are Mhlanga, David 14 citations and 80 TLS, Strauss, Nadine has 77 citations and 104 TLS, Ziolo, Magdalena has 257 citations and 269 TLS followed by other writers.

There were Articles 945, Book Chapter 311, Review 91, Conference Paper 84, Book 68 etc. which were mostly published in English language.

4.8 Leading Sources with Highest Bibliographic Integration

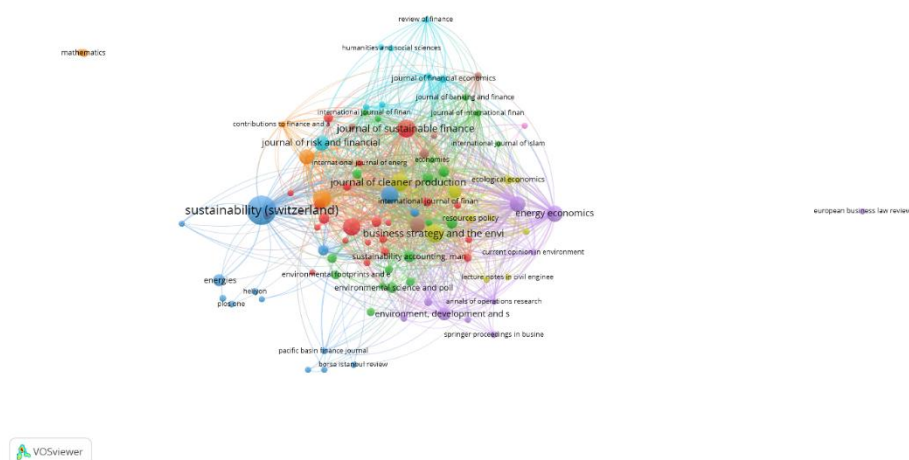


Figure 9. Sources with Highest Bibliographic Integration

Out of 501 sources, 94 met the criteria. Figure 9. illustrates network visualisation of leading sources like ‘sustainability (swtizerland)’ has links 77, total link strength (TLS) 429, led with 66 documents. The ‘journal of sustainable finance’ has links 70, 511 TLS with 25 documents. The ‘journal of cleaner production’ has links 80, 527 TLS with 23 documents followed by other sources.

The top funding sponsors include ‘National Natural Science Foundation of China’ with 35 documents, ‘European Commission’ 29, ‘Horizon 2020 Framework Programme’ 22 documents followed by others.

4.9 Top Countries with Extensive Bibliographic Linking Networks

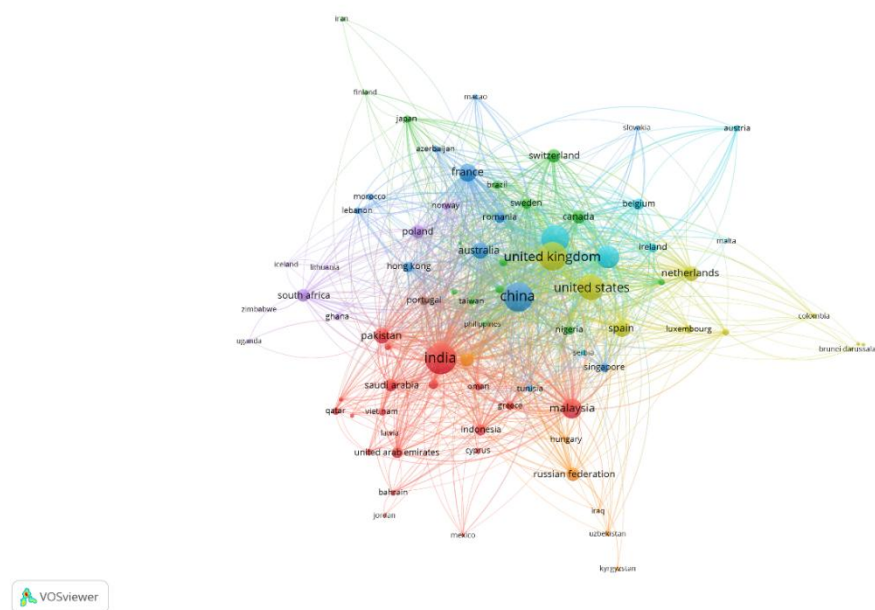


Figure 10. Top Countries with Bibliographic Networks, out of 108 countries, 79 met the criteria

