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Research Article

Analytical Mapping of Critical Factors Influencing Corporate Sustainability: A Network Perspective

Fatih Bıyıklı[a]

Abstract

Introduction: This study identifies and maps the critical factors influencing corporate sustainability by examining its intellectual, thematic, and social evolution within academic literature. It particularly emphasises the role of environmental, social, economic, and governance (ESG) dimensions in shaping corporate sustainability discourse.

Method: A bibliometric and network-based analysis was conducted on 1,139 academic articles published between 2003 and 2025, sourced from the Web of Science Core Collection. The analysis utilised the R-based Biblioshiny interface from the bibliometric package to perform co-occurrence mapping, thematic clustering, trend analysis, and collaboration network visualisation.

Results or Findings: The results show a consistent rise in scholarly output on corporate sustainability, with an annual publication growth rate of 17.13%. Thematic mapping identified key clusters centred on "performance," "management," and "governance." Recent trends show a growing focus on themes such as transparency, ESG reporting, and stakeholder equity. A geographical analysis revealed dominance by North American and European institutions while increasing contributions from developing countries reflect a broader global engagement.

Discussion or Conclusion: Corporate sustainability has transformed from a normative concern into a multidimensional strategic priority within organisational and academic spheres. This study offers a comprehensive analytical foundation for future research and supports efforts by scholars, practitioners, and policymakers to integrate ESG principles into sustainable corporate governance.

Keywords: ESG integration, sustainable corporate governance, data-driven sustainability research, stakeholder engagement, corporate sustainability

JEL Codes: C82, Q56, G34, O16

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Araştırma Makalesi

Kurumsal Sürdürülebilirliği Etkileyen Kritik Faktörlerin Analitik Haritalandırılması: Ağ Temelli Bir Perspektif

Fatih Bıyıklı[a]

Öz

Giriş: Bu çalışmanın amacı, kurumsal sürdürülebilirliği etkileyen kritik faktörleri belirlemek ve bu alandaki akademik literatürün entelektüel, tematik ve sosyal evrimini haritalandırmaktır. Özellikle çevresel, sosyal, ekonomik ve yönetişim (ESG) boyutlarının kurumsal sürdürülebilirlik söylemini nasıl şekillendirdiği üzerinde durulmaktadır.

Yöntem: 2003–2025 yılları arasında yayımlanan ve Web of Science Core Collection veri tabanından elde edilen 1.139 akademik makale üzerinde bibliyometrik ve ağ tabanlı bir analiz gerçekleştirilmiştir. Analiz sürecinde, bibliometrix paketine entegre R tabanlı Biblioshiny arayüzü kullanılarak eş-ortaya çıkış haritaları, tematik kümelenmeler, eğilim analizleri ve iş birliği ağları görselleştirilmiştir.

Sonuçlar ya da Bulgular: Kurumsal sürdürülebilirlik konusundaki akademik yayınlarda istikrarlı bir artış gözlemlenmiş olup, yıllık yayın artış oranı %17,13'tür. Tematik haritalama sonucunda "performans", "yönetim" ve "yönetişim" kavramlarının öne çıktığı tespit edilmiştir. Son yıllarda şeffaflık, ESG raporlaması ve paydaş eşitliği gibi temaların ön plana çıktığı belirlenmiştir. Coğrafi analizlerde Kuzey Amerika ve Avrupa kurumlarının baskınlığı görülmekle birlikte, gelişmekte olan ülkelerin katkısında da artış olduğu dikkate değerdir.

Tartışma ya da Yapılan Çıkarımlar: Kurumsal sürdürülebilirlik, etik bir kaygıdan çok boyutlu stratejik bir önceliğe dönüşmüştür. Bu çalışma, gelecekteki araştırmalara analitik bir temel sunmakta ve ESG ilkelerinin sürdürülebilir kurumsal yönetişime entegrasyonu konusunda akademisyenler, uygulayıcılar ve politika yapıcılara değerli içgörüler sağlamaktadır.

Anahtar Kelimeler: ESG entegrasyonu, sürdürülebilir kurumsal yönetişim, veri odaklı sürdürülebilirlik araştırması, paydaş katılımı, kurumsal sürdürülebilirlik

JEL Kodlar: C82, Q56, G34, O16

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Introduction

In today's business world, sustainability has moved beyond being solely an environmental concern to become a central component of long-term value-creation strategies for companies. This transformation necessitates the integration of environmental, social, economic, and governance (ESG) dimensions into corporate decision-making processes (Elkington, 1997; Montiel & Delgado-Ceballos, 2014). The concept of corporate sustainability, grounded in the World Commission on Environment and Development's (WCED) (1987) principle of intergenerational equity, advocates that businesses operate in a manner that ensures financial profitability and the protection of the planet and the well-being of society. In this context, companies are expected to perform based on the "triple bottom line" of people, planet, and profit.

Corporate sustainability's environmental, social, and economic pillars are complementary and mutually reinforcing. Environmental sustainability includes efficient use of natural resources, reduced carbon emissions, and adopting eco-friendly production systems (Hart, 1995; Kolk & Pinkse, 2005). Social sustainability involves fair labour practices, respect for human rights, community engagement, and transparent relationships with stakeholders (Freeman, 1984; Carroll, 1999). Economic sustainability aims to ensure long-term financial stability and develop business models prioritising social and environmental value creation (Dyllick & Hockerts, 2002; Porter & Kramer, 2006). This tripartite structure enables businesses to create value for shareholders and all stakeholders.

In recent years, governance has emerged as a fourth foundational pillar of corporate sustainability. Governance sustainability encompasses institutional transparency, ethical decision-making, internal audit mechanisms, board independence, and management of ESG performance (Aguilera et al., 2006; Jensen & Meckling, 1976; Davis et al., 1997). Effective governance ensures the holistic implementation and monitoring of sustainable strategies (Epstein, 2008). The increasing demands of stakeholders, tightening regulatory frameworks, and the need for compliance with international standards (DiMaggio & Powell, 1983) have made governance an indispensable element of corporate strategy.

The main objective of this study is to analyse the academic production on corporate sustainability through bibliometric methods and to map the critical factors in this domain from a network-based perspective. To this end, 1,139 academic articles published between 2003 and 2025 were retrieved from the Web of Science database and analysed using the R-based biblioshiny software. This analysis aims to provide a comprehensive overview of how the environmental, social, economic, and governance dimensions are represented in the literature, which concepts are most prominent, and how research trends have evolved.

Conceptual Framework

Corporate Sustainability

Corporate sustainability (CS) is a multidimensional framework that integrates environmental, social, economic, and governance considerations into the core of corporate strategy and operations. The concept builds upon the WCED's (1987) definition of sustainable development, emphasising long-term value creation without compromising future generations. At its core, CS aims to align corporate performance with global sustainability challenges by addressing the "triple bottom line"—people, planet, and profit (Elkington, 1997). As Montiel and Delgado-Ceballos (2014) note, the contemporary understanding of corporate sustainability involves more than mere compliance or philanthropic activities; it is a strategic approach that

seeks to manage risks, improve efficiency, and build resilient organisations. The interconnected nature of environmental, social, and economic systems necessitates that companies adopt an integrated, holistic mindset to shape business decisions.

Environmental, social, and economic dimensions of sustainability are complementary and mutually reinforcing. For example, environmental sustainability efforts—such as reducing emissions or conserving resources—can lower operational costs while fulfilling regulatory obligations and enhancing corporate reputation (Hart, 1995; Kolk & Pinkse, 2005). Social sustainability, which includes fair labour practices, community engagement, and respect for human rights, enhances stakeholder trust and supports organisational legitimacy (Freeman, 1984; Carroll, 1999). Economic sustainability, in turn, ensures the long-term viability of the business by focusing on value creation for a broad array of stakeholders (Dyllick & Hockerts, 2002). As Cantele, Landi, and Vernizzi (2024) emphasise, these three pillars cannot be isolated; their synergistic implementation leads to sustainable growth and resilience in an increasingly complex global environment.

Governance has emerged as a critical fourth pillar that supports and integrates sustainability's environmental, social, and economic aspects. Effective governance mechanisms ensure that sustainability principles are embedded within strategic planning, risk management, and performance monitoring (Aguilera et al., 2006). Agency theory (Jensen & Meckling, 1976) and stewardship theory (Davis et al., 1997) underscore the role of governance in aligning managerial behaviour with long-term stakeholder interests. Transparent governance structures, including independent boards, stakeholder engagement practices, and ESG oversight, are associated with better sustainability performance and accountability (Epstein, 2008; OECD, n.d.). According to Pazienza, de Jong, and Schoenmaker (2022), integrating governance into sustainability frameworks improves coherence and impact, enabling firms to respond more effectively to stakeholder expectations and regulatory pressures. In this sense, governance sustainability is the institutional backbone that enables environmental, social, and economic goals to be pursued simultaneously and effectively.

Environmental Sustainability

Environmental sustainability constitutes a fundamental dimension of corporate sustainability and refers to the organisational practices and strategies aimed at mitigating ecological degradation and promoting the responsible use of natural resources. Rooted in the firm's natural resource-based view (NRBV), environmental capabilities are posited as strategic assets that can foster long-term competitive advantage (Hart, 1995). This perspective aligns with the principles laid out in the WCED in 1987.

Organisational practices that reflect environmental sustainability include adopting energy-efficient technologies, implementing waste reduction programs, utilising renewable energy sources, and integrating sustainable supply chain practices (Bansal & Roth, 2000; Kolk & Pinkse, 2005). The Global Reporting Initiative (GRI, 2021) offers a standardised framework for reporting these practices, enabling industry transparency and benchmarking.

The theoretical foundation for environmental sustainability is also supported by stakeholder theory (Freeman, 1984), which emphasises the organisation's accountability to various stakeholders, including communities and future generations. Moreover, institutional theory suggests that firms are influenced by societal norms and environmental regulations, leading to the adoption of green strategies for legitimacy (DiMaggio & Powell, 1983; Lozano, 2015).

As global climate concerns escalate, corporate engagement in environmental sustainability is increasingly scrutinised by investors, governments, and consumers. This scrutiny is reflected in the proliferation of ESG metrics, which evaluate environmental performance alongside social and governance factors (Eccles et al., 2014). Ultimately, environmental sustainability contributes to achieving Sustainable Development Goals (SDGs), notably Goals 6, 7, 12, and 13.

Social Sustainability

Social sustainability pertains to the capacity of organisations to manage their social impacts responsibly and ethically while contributing positively to the well-being of internal and external stakeholders. Carroll's (1999) Corporate Social Responsibility (CSR) model, which encompasses economic, legal, ethical, and philanthropic responsibilities, provides a foundational framework for understanding this dimension. Social sustainability extends beyond compliance to proactive engagement in diversity and equality.

Stakeholder theory (Freeman, 1984) provides a conceptual basis for social sustainability by advocating the inclusion of diverse stakeholder voices in organisational governance. Clarkson's (1995) stakeholder performance model furthers this by offering measurable criteria for evaluating corporate responsiveness to stakeholder needs. Waddock and Graves (1997) also underscored the importance of social sustainability and empirically linked positive social performance with enhanced financial performance.

In institutional contexts, firms often adopt socially sustainable practices to align with cultural expectations and maintain legitimacy (DiMaggio & Powell, 1983; Matten & Moon, 2008). However, Jamali and Mirshak (2007) caution that CSR strategies in developing countries face unique implementation barriers, including weak governance and cultural resistance.

Global initiatives such as the UN Global Compact (2021) and the SDGs emphasise social sustainability through principles related to labour rights, gender equality, and inclusive development (Goals 5, 8, and 10). As such, firms that prioritise social responsibility are fulfilling ethical obligations and positioning themselves for long-term viability in increasingly conscientious markets.

Governance Sustainability

Governance sustainability refers to establishing robust systems, structures, and processes that ensure ethical, transparent, and accountable organisational decision-making. Effective governance enables firms to manage risks, align strategic objectives with sustainability goals, and respond to stakeholder expectations (Aguilera et al., 2006; Epstein, 2008). It is a critical enabler of environmental, social, and economic sustainability.

Agency theory (Jensen & Meckling, 1976) and stewardship theory (Davis et al., 1997) offer theoretical underpinnings for governance sustainability. While the former emphasises the need for oversight mechanisms to mitigate conflicts between managers and shareholders, the latter promotes collaborative leadership and long-term stakeholder value creation. Clarkson (1995) adds that transparent stakeholder engagement is essential to effective governance.

The UN Global Compact (2021) articulates governance principles focused on anti-corruption, human rights, and labour standards, which firms are encouraged to internalise. Governance sustainability also encompasses board diversity, executive accountability, and ESG integration into corporate oversight (Matten & Moon, 2008; Schaltegger & Burritt, 2005).