Table 1. Top Countries with Bibliographic Networks, Citations, Documents & TLS

#	country	documents	citations	total link strength	#	country	documents	citations	total link strength
1	India	208	1942	8415	11	Pakistan	50	1098	2310
2	China	186	3319	11004	12	Netherlands	48	995	2365
3	United Kingdom	179	6764	9267	13	Russian Federation	40	395	1193
4	Italy	166	3330	10702	14	Poland	39	584	1317
5	United States	141	5975	7167	15	Canada	37	350	2407
6	Germany	108	2836	8689	16	Switzerland	37	499	1806
7	Malaysia	86	757	3880	17	Turkey	37	690	2433
8	France	68	1233	4857	18	Saudi Arabia	35	316	1824
9	Australia	59	1545	3429	19	South Africa	33	286	1033
10	Spain	58	752	3707	20	Romania	28	238	1092

Table 1. Top Countries with Bibliographic Networks

Top Countries with number of documents published, citations and total link strength (TLS) are displayed in Table 1. Out of 79 countries, India leads globally with 208 documents published, has received 1942 citations and 8415 TLS. China with 186 documents, 3319 citations and 11004 TLS, UK with 179 documents, 6764 citations and 9267 TLS followed by other countries.

4.10 Most Frequently Occurring Keywords

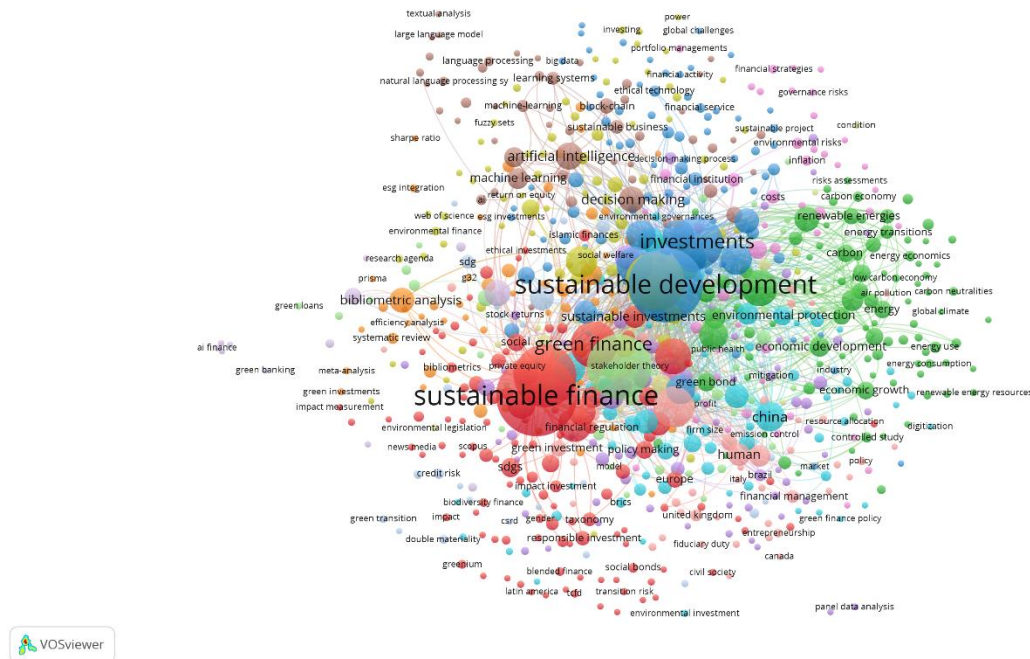


Figure 11. Most Occurring Keywords, out of 5752 keywords, 811 met the criteria

Table 2. Most Occurring Keywords with occurrences & TLS

#	keyword	occurrences	total link strength	#	keyword	occurrences	total link strength
1	Sustainable Finance	446	2222	11	Sustainable Development Goals	89	792
2	Sustainable Development	379	3721	12	Green Bonds	77	491
3	Sustainability	288	2412	13	Economics	69	863
4	ESG	269	1729	14	Decentralized Finance	68	758
5	Finance	239	2229	15	Financial Performance	67	542