Institutional pressures further drive the adoption of governance practices that conform to international norms and enhance organisational legitimacy (DiMaggio & Powell, 1983). Governance sustainability aligns directly with SDG 16, which advocates for peace, justice, and strong institutions.

In sum, governance is not merely a compliance function but a strategic pillar that ensures the integrity and effectiveness of sustainability initiatives across the organisation.

Circular Economy and Dynamic Capabilities

Recent scholarship on sustainability strategy has increasingly emphasised frameworks such as the circular economy, dynamic capabilities, and sustainability transitions. The circular economy paradigm advocates for closed-loop systems that minimise waste and resource use by promoting reuse, recycling, and regeneration (Geissdoerfer et al., 2017). This approach aligns with the co-occurrence of keywords such as “waste,” “pollutants,” and “decarbonisation strategy” observed in the network analysis, reflecting a shift in sustainability discourse towards systemic resource efficiency.

In parallel, the dynamic capabilities framework (Teece, Pisano, & Shuen, 1997) offers insights into how organisations develop, integrate, and reconfigure internal and external competencies to adapt to rapidly evolving sustainability demands. The results demonstrate increasing attention to terms like “innovation,” “resilience,” and “strategic management,” which directly reflect this capability-based orientation.

Additionally, the concept of sustainability transitions—focusing on the systemic transformation of socio-technical systems (Markard, Raven, & Truffer, 2012)—provides a macro-level lens through which emerging clusters such as “governance,” “policy influence,” and “stakeholder equity” can be interpreted. These linkages show that the field is increasingly integrating strategic and institutional dimensions beyond traditional ESG frameworks.

Methodology

This study adopts a bibliometric analysis approach, supported by science mapping techniques, to explore the critical factors influencing corporate sustainability from a multidimensional and network-based perspective. The analysis was conducted using the biblioshiny interface of the bibliometrix R package (Aria & Cuccurullo, 2017), which enables comprehensive, reproducible, and visually intuitive bibliometric analyses. This tool was selected for its capacity to analyse large bibliographic datasets, generate dynamic network visualisations, and map scientific trends across multiple dimensions of sustainability.

The data for this research were extracted from the Web of Science Core Collection, a leading multidisciplinary database of peer-reviewed academic publications. The search strategy was carefully constructed to reflect the multifaceted nature of corporate sustainability, with two overarching keyword themes: (1) general sustainability constructs (e.g., "corporate sustainability," "firm sustainability") and (2) detailed sub-factors representing environmental, social, economic, and governance dimensions (e.g., "climate strategy," "waste," "labour practices," "corporate governance," "business ethics," etc.). This structured search resulted in a final dataset comprising 1,139 articles published between 2003 and 2025, drawn from 331 academic sources, and authored by 2,878 researchers. The dataset included 3,074 author keywords and over 54,000 cited references, ensuring a comprehensive representation of the field's evolution.

Using biblioshiny, the study first performed descriptive analyses, including annual scientific production, authorship patterns, citation counts, and international collaboration rates. Subsequently, co-occurrence keyword analysis was used to detect thematic clusters and emerging concepts. Three-field plots, co-authorship networks, and collaboration world maps were generated to understand the intellectual and social structure of the research landscape. Conceptual structure maps, thematic evolution diagrams, and trend topic analyses were used to examine how corporate sustainability discourses have changed. These visualisations provided insight into dominant research streams, high-impact contributors, and the evolving interrelationship between sustainability dimensions. By leveraging the full capabilities of biblioshiny, this methodology enables a robust, data-driven understanding of the corporate sustainability literature and highlights pathways for future academic inquiry.

In the network-based analyses (co-occurrence, collaboration, and conceptual mapping), the default Louvaine clustering algorithm embedded in the Biblioshiny interface of the bibliometrix R package (Aria & Cuccurullo, 2017) was employed. For co-occurrence analysis, a minimum frequency threshold of 5 for author keywords was applied to reduce noise and ensure analytical clarity. The network layout was generated using the Fruchterman-Reingold algorithm, which optimises spatial distribution for visual clarity.

The modularity resolution parameter was set at 0.75, a mid-range value suitable for detecting thematically coherent clusters without excessive fragmentation. Network density was calculated at 0.042, indicating a moderately sparse network typical for conceptual mapping in diverse thematic fields.

To ensure the robustness of the clustering solution, the modularity class outputs were cross-validated with thematic map results, and a sensitivity analysis was performed by lowering the frequency threshold to 3 and increasing it to 8. The core structure remained stable across these thresholds, indicating reliability of the observed clusters. In addition, the co-occurrence analysis was replicated using Keywords Plus (ID field) as a robustness check, which yielded consistent thematic clusters aligned with the author keyword-based network.

Findings

Table 1 outlines the thematic structure and specific search terms for constructing the bibliometric dataset. The table categorises the keywords into two main themes: Corporate Sustainability and Sub-Factors Affecting Corporate Sustainability. Under the first theme, broad terms like Corporate Sustainability and Firm Sustainability are listed, reflecting the overarching focus of the study. The second theme breaks down the concept into detailed sub-factors such as Governance Dimension, Transparency, Business Ethics, Sustainable Finance, and Climate Strategy, among many others. This comprehensive keyword selection ensures that the dataset captures a broad and representative spectrum of the sustainability discourse, spanning governance, environmental, and social dimensions, as well as risk and crisis management issues.

The detailed decomposition into sub-factors signals a deliberate methodological effort to cover the multifaceted nature of corporate sustainability by including terms related to environmental impact (e.g., Energy, Waste, Pollutants), social concerns (e.g., Labor Practices, Human Rights, Financial Inclusion), and governance issues (e.g., Corporate Governance, Policy Influence, Tax Strategy), the keyword set ensures a holistic retrieval of literature. Moreover, emerging areas such as the decarbonisation strategy and privacy protection indicate an awareness of contemporary challenges and the evolving landscape of sustainability research. This structured approach enhances the relevance and comprehensiveness of the bibliometric

analysis, enabling robust insights into how various facets of corporate sustainability are addressed across the academic literature.

Table 1

Keywords Used in Creating the Data Set

Theme 1: Corporate Sustainability	**Theme 2: Sub-Factors Affecting Corporate Sustainability**
Corporate Sustainability Firm Sustainability	Governance Dimension, Economic Dimension, Transparency, Reporting, Corporate Governance, Materiality, Risk Management, Crisis Management, Business Ethics, Policy Influence, Tax Strategy, Information Security, Sustainable Finance, Environmental Dimension, Energy, Waste, Pollutants, Water, Climate Strategy, Decarbonization Strategy, Social Dimension, Labor Practices, Human Rights, Human Capital Management, Occupational Health, Occupational Safety, Financial Inclusion, Customer Relations, Privacy Protection

Note. This table was created by the author.

Table 2 provides an overview of the fundamental bibliometric parameters characterising the dataset. The study spans 2003 to 2025, covering more than two decades of academic production. It includes 331 sources and 1,139 articles, indicating a substantial and diverse body of literature. The annual growth rate of 17.13% demonstrates a robust upward trajectory in scholarly interest, suggesting that the field of corporate sustainability and its sub-factors have been gaining considerable momentum over time. This consistent increase signals a dynamic and expanding research area responding to evolving global sustainability challenges and corporate practices.

Additional metrics provide insights into the research community's structure and the dataset's richness. With 2,878 authors, the field is highly collaborative, and an international co-authorship rate of 31.61% indicates a significant level of cross-border collaboration, essential for addressing global issues like sustainability. Furthermore, the dataset includes 3,074 author keywords, reflecting thematic diversity and complexity. The large number of 54,155 references underscores the field's profound intertextuality, suggesting that the research is heavily grounded in existing literature and that cumulative knowledge-building is a prominent feature. These descriptive statistics portray a mature and rapidly evolving field characterised by increasing scholarly engagement, thematic diversity, and global collaboration.

Table 2

Descriptive Statistics

Descriptives	**Statistics**
Timespan	2003-2025
Sources	331
Articles	1139
Annual Growth Rate	%17.13
Authors	2878
International Co-Authorship	%31.61
Author's Keywords	3074
References	54155

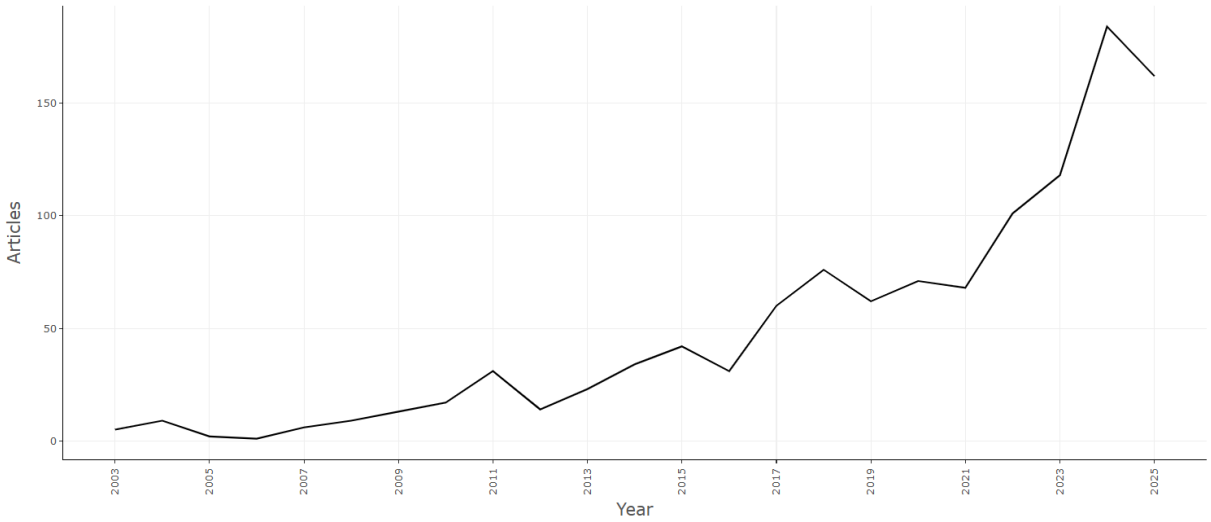
Note. This table was created by the author.

The trend depicted in Figure 1, titled Annual Scientific Production, shows the evolution of the number of articles published over the years. From 2003, scientific output was relatively low, with fewer than 10 articles per year until around 2010. After this point, a modest but steady growth can be observed, with slight fluctuations until 2017. From 2018 onwards, the increase becomes more pronounced, peaking notably in 2024. This upward trend suggests a growing academic interest in the field under study, likely driven by increasing awareness, policy developments, and global emphasis on related research themes.

The sharp rise in publications from 2021 to 2024 reflects a broader trend of intensifying scholarly engagement, which may be attributed to various factors, such as advancements in data availability, funding opportunities, and interdisciplinary collaboration. The slight dip observed after the peak could result from regular publication cycles or shifting research priorities. This figure indicates that the field is in a growth phase, characterised by heightened scientific productivity and expanding academic discourse, pointing to its maturation and relevance within the broader research ecosystem.

Figure 1

Annual Scientific Production



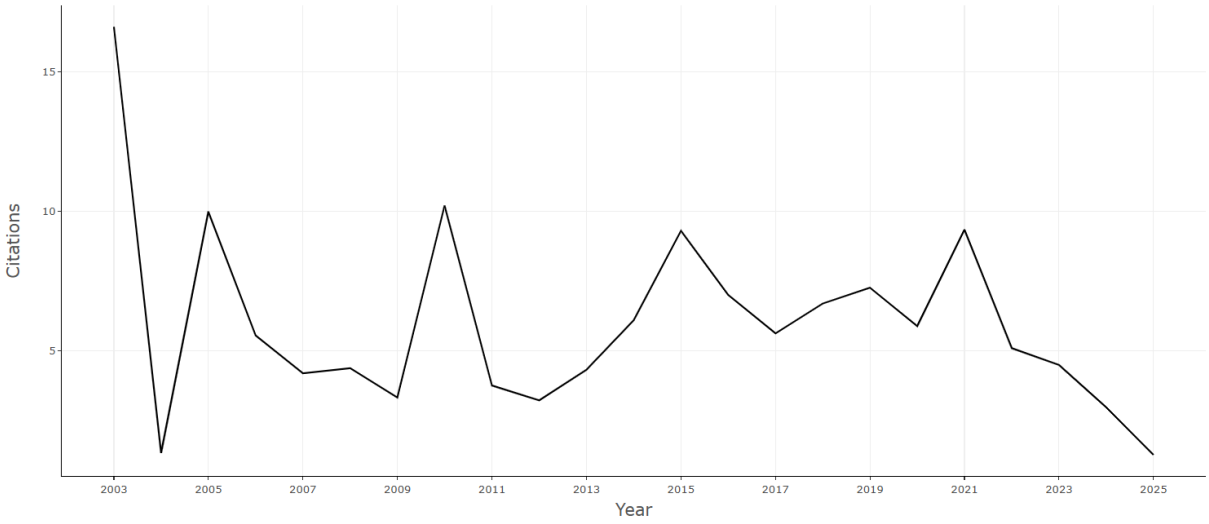
Note. This figure was created via Biblioshiny, where Arial font customization is not supported.

Figure 2, titled Average Citations Per Year, illustrates the temporal evolution of citation impact. The figure reveals that in the early years, notably around 2003, articles achieved the highest average citations, peaking at approximately 17 citations per article. This early surge can often be attributed to the "first-mover advantage," where pioneering studies garner significant attention due to their novelty. However, the subsequent sharp decline indicates the field's gradual expansion, leading to a dilution effect where newer papers face increasing competition for citations. The intermittent peaks, notably around 2005, 2010, and 2015, reflect periods when landmark studies or special issues might have reinvigorated scholarly attention, boosting citation rates temporarily.

There has been a noticeable declining trend in average citations per article in recent years, particularly after 2021. Despite the increasing number of publications observed in Figure 1, this decline suggests a saturation effect where the proliferation of articles reduces the per-article citation potential. It may also reflect the shorter citation windows available for recent publications, as newer articles require time to accumulate citations. The pattern highlights a typical bibliometric phenomenon where early seminal works enjoy a citation premium. At the same time, newer contributions face heightened competition, necessitating higher quality, novelty, or interdisciplinary relevance to achieve significant citation impact.

Figure 2

Average Citations Per Year



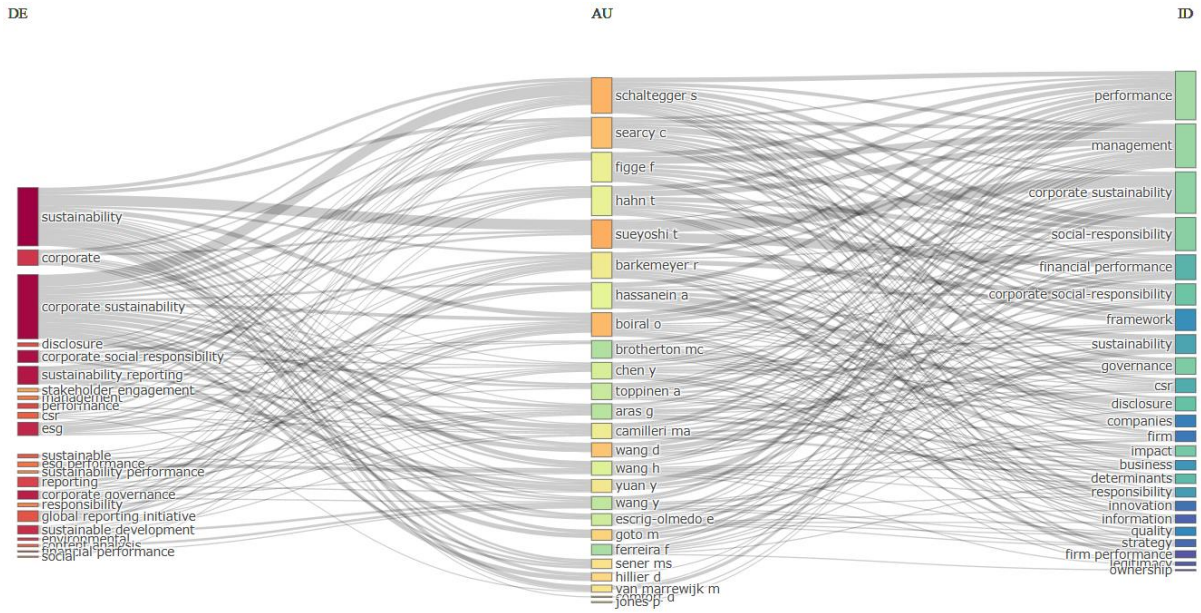
Note. This figure was created via Biblioshiny, where Arial font customization is not supported.

Figure 3, titled Three-Field Plot, illustrates the relational mapping among keywords (DE), authors (AU), and topics (ID) within the field. On the left, dominant keywords such as "sustainability," "corporate," and "corporate sustainability" reveal the thematic foci guiding the research. In the centre, leading authors like Schaltegger S., Searcy C., and Figge F. emerge as influential contributors, linking multiple thematic areas to critical research outputs. On the right, frequently addressed topics such as "performance," "management," and "corporate sustainability" demonstrate the conceptual alignment between the author's expertise and research objectives. The dense interconnections suggest a well-integrated academic network where prominent scholars continuously engage with core topics, ensuring thematic consistency across the field.

The visualisation highlights the structural cohesiveness of the research landscape. Scholars are connected to high-frequency keywords and contribute to a broad array of subtopics, suggesting multidimensionality in their research contributions. The convergence of sustainability and corporate responsibility themes reflects the field's maturation and intersection with business performance and governance concerns. The three-field plot effectively underscores the concentration of intellectual leadership and the diversity of applied research areas, indicating a robust and dynamic scholarly environment where key authors play a pivotal role in shaping evolving research directions.

Figure 3

Three-Field Plot



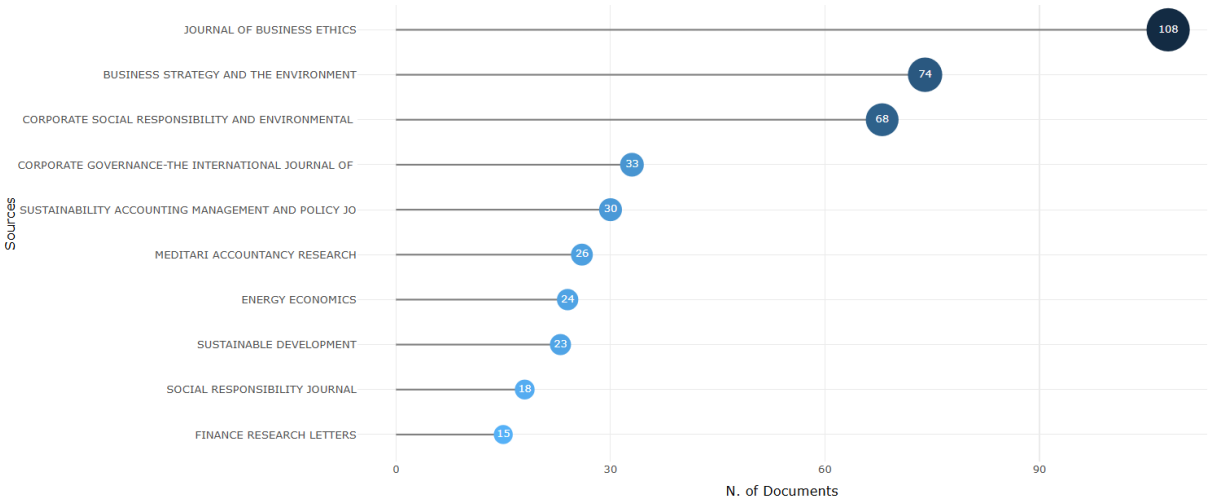
Note. This figure was created via Biblioshiny, where Arial font customization is not supported.

Figure 4, titled Most Relevant Sources, provides an overview of the journals that have published the most articles within the analysed field. Leading the list is the Journal of Business Ethics with 108 publications, followed by Business Strategy and the Environment with 74 articles, and Corporate Social Responsibility and Environmental Management with 68 articles. These journals' dominance underscores the interdisciplinary nature of the research area, which intersects business ethics, environmental management, and corporate responsibility. The prominence of such journals suggests that the field is anchored in addressing ethical considerations and sustainability strategies within corporate contexts, reflecting broader academic and societal priorities.

The presence of other journals, such as Corporate Governance: The International Journal of Business in Society and Sustainability Accounting, Management and Policy Journal, highlights the diversity of scholarly outlets contributing to the field's development. This range indicates that the field extends into the domains of governance, accounting, and energy economics. The diversity of sources also suggests a healthy and vibrant research ecosystem where interdisciplinary dialogue is encouraged. Moreover, the dispersion of document numbers among different journals points to a decentralised but thematically cohesive body of literature, enhancing the field's resilience and adaptability to emerging sustainability and corporate governance challenges.

Figure 4

Most Relevant Sources



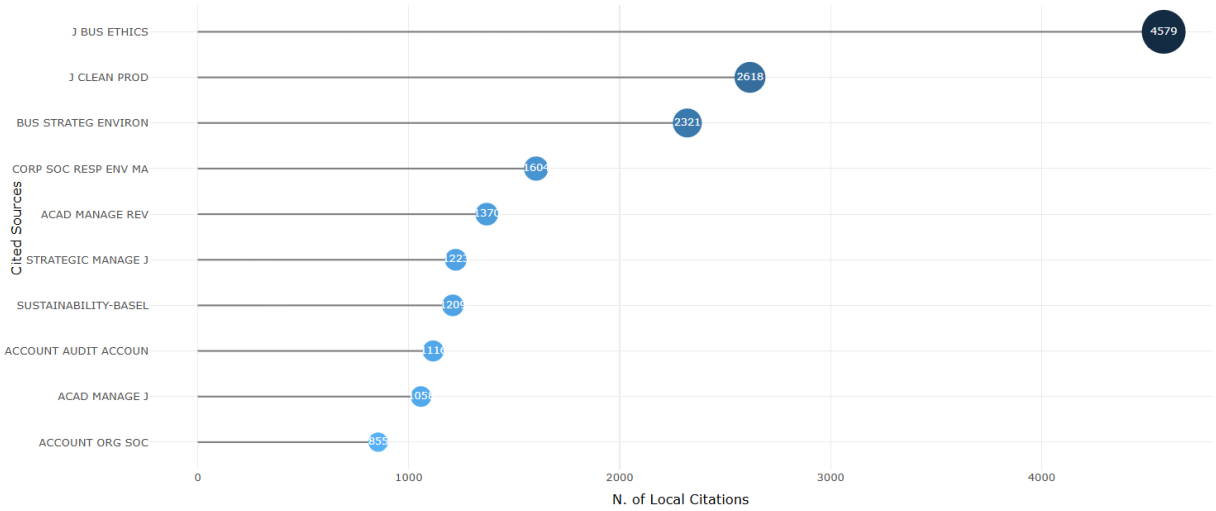
Note. This figure was created via Biblioshiny, where Arial font customization is not supported.

Figure 5, titled Most Local Cited Sources, displays the journals most frequently cited within the analysed corpus. The Journal of Business Ethics stands out prominently with 4,579 citations, significantly surpassing the second most cited source, the Journal of Cleaner Production with 2,618 citations, and Business Strategy and the Environment with 2,321 citations. This dominant citation performance suggests that the Journal of Business Ethics is a foundational reference point for researchers in this domain, emphasising the centrality of ethical considerations in sustainability and corporate governance studies. The citation concentration in these top journals reflects their role in shaping theoretical frameworks and methodological approaches widely adopted by subsequent research.

The broader citation distribution indicates a diverse intellectual base, with journals such as Corporate Social Responsibility and Environmental Management, Academy of Management Review, and Strategic Management Journal also making substantial contributions. These journals span disciplines, including business strategy, environmental management, organisational studies, and sustainability science, reflecting the field's interdisciplinary nature. High-impact, generalist management journals alongside specialised sustainability and ethics outlets underscore the cross-cutting relevance of sustainability and governance issues across various management and organisational disciplines. This pattern of citation consolidation around a few influential journals also suggests a maturing research field with well-established scholarly anchors.