6	Investments	190	2309	16	Corporate Social Responsibility	64	537
7	Green Finance	147	1128	17	Financial Markets	61	685
8	Investment	116	1329	18	China	60	801
9	Climate Change	91	825	19	Financial System	58	636
10	Green Economy	89	1101	20	Environmental Economics	57	753

Table 2. Most Occurring Keywords

Table 2. describes frequent keywords, their occurrences and total link strength (TLS). The top keyword is ‘sustainable finance’ with 446 occurrences and 2222 TLS. Next is ‘sustainable development’ with 379 occurrences and 3721 TLS, ‘sustainability’ has 288 occurrences and 2412 TLS, ‘ESG’ has 269 occurrences and 1729 TLS followed by other key-terms.

Limitations:

The analysis was limited to articles that were indexed in the Scopus database, and it is possible that publications from unidentified databases, such as PubMed and Web of Science, were undetected.

5. Conclusion

The bibliometric analysis of 1,520 publications on sustainable finance and ESG investing indicates a subject marked by exponential development, heightened sophistication, and ongoing fragmentation.

The findings indicated that year 2025 had witnessed the highest 567 documents and 11042 citations. The most prolific authors leading the analysis were Mhlana, D. and Strauß, N. with 9 publications each. Leading journal sources were ‘Sustainability Switzerland’ with 66 documents followed by ‘Corporate Social Responsibility and Environmental Management’ with 26 articles. Among top affiliations, ‘Christ University’ led with 23 publications, followed by ‘University of Oxford’, 18 documents and so on. Among top nations, India led the globe with 208 publications, China had 187 documents followed by other nations. Major subject disciplines were ‘Economics, Econometrics and Finance’, 800 documents, ‘Business, Management and Accounting’, 729 and so on. Most of the documents were ‘Articles’, 945 and ‘Book Chapters’, 311 mostly published in English language. In science mapping, the network visualisation displayed author-wise citations and total link strength. The top funding sponsors include ‘National Natural Science Foundation of China’ with 35 documents, ‘European Commission’ had 29. Leading countries with highest bibliographic integration, citations and total link strength were India, China and UK followed by others. Frequently occurring keywords among 811 were ‘Sustainable Finance’, ‘Sustainable Development’, ‘Sustainability’, ‘ESG’ followed by other key-terms.

Our findings reveal the multifaceted character of the performance conundrum. The performance conundrum in sustainable finance is not simply an empirical issue but a manifestation of profound intellectual, methodological, and paradigmatic intricacies. Our bibliometric research indicates a discipline in dynamic change, expanding dramatically in both volume and sophistication, while confronting essential concerns regarding evidence, theory, and practice.

Instead of pursuing a conclusive determination on the performance of ESG investing, we advocate for an acceptance of the field's intricacies. Diverse research traditions pose distinct inquiries, utilize varied methodologies, and yield disparate although possibly complimentary insights. Progress is achieved not by proclaiming one viewpoint as superior, but by promoting debate among different paradigms, enhancing methodological precision, and cultivating more sophisticated insights into the circumstances under which ESG variables may affect financial returns.

The fast expansion of sustainable finance necessitates urgent, comprehensive research from all perspectives. This study enhances the field of sustainable finance research by delineating the existing landscape and outlining future directions, thereby fostering a more resilient, transparent, and influential domain that can effectively inform investors, guide policymakers, and address pressing sustainability challenges.

6. Practical Implications:

- For Investors and Asset Managers a subtle comprehension to understand that ESG success is not a dichotomous issue but is contingent upon various aspects, including the implementation strategy, time frame, and market conditions.
- For Scholars & Academics a methodological clarity which thoroughly record ESG indicators, standards, and statistical methodologies to facilitate comparison and replication.

7. Directions For Future Implications:

- To provide defined performance benchmarks for ESG strategies and combine frameworks that connect financial economics with stakeholder perspectives.

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