Figure 5

Most Local Cited Sources



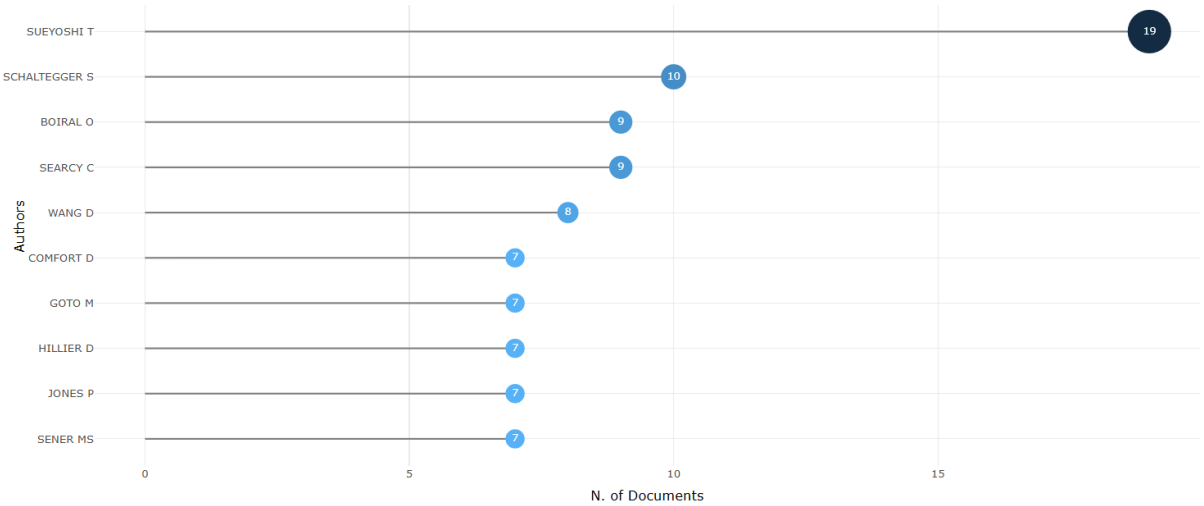
Note. This figure was created via Biblioshiny, where Arial font customization is not supported.

Figure 6, titled Most Relevant Authors, presents the leading contributors based on the field's published documents. At the top of the list, Sueyoshi T. stands out with 19 publications, demonstrating a significant scholarly influence and sustained research activity. Following him, Schaltegger S. has 10 publications, while Boiral O. and Searcy C. have nine publications. This pattern highlights a core group of prolific authors who have consistently contributed to the body of knowledge on sustainability, corporate responsibility, and related topics. Their high publication counts suggest they play a pivotal role in setting research agendas and advancing theoretical and empirical debates in the field.

The presence of additional scholars such as Wang D., Comfort D., Goto M., Hillier D., Jones P., and Sener MS., each with 7 or 8 publications, indicates a moderately distributed authorship landscape. Although there is some concentration among a few highly productive researchers, the field also benefits from contributions by a broader pool of active scholars. This prolific authors and wider participation combination suggests a vibrant academic community with a balanced mix of thought leadership and diverse perspectives. It reinforces that the field is expanding steadily, supported by sustained individual efforts and collaborative research networks.

Figure 6

Most Relevant Authors



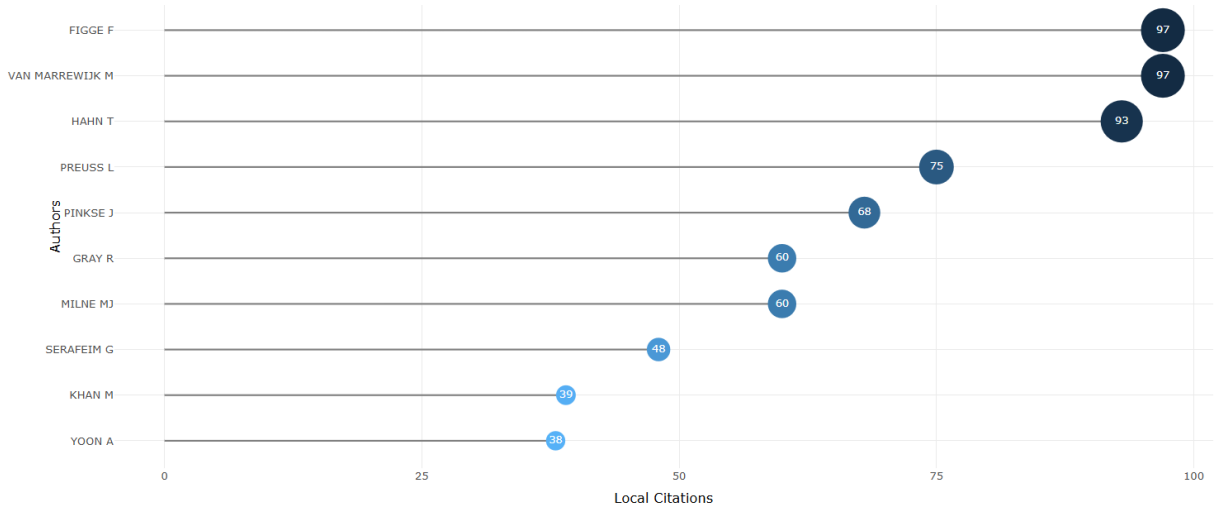
Note. This figure was created via Biblioshiny, where Arial font customization is not supported.

Figure 7, titled Most Local Cited Authors, illustrates the scholars whose works have received the highest number of local citations within the dataset. Figge F. and Van Marrewijk M. are tied at the top, each with 97 local citations indicating their pivotal influence and their studies' foundational role in the research domain. Close behind is Hahn T., with 93 citations, followed by Preuss L. and Pinkse J., who have 75 and 68 citations, respectively. The high citation counts of these authors reflect their significant intellectual contributions, signalling that their research has been instrumental in shaping the theoretical and empirical underpinnings of sustainability, corporate social responsibility, and governance studies.

Interestingly, while publication counts (as seen in previous figures) show productivity, citation counts emphasise scholarly impact. Authors such as Gray R., Milne M.J., and Serafeim G., despite fewer publications compared to the most prolific authors, appear prominently here due to the high impact of their work. This distinction highlights that quality and influence, measured by citations, are not always directly proportional to publication quantity. Overall, this figure demonstrates that a select group of scholars has produced substantial research output and significantly shaped academic discourse, serving as key reference points for ongoing research within the field.

Figure 7

Most Local Cited Authors



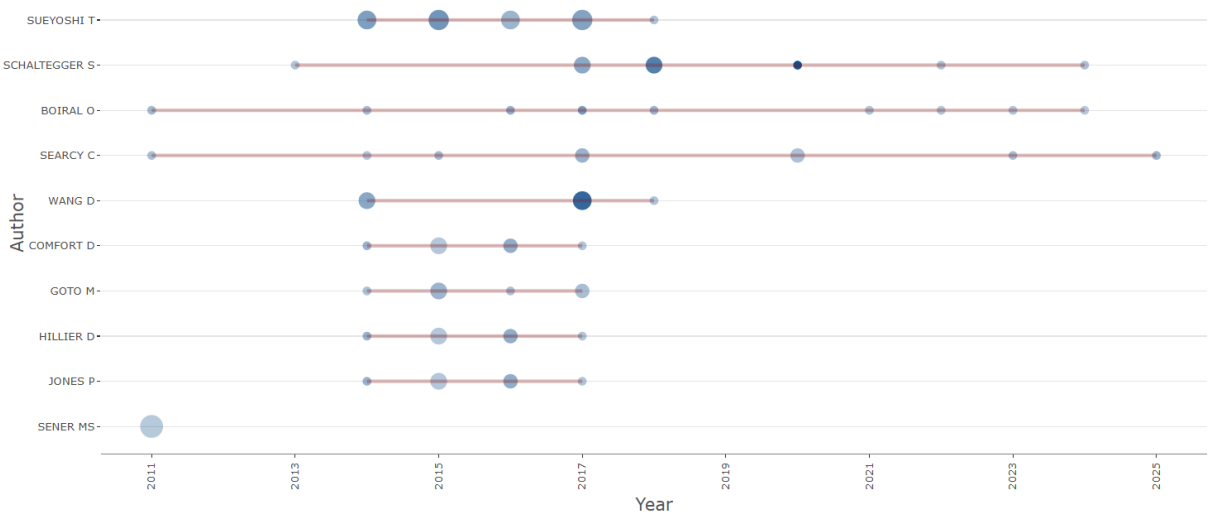
Note. This figure was created via Biblioshiny, where Arial font customization is not supported.

Figure 8, titled Authors' Production over Time, traces the publication activity of the most productive authors across different years. Sueyoshi T., Schaltegger S., Boiral O., and Searcy C. exhibit a consistent research output, with noticeable clusters of publications, particularly between 2014 and 2018. The size of the bubbles indicates the volume or impact of their work in a given year, showing that certain years were particularly productive or influential for specific authors. For instance, Sueyoshi T. and Wang D. have relatively larger bubbles in specific years, indicating not just steady productivity but also notable peaks in research impact or volume. The extended horizontal lines for some authors, like Schaltegger S. and Searcy C., suggest sustained engagement over a more extended period than others.

This figure reflects not only the productivity patterns but also suggests the evolving prominence of individual scholars in the field. Authors like Sener MS., although having significant early contributions, do not show continued activity in the later years, implying either a shift in research focus or a reduced engagement. Meanwhile, Schaltegger S. and Boiral O. demonstrate enduring presence, indicating leadership roles in setting the research agenda or mentoring newer scholars. The temporal distribution of publications reveals how research leadership and scholarly influence are maintained over time, providing insight into the dynamic evolution of the intellectual community in sustainability and corporate responsibility research

Figure 8

Authors' Production over Time



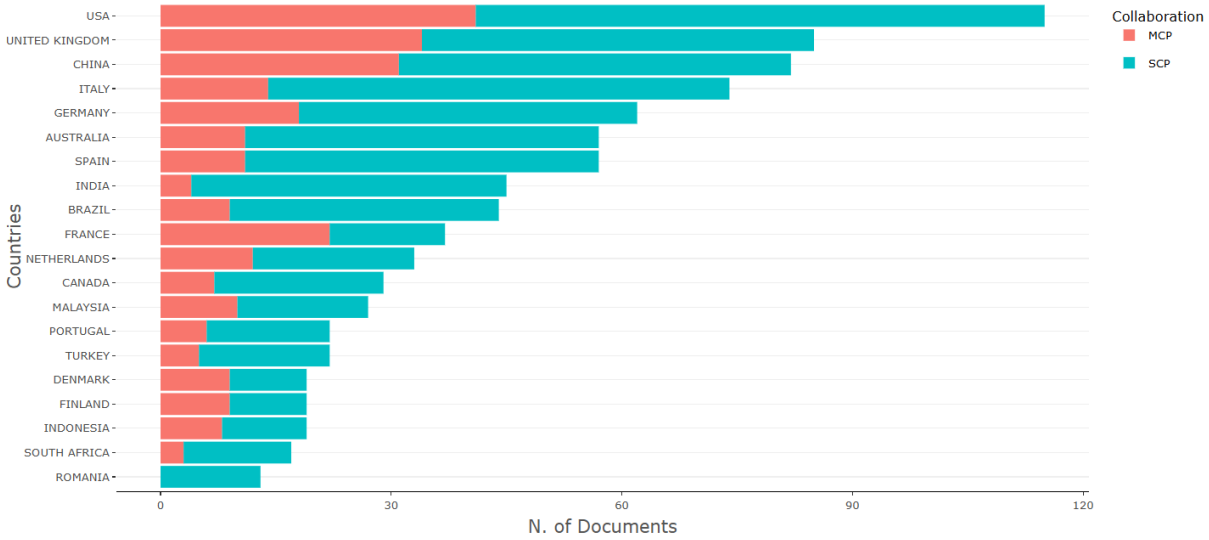
Note. This figure was created via Biblioshiny, where Arial font customization is not supported.

Figure 9, titled Corresponding Author's Countries, presents the distribution of scientific production based on the country affiliation of corresponding authors, further distinguishing between single-country publications (SCP) and multiple-country collaborations (MCP). The United States leads by a wide margin, followed by the United Kingdom and China, confirming the dominant role of these countries in driving global research output in sustainability and corporate responsibility. The significant portion of blue (SCP) for most countries indicates that much of the research is conducted within national borders, with relatively fewer international collaborations. Nevertheless, countries like the United Kingdom and Germany show a higher share of MCPs (red), reflecting a greater tendency for international research partnerships.

The broader distribution also reveals active research engagement from European countries such as Italy, Germany, Spain, and France, alongside emerging economies like India, Brazil, and Malaysia. The participation of countries like Turkey, South Africa, and Indonesia, although at lower volumes, signifies the expanding global interest in the field. The predominance of single-country studies highlights a potential limitation in the field: the need for broader cross-national collaboration to enrich research perspectives and enhance the generalizability of findings. Encouragingly, the presence of MCPs among top-producing countries suggests growing international connectivity, which is vital for addressing global sustainability challenges through diverse and inclusive research approaches.

Figure 9

Corresponding Author's Countries



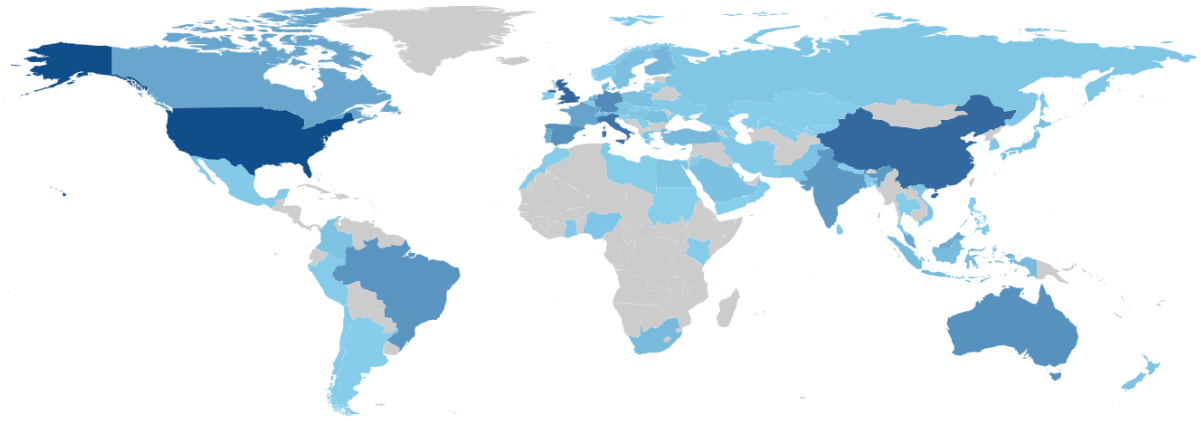
Note. This figure was created via Biblioshiny, where Arial font customization is not supported.

Figure 10, titled Countries' Scientific Production, presents a global heat map reflecting the geographical distribution of scholarly output in the field. Darker shades of blue represent higher production levels, with the United States, the United Kingdom, and China prominently highlighted as the leading contributors. Other countries with significant output include Australia, Germany, Canada, Italy, and India, suggesting a concentration of research activity in North America, Europe, and Asia-Pacific. The widespread distribution of scientific production across continents reflects the global importance of sustainability and corporate governance research, transcending regional boundaries.

However, the map also reveals notable gaps in scientific production, particularly in large parts of Africa, the Middle East, and some parts of Southeast Asia and Latin America, where countries are shaded in grey, indicating minimal or no contribution. This geographical imbalance suggests disparities in research infrastructure, funding availability, and academic prioritisation of sustainability-related topics. Addressing these disparities through capacity building, international collaboration, and funding initiatives would be crucial to ensuring a more globally representative body of research. Overall, the map highlights the widespread interest and the persistent geographic inequalities in the scholarly exploration of sustainability and corporate responsibility issues.

Figure 10

Countries' Scientific Production



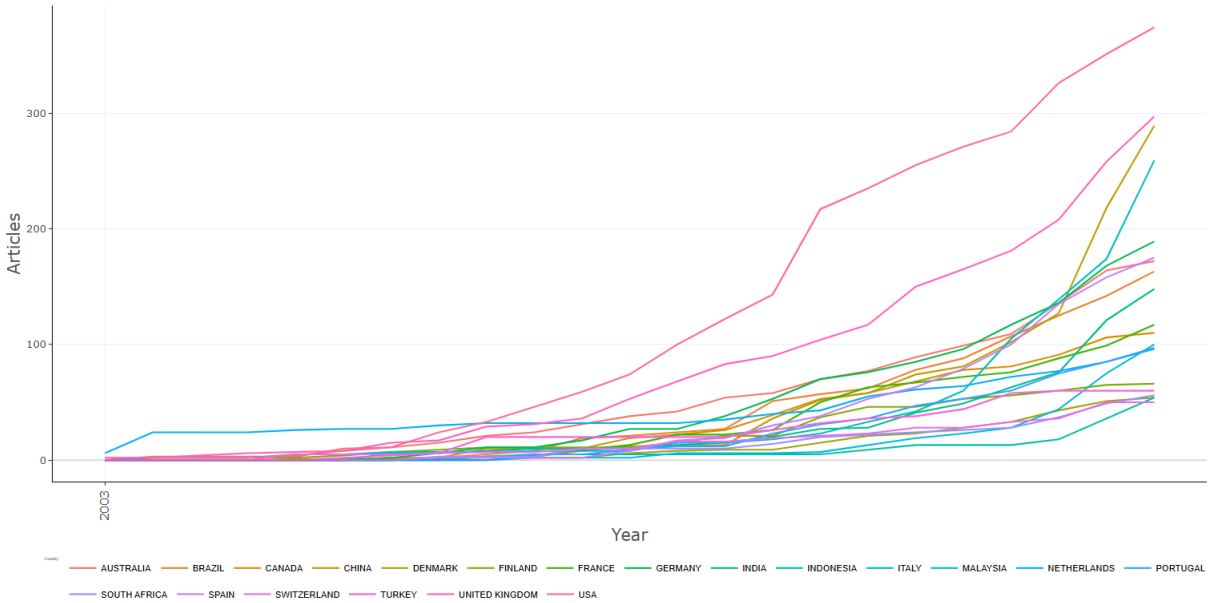
Note. This figure was created via Biblioshiny, where Arial font customization is not supported.

Figure 11, titled Countries' Production over Time, illustrates the longitudinal trends in scholarly output for different countries from 2003 to 2025. The United States consistently leads with a sharply rising trajectory, especially after 2010, surpassing 350 articles in recent years. The United Kingdom and China follow closely behind, demonstrating significant production growth, particularly after 2015. This surge indicates that these countries have substantially intensified their research focus on sustainability and corporate responsibility in the last decade, likely fueled by increasing policy pressures, funding availability, and growing public and corporate interest in sustainability issues.

Other countries such as Germany, Italy, Canada, and Australia also exhibit steady upward trends, though at a lower scale than the leading trio. Emerging economies like India and Brazil show gradual but consistent increases, reflecting their growing engagement in global sustainability discourse. The data suggest that research in this field is expanding in traditionally research-intensive nations and developing economies. This collective upward trend underscores the globalisation of sustainability research. However, the gap between leading and other countries remains wide, signalling the need for broader research capacity and resource dissemination to ensure a more balanced global academic contribution.

Figure 11

Countries' Production over Time



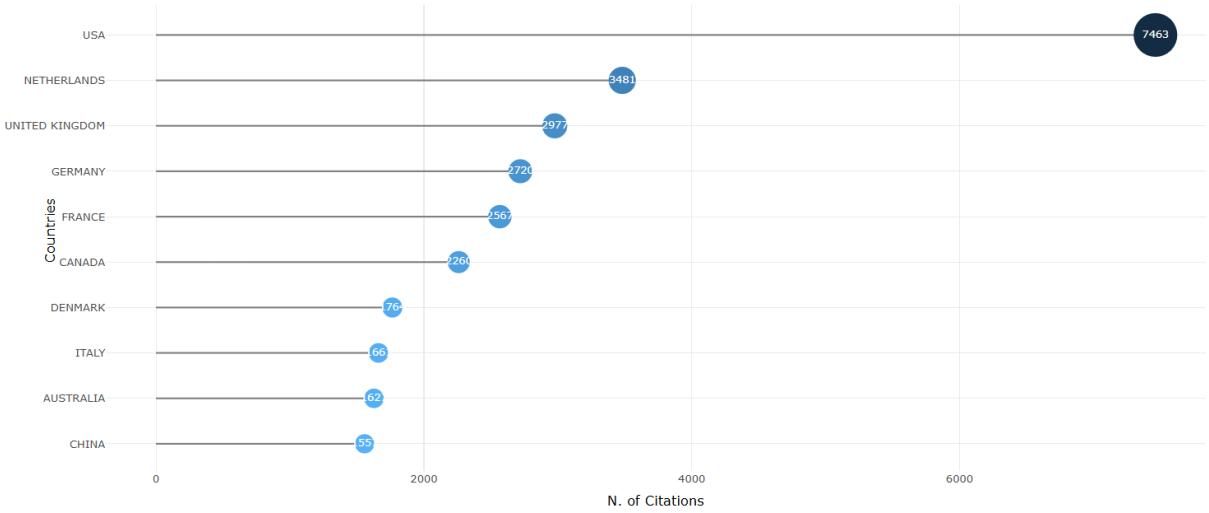
Note. This figure was created via Biblioshiny, where Arial font customization is not supported.

Figure 12, titled Most Cited Countries, ranks countries by the total number of citations their publications have received. The United States dominates with 7,463 citations, followed by the Netherlands (3,481 citations) and the United Kingdom (2,977 citations). This substantial lead suggests that not only is the USUS highly productive in terms of the number of articles (as shown in previous figures), but it also exerts significant influence on the academic community, with its research widely referenced and built upon by other scholars. Despite a smaller absolute publication volume, the Netherlands' high citation count highlights the country's ability to produce high-impact research, indicative of a focus on quality and relevance.

The distribution further shows that other major European nations — Germany, France, Denmark—and Canada, Australia, and China- contribute meaningfully to the citation landscape. The relatively high citation counts of countries with moderate publication numbers, such as Denmark and the Netherlands, imply that their research outputs are particularly valued and influential. Meanwhile, the lower citation counts for countries like China, despite high production, suggest a citation gap that could be due to factors such as language barriers, publication venue visibility, or the recency of their research contributions. Overall, this figure highlights the importance of quantity and citation quality in establishing a country's academic leadership in sustainability and corporate governance.

Figure 12

Most Cited Countries



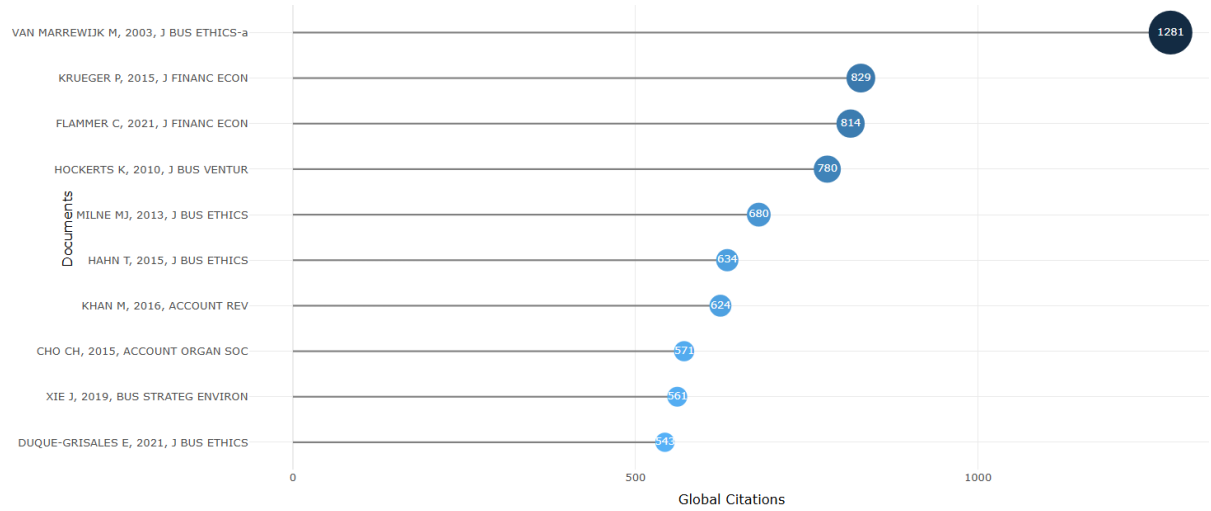
Note. This figure was created via Biblioshiny, where Arial font customization is not supported.

Figure 13, titled Most Global Cited Documents, highlights the individual publications with the highest global citations. Leading the list is Van Marrewijk's (2003) article in the Journal of Business Ethics, which has an impressive 1,281 citations, indicating its seminal status in the field. Krüger's (2015) and Flammer's (2021) works in the Journal of Financial Economics follow, with 829 and 814 citations, respectively, showcasing the interdisciplinary reach of sustainability and corporate responsibility research into finance. Other highly cited works include Hockerts (2010) on sustainable entrepreneurship and Milne (2013) on critical perspectives in business ethics, reflecting the diversity of influential topics driving citation impact in the field.

The various journals and topics among the top-cited documents reveal the field's interdisciplinary nature, blending business ethics, finance, management, and entrepreneurship studies. Notably, the frequent appearance of articles from the Journal of Business Ethics reinforces the journal's dominant position in shaping scholarly discourse. These highly cited documents are foundational texts widely recognised for their theoretical contributions or empirical insights. Their significant citation numbers also imply that they have catalysed subsequent research developments as key references for new studies exploring the evolving landscape of corporate sustainability, governance, and social responsibility.

Figure 13

Most Global Cited Documents



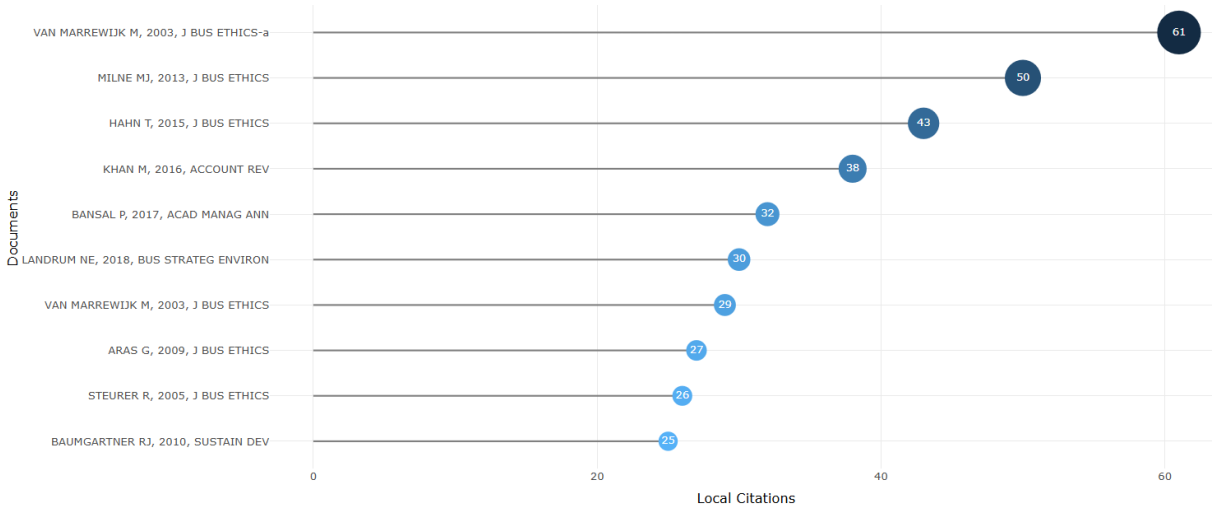
Note. This figure was created via Biblioshiny, where Arial font customization is not supported.

Figure 14, titled Most Local Cited Documents, ranks documents based on the number of citations they have received within the dataset (local citations). Once again, Van Marrewijk's (2003) publication in the Journal of Business Ethics stands out with 61 local citations, reaffirming its foundational influence within this specific research corpus. Milne (2013) and Hahn (2015), published in the Journal of Business Ethics, follow closely with 50 and 43 citations, respectively. This journal's concentration of top-cited works underscores its role as the central outlet for scholarship in sustainability and corporate responsibility. It also signals that these studies are globally influential and highly referenced within their direct academic community.

The remainder of the list includes articles by Khan (2016), Bansal (2017), and Landrum (2018), among others, showcasing a mix of classic and more recent influential contributions. The relatively high local citation counts for more recent articles, such as those from 2017 and 2018, indicate their rapid uptake and relevance within the field. This pattern indicates an evolving but stable intellectual foundation where seminal works coexist with newer influential studies. Local citation analysis thus offers a lens into the internal dynamics of the field, reflecting which contributions are most frequently relied upon by active researchers to frame or advance their work.

Figure 14

Most Local Cited Documents



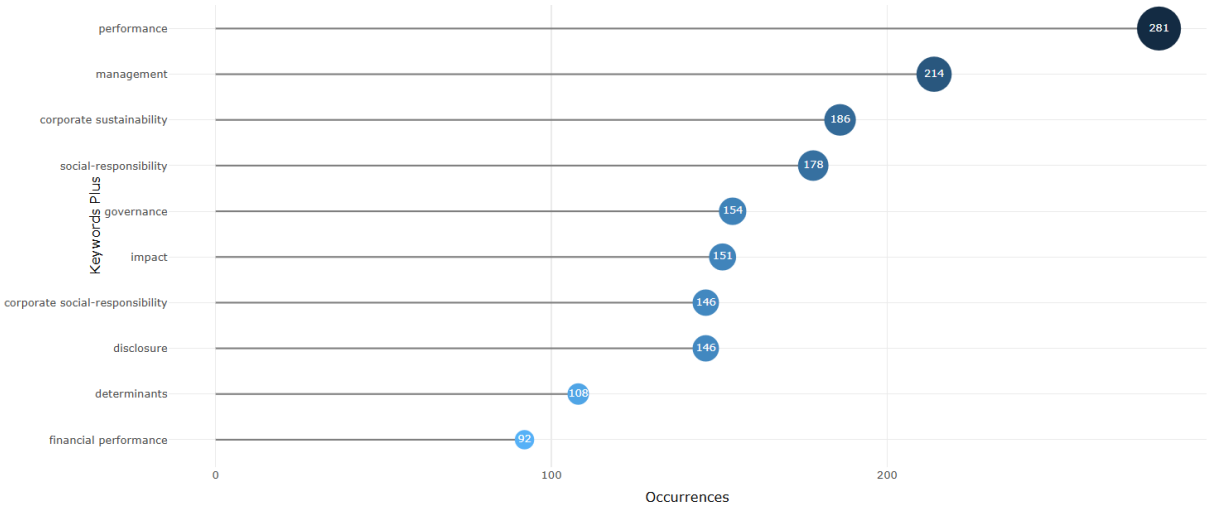
Note. This figure was created via Biblioshiny, where Arial font customization is not supported.

Figure 15, titled Most Frequent Words, displays the top recurring keywords in the literature analysed. "Performance" emerges as the most frequent term, with 281 occurrences, followed by "management" (214 occurrences) and "corporate sustainability" (186 occurrences). These results suggest that the central research concerns revolve around assessing organisational outcomes, managerial practices, and the strategic pursuit of sustainability goals. The high frequency of "performance" also reflects an ongoing emphasis on measurable impacts, particularly how sustainability initiatives affect corporate outcomes. Furthermore, the appearance of "corporate sustainability" and "social responsibility" underscores a dominant thematic convergence on corporate actions to balance profit with social and environmental considerations.

Other frequently occurring terms like "governance," "impact," "corporate social responsibility," "disclosure," and "financial performance" indicate the multifaceted nature of the field, intertwining strategic management, accountability, and stakeholder engagement. "Governance" and "disclosure" suggest that transparency and ethical leadership are recurrent focal points. In contrast, the recurrence of "impact" and "determinants" indicates a strong interest in understanding causal relationships and evaluating effectiveness. Overall, the keyword analysis reveals that research in this area is widespread and thematically rich, emphasising both the operational (performance, management) and ethical (governance, responsibility) dimensions of sustainability discourse in corporate contexts.

Figure 15

Most Frequent Words



Note. This figure was created via Biblioshiny, where Arial font customization is not supported.

Figure 16, titled WordCloud, visually represents the most frequently occurring keywords in the literature, with the size of each word proportional to its frequency. The largest terms — "performance," "corporate sustainability," "management," "governance," and "social responsibility" — dominate the image, indicating their centrality to the research field. The prominence of "performance" reflects the scholarly preoccupation with evaluating the outcomes of sustainability efforts. In contrast, "corporate sustainability" and "social responsibility" signal the thematic backbone around which discussions of sustainable business practices and ethical corporate behaviour revolve. "Governance" and "disclosure" further reinforce the importance of transparency and accountability in corporate actions.

Surrounding these dominant terms are a wide variety of related concepts such as "determinants," "impact," "financial performance," and "framework," suggesting a multidisciplinary approach that spans organisational behaviour, finance, and strategy. Words like "innovation," "quality," and "business" hint at the expanding scope of sustainability research into areas of competitive advantage and operational excellence. The WordCloud thus encapsulates the field's broad yet interconnected thematic network, confirming that sustainability research is not confined to environmental issues alone but deeply intertwined with strategic management, performance measurement, and corporate governance discourses.

Figure 16

Word Cloud

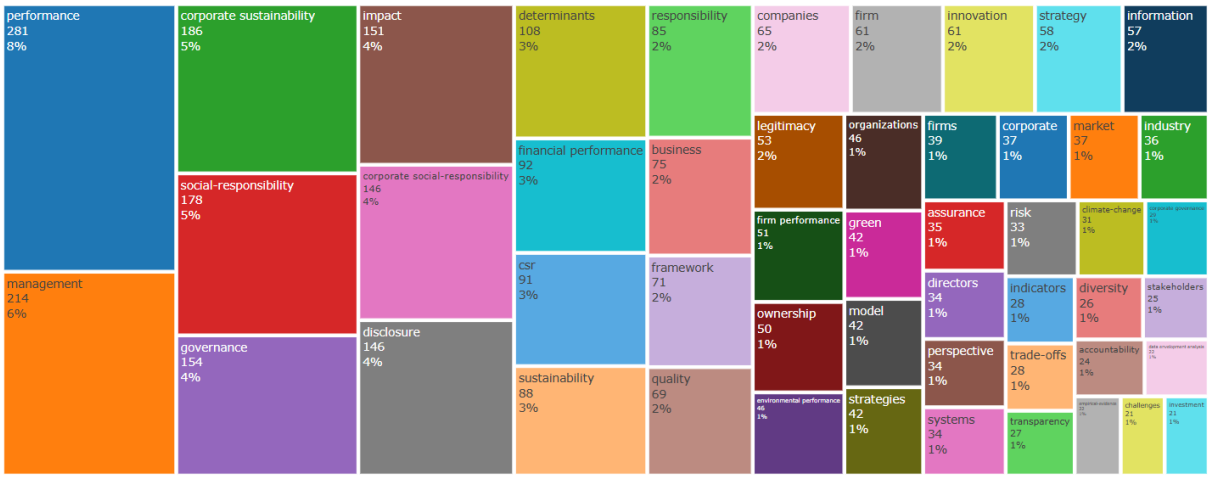
Note. Word cloud of search results. This figure was created via Biblioshiny, where Arial font customization is not supported.

Figure 17, titled TreeMap, offers a hierarchical visualisation of the most frequent keywords based on their occurrence. The size of each block corresponds to the relative frequency of the keyword, with "performance" occupying the largest space (8%), followed by "management" (6%), "corporate sustainability" (5%), and "social-responsibility" (5%). This distribution reinforces the prominence of performance measurement and managerial practices in sustainability research while highlighting the central focus on corporate social responsibility and sustainability strategies. The TreeMap format allows for a more intuitive grasp of the thematic weight of each concept, illustrating the layered complexity and relative emphasis within the literature.

Additionally, keywords such as "governance," "impact," "disclosure," and "financial performance" each contribute 3-4%, showcasing important subfields that complement the core themes. Smaller but still significant terms like "determinants," "legitimacy," "innovation," and "quality" illustrate the multifaceted nature of sustainability studies, reflecting broader concerns with organisational legitimacy, technological advancement, and operational excellence. The variety of keywords displayed, from "climate change" to "accountability" and "stakeholders," points to an interdisciplinary and evolving research agenda, capturing the diverse scholarly interest in how businesses integrate sustainability into their core strategies and operations.

Figure 17

Tree Map



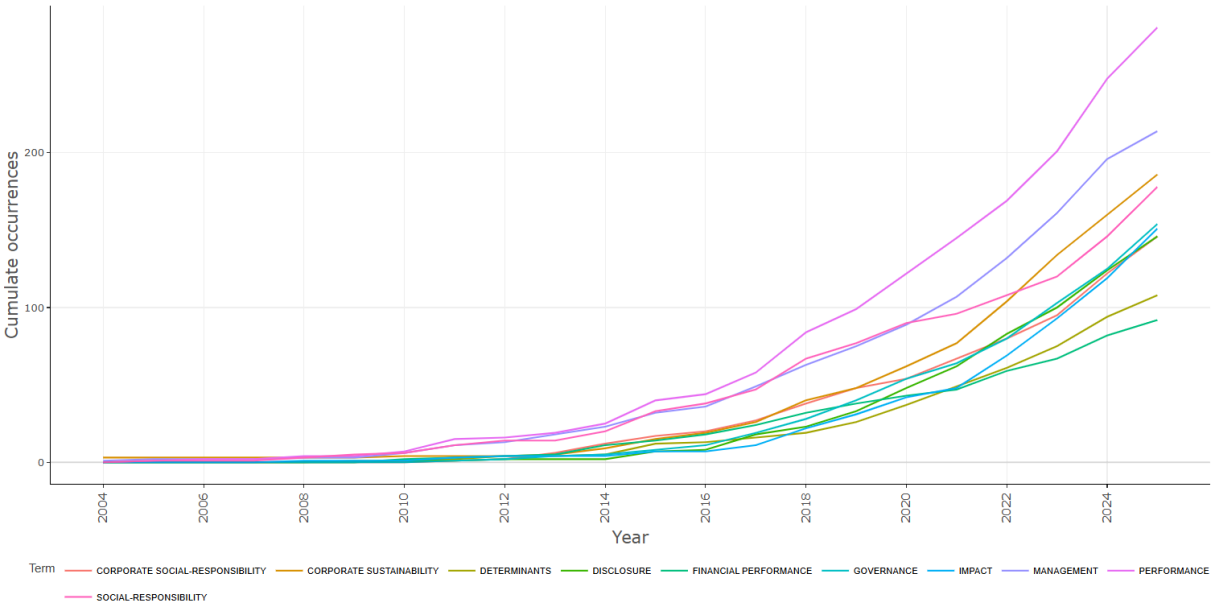
Note. This figure was created via Biblioshiny, where Arial font customization is not supported.

Figure 18, titled Words' Frequency over Time, shows the cumulative occurrences of key terms from 2003 to 2025. "Performance" and "Management" stand out with the steepest upward trajectories, particularly after 2015, indicating a growing research emphasis on evaluating corporate effectiveness and managerial strategies related to sustainability. "Social responsibility" and "Corporate sustainability" also show substantial, steady increases, reflecting the enduring importance of ethical obligations and long-term environmental and social objectives in corporate practices. The sharp acceleration of these terms in recent years suggests an intensified scholarly interest in how sustainability initiatives are integrated into organisational operations and measured for effectiveness.

Other terms such as "Governance," "Impact," "Disclosure," and "Financial performance" also exhibit upward trends, albeit at a more moderate pace. The consistent rise in "Governance" indicates an ongoing concern with how corporate structures and leadership influence sustainability outcomes. At the same time, "Disclosure" reflects the growing emphasis on transparency and accountability in sustainability reporting. The gradual increase in "Determinants" suggests an expanding inquiry into the factors driving corporate sustainability behaviour. Overall, this figure highlights the increasing volume of research in the field and a maturing focus on tangible outcomes, strategic management practices, and the broader societal and organisational implications of corporate sustainability efforts.

Figure 18

Words' Frequency over Time



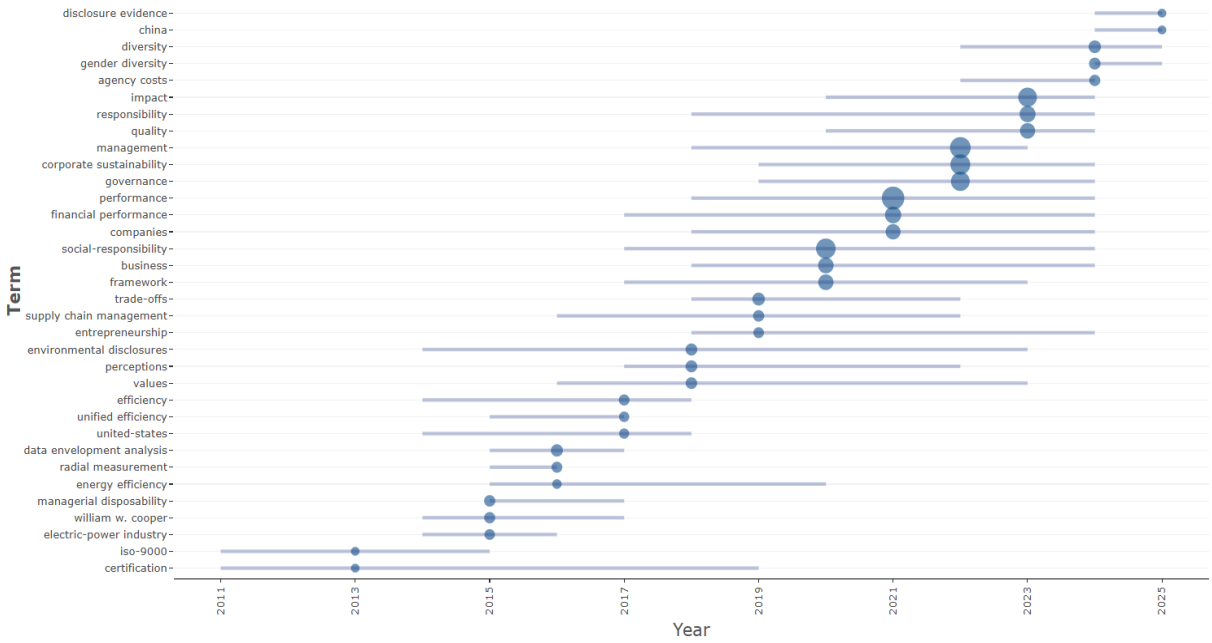
Note. This figure was created via Biblioshiny, where Arial font customization is not supported.

Figure 19, titled Trend Topics, captures the evolution of research themes over time by plotting the appearance and persistence of key terms. Larger circles indicate more prominent terms or have higher usage at specific time points. Early terms such as "certification," "iso-9000," and "energy efficiency" appeared around 2011–2013 but did not maintain long-term prominence. In contrast, terms like "performance," "management," "corporate sustainability," and "social responsibility" have shown sustained importance, persisting steadily into recent years. This long-term presence suggests that these topics form the backbone of the sustainability research field.

More recent trends highlight the emergence of contemporary themes such as "gender diversity," "agency costs," "impact," and "disclosure evidence" around 2022–2025, reflecting a growing focus on inclusion, financial efficiency, and transparency. The emergence of topics like "supply chain management" and "environmental disclosures" also suggests an expansion of the field into operational and reporting dimensions of sustainability. This figure demonstrates that while the field is anchored in long-standing core concepts, it is simultaneously evolving to incorporate emerging social, environmental, and governance concerns. This dynamic evolution underscores sustainability research's responsiveness to academic advancements and real-world global challenges.

Figure 19

Trend Topics



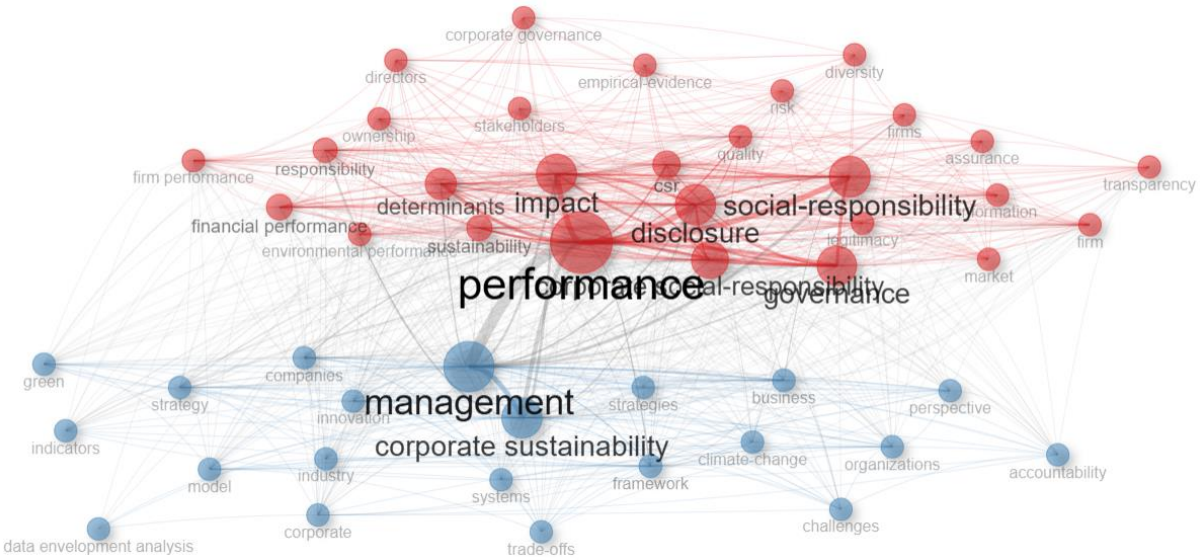
Note. This figure was created via Biblioshiny, where Arial font customization is not supported.

Figure 20, titled Co-occurrence Network, presents a network visualisation of keyword co-occurrences, illustrating the relationships and thematic clusters within the research field. The nodes represent keywords, while the edges (lines) indicate co-occurrence relationships, with larger nodes signifying more frequent terms. The network reveals two prominent clusters: the red cluster, focused on social responsibility, disclosure, governance, and determinants, and the blue cluster, centred around management, corporate sustainability, and business-related themes. "Performance" emerges as the most interconnected node, bridging the two clusters and indicating its central role across different thematic areas.

The red cluster emphasises ethical, reporting, and governance dimensions of sustainability research, suggesting a strong focus on transparency, legitimacy, and accountability. In contrast, the blue cluster is more oriented toward strategic management, innovation, and corporate operational practices. The clear division of clusters indicates a thematic bifurcation between social responsibility concerns and managerial-strategic approaches to sustainability. Additionally, the network density and strong linkages between key concepts demonstrate the interdisciplinary and interconnected nature of the research, where discussions on governance, responsibility, and performance are deeply intertwined with management practices and sustainability strategies.

Figure 20

Co-occurrence Network



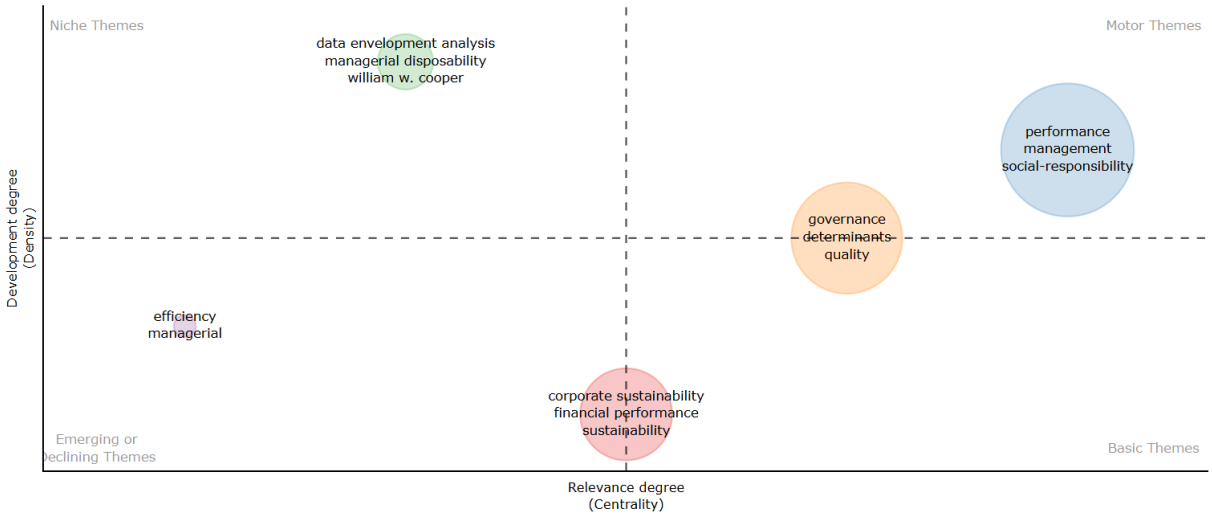
Note. This figure was created via Biblioshiny, where Arial font customization is not supported.

Figure 21, titled Thematic Map, provides a strategic diagram plotting research themes according to centrality (relevance degree) and density (development degree). In the top-right quadrant, performance, management, and social responsibility are positioned as motor themes—highly developed and important for structuring the field. Their high centrality and density indicate that these themes are both mature and critical to the intellectual structure, reflecting a well-integrated body of research with strong theoretical and empirical foundations. They represent the mainstream discourse in corporate sustainability research, encompassing core concepts that drive the field forward.

On the other hand, corporate sustainability, financial performance, and sustainability appear in the bottom-right quadrant as basic themes. Although these topics have high centrality (indicating broad relevance across studies), they have a lower density, suggesting that while important, their internal development may still be expanding. In the upper-left quadrant, data envelopment analysis and managerial disposability are considered niche themes—specialised and internally developed topics but less central to the field. Finally, in the bottom-left quadrant, efficiency and management are positioned as emerging or declining themes, indicating lower development and relevance, potentially representing nascent or fading research areas. This thematic distribution offers insight into the maturity and interconnectedness of different research areas, showing where the field is robust and may need further exploration or revitalisation.

Figure 21

Thematic Map



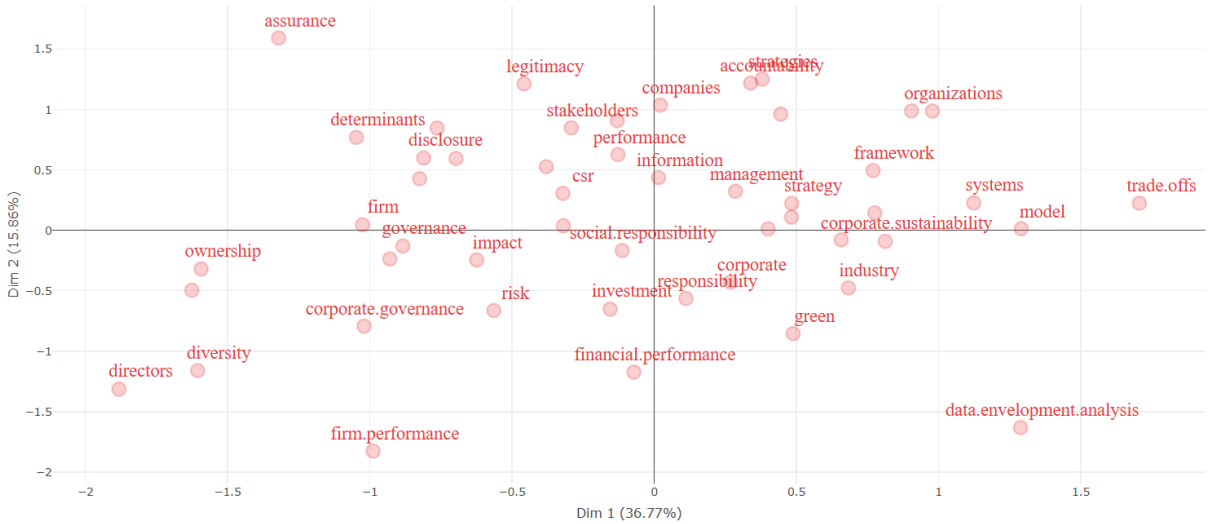
Note. This figure was created via Biblioshiny, where Arial font customization is not supported.

Figure 22, titled Factorial Analysis, presents a two-dimensional correspondence analysis map that spatially arranges keywords based on their co-occurrence patterns. Dimension 1 (horizontal axis) explains 36.77% of the variance, while Dimension 2 (vertical axis) explains 15.86%, capturing major underlying structures in the data. Keywords that are closer together share stronger semantic relationships. For instance, performance, social responsibility, management, and corporate sustainability are closely grouped near the centre, reflecting their interconnectedness and core position within the field's discourse. These centrally located terms act as thematic anchors, indicating that most studies discuss these concepts in close relation.

In contrast, terms like data envelopment analysis and firm performance are situated on the periphery, suggesting they are less integrated into the central research discourse, potentially representing more specialised or emerging areas of study. Similarly, directors, ownership, and diversity cluster on the left side, indicating a distinct sub-theme focused on corporate governance and diversity issues. The spatial dispersion of terms reveals the multidimensional and interdisciplinary nature of the research field, where clusters of related concepts coexist around a central core, reflecting both established and evolving areas of academic interest in corporate sustainability and responsibility.

Figure 22

Factorial Analysis



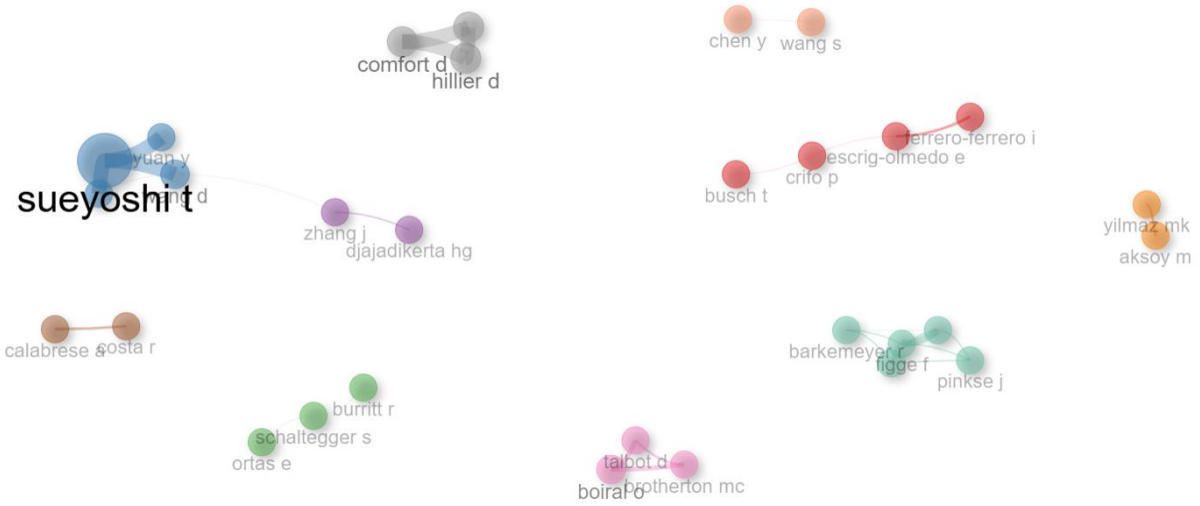
Note. This figure was created via Biblioshiny, where Arial font customization is not supported.

Figure 23, titled Collaboration Network, visualises the co-authorship relationships among researchers in the field. Each node's size represents an author's productivity or prominence, while the lines connecting them indicate collaborative ties. Sueyoshi T. stands out with the largest node and the densest network, signifying a leading publication volume and collaboration intensity position. His network is notably larger and more connected than others, suggesting a central role in fostering collaborative research within corporate sustainability and responsibility. Other smaller but distinct clusters form around authors like Schaltegger S., Boiral O., and Barkemeyer R., reflecting localised but active collaboration groups.

The figure also highlights a fragmented collaboration structure, with many clusters in relative isolation. For instance, pairs such as Calabrese A. and Costa R. or Chen Y. and Wang S. represent dyadic collaborations rather than broader networks. This fragmented nature suggests that while there are key hubs of cooperation, much of the research is conducted in smaller, tight-knit groups rather than in large, interconnected networks. Encouraging more cross-cluster collaboration could enhance knowledge exchange and foster a more integrated research community, facilitating more prosperous and diverse academic contributions in the field.

Figure 23

Collaboration Network



Note. This figure was created via Biblioshiny, where Arial font customization is not supported.

Results and Discussions

This study contributes to the growing body of knowledge on corporate sustainability by offering a comprehensive bibliometric and network-based analysis of the field between 2003 and 2025. Using R-based biblioshiny tools and data from the Web of Science, the research systematically mapped sustainability research's intellectual, thematic, and social structure within corporate contexts. The results affirm corporate sustainability's evolving complexity and multidimensionality, emphasising its transition from a predominantly conceptual and ethical concern to a strategic imperative embedded across governance, operational, and financial domains.

The findings demonstrate that corporate sustainability is increasingly shaped by an integrated perspective combining environmental, social, economic, and governance (ESG) dimensions. The co-occurrence of keywords such as "performance," "governance," "management," and "financial disclosure" indicates that sustainability is no longer treated as a peripheral responsibility but is positioned as a central component of corporate strategy. This aligns with existing literature emphasising the convergence of ethical accountability, stakeholder engagement, and long-term value creation (Dyllick & Hockerts, 2002; Eccles et al., 2014). Furthermore, the thematic evolution of keywords such as "gender diversity," "tax strategy," and "agency cost" reflects the expansion of sustainability into areas of equity, transparency, and economic governance—suggesting that future research may increasingly draw from disciplines like finance, public policy, and behavioural economics.

Geographically, the dominance of North American and European scholars underscores existing inequalities in global research output. While countries such as the United States, the United Kingdom, and Germany maintain leadership in scholarly production, the underrepresentation of developing regions signals a critical gap in inclusive sustainability discourse. This calls for deeper transnational research collaboration and funding mechanisms that amplify voices and contexts from the Global South. The fragmented structure of

international co-authorship networks identified in this study further underscores the need for integrated global partnerships in addressing sustainability challenges.

The presence of high-frequency terms related to “waste,” “innovation,” and “resilience” indicates the rising influence of strategic frameworks such as circular economy and dynamic capabilities in the literature. These thematic trends suggest a transition towards systemic and adaptive models of sustainability implementation, aligning with emerging concepts in sustainability transitions theory.

While this study adopts a bibliometric and network-based methodology, the findings align with and complement recent qualitative and mixed-methods research in corporate sustainability. For instance, the observed emergence of themes such as "stakeholder equity," "transparency," and "governance reform" echoes the emphasis on dynamic materiality—the evolving nature of ESG issues based on stakeholder salience—as explored in qualitative studies by Khan et al. (2021) and Eccles & Krzus (2022). Similarly, the growing academic attention to performance, innovation, and leadership reflects broader concerns highlighted in case-based corporate transformation research (e.g., Whiteman et al., 2021), which documents the internal cultural and strategic shifts organisations undertake to operationalise sustainability. These convergences suggest that bibliometric mapping and interpretive case research can jointly enrich the understanding of how sustainability transitions are conceptualised, institutionalised, and practiced over time.

Compared to prior bibliometric studies such as Schaltegger and Burritt (2005), and Montiel and Delgado-Ceballos (2014), this research offers a more granular mapping of thematic evolution, particularly by integrating the ESG dimensions within a longitudinal network framework. Unlike earlier reviews that focused on conceptual synthesis, the findings draw attention to the emerging salience of issues like gender equity, tax strategy, and digital accountability—trends that remain underexplored in earlier models. Additionally, the dominance of North American and European institutions is consistent with earlier geographic patterns, yet the results highlight a gradual rise of Global South participation, reflecting a more diversified research ecosystem. This comparative positioning strengthens the unique value of the analysis.

In sum, by integrating bibliometric mapping with thematic and geographic analysis, the study not only reveals the evolving intellectual structure of corporate sustainability literature but also translates these insights into strategic entry points for scholarly and policy engagement. These contributions distinguish the present analysis from previous reviews and offer a roadmap for future cross-disciplinary dialogue.

In conclusion, this research highlights the maturing nature of corporate sustainability as both a scholarly domain and a corporate practice. The increasing convergence of ESG pillars and the diversification of thematic clusters suggest that the field is entering a phase of strategic refinement and interdisciplinary integration. For academics, this presents opportunities to bridge existing gaps through empirical research on underexplored topics such as digital sustainability, social equity, and climate resilience. For practitioners and policymakers, the findings provide evidence of the growing necessity to embed sustainability within corporate governance and performance frameworks. Future research may benefit from triangulating bibliometric insights with case studies, interviews, or econometric models to unpack further the dynamics driving sustainable corporate transformation.

Practical Implications for PolicyMakers

The findings of this study carry actionable implications for policymakers, particularly in emerging economies seeking to enhance their corporate sustainability agendas. First, the underrepresentation of developing countries in sustainability research underscores the need for government-supported international research collaborations. National research councils and development agencies are encouraged to incentivize co-authorship and joint projects with institutions in the Global North through bilateral grant schemes or academic mobility programs.

Second, the fragmented ESG discourse observed in the co-occurrence and thematic maps suggests a lack of harmonized standards. This challenge may be addressed by adopting or localizing international ESG reporting frameworks, such as the GRI Standards or IFRS Sustainability Disclosure Standards, and by mandating ESG disclosure for listed and large firms. In parallel, investing in national ESG data repositories can facilitate benchmarking and enable evidence-based policy evaluation.

Third, the dominance of keywords like "performance" and "management" in emerging clusters indicates a shift toward strategic integration of sustainability. Accordingly, governments should support capacity-building programs for corporate managers and board members, promoting ESG training, sustainability leadership, and sector-specific implementation roadmaps.

Lastly, the low modularity of collaboration networks in many regions suggests siloed knowledge production. National science policy strategies should therefore prioritise regional sustainability research hubs and cross-border knowledge-sharing platforms, enabling researchers and practitioners to co-create locally relevant sustainability solutions.

Recommendations for Key Stakeholders

The findings of this study offer several insights for key stakeholder groups:

Researchers are encouraged to explore underrepresented themes (e.g., tax governance, stakeholder equity, data privacy) using mixed-method approaches to complement bibliometric insights. There is also a need to conduct in-depth qualitative investigations on emerging clusters identified through this analysis.

Practitioners—especially sustainability officers and CSR professionals—may use the identified thematic clusters as a benchmarking tool to align internal strategies with evolving stakeholder expectations and reporting norms.

Policymakers, particularly in emerging economies, should invest in ESG capacity-building programs, data standardization efforts, and regional research hubs to close the geographical research gap.

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