Manuscript ID:
TIJCMBLIR-2025-020302

Volume: 2

Issue: 3

Month: June

Year: 2025

E-ISSN: 3065-9191

Submitted: 05 may 2025

Revised: 25 may 2025

Accepted: 10 June 2025

Published: 30 June 2025

Address for correspondence:
Gauri Gupta
Research Scholar, School of Commerce, HNB Garhwal University, Srinagar, Uttarakhand, India
Email:
gauriresearch0502@gmail.com

DOI:
10.5281/zenodo.15771510

DOI Link:
https://doi.org/10.5281/zenodo.15771510

OPEN ACCESS

Creative Commons (CC BY-NC-SA 4.0):
This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International Public License, which allows others to remix, tweak, and build upon the work noncommercially, as long as appropriate credit is given and the new creations ae licensed under the identical terms.

A Bibliometric Analysis of ESG Reporting and Corporate Performance: Trends, Themes, and Gaps

Gauri Gupta[1] Rinki Joshi[2] Dr. Vaishali[3]
[1]Research Scholar, School of Commerce, HNB Garhwal University, Srinagar, Uttarakhand, India
[2]Research Scholar, School of Management, Doon University, Dehradun, Uttarakhand, India
[3]Assistant Professor, School of Management, Doon University, Dehradun, Uttarakhand, India

Abstract

This study explores the evolving relationship between Environmental, Social, and Governance (ESG) disclosure and corporate performance using a bibliometric approach. Because ESG reporting has gained increasing importance among investors, regulators, and stakeholders, understanding its impact on business outcomes has become critical. The research analyzes the literature from 2016 to 2024, extracted from the Scopus database, to provide a comprehensive overview of scholarly developments in this domain. Through descriptive and performance analyses, the study identifies key trends, influential authors, leading institutions, and highly cited publications that have shaped the ESG-performance discourse. Advanced bibliometric techniques, such as co-authorship analysis, bibliographic coupling, citation, and co-citation analysis, are employed to map the intellectual structure and collaboration patterns within the field. The findings reveal a growing convergence between sustainability reporting and strategic corporate objectives, highlighting both positive performance correlations and unresolved challenges. The study concludes by outlining key research gaps, methodological limitations, and future directions, including the need for industry-specific ESG metrics and longitudinal performance studies. This study contributes to the academic and practical understanding of ESG's strategic relevance, offering valuable insights for policymakers, corporate leaders, and scholars interested in responsible business practices and long-term value creation.

Keywords: *ESG Reporting, Sustainability Reporting, Bibliometric analysis, Environmental, Social, and Governance reporting, Firm Performance,*

Introduction

Environmental, social, and governance (ESG) disclosure has grown in importance, as stakeholders call for increased responsibility and transparency in company activities. Over the past 20 years, businesses worldwide have come to understand that ESG disclosure is a strategic tool that may have a significant influence on company performance instead of just being a legal necessity. Businesses have stronger connections with investors, regulators, consumers, and workers when they reveal more information about their environmental sustainability programs, social obligations, and governance procedures. This can improve their financial results (Eccles, Ioannou, & Serafeim, 2014).

As the global emphasis on sustainability and ethical business conduct grows, ESG issues are becoming more factored into corporate decision making. Public authorities, capitalists, and regulatory agencies have been recommended for greater transparency because they recognize how essential ESG elements decide a company's long-term growth. The European Union enacted the Non-Financial Reporting Directive (NFRD) in 2014, prescribing large public firms to report on non-monetary variables such as social and ecological performance. As a consequence of this judicial push, ESG reporting has become poor as businesses strive to align better with universal sustainability goals and upgrade their character among representatives (Lozano 2015).

In the context of investing, ESG disclosure is being progressively used to assess a company's moral and viable policies.

How to Cite this Article:
Gupta, G., Joshi, R., & Vaishali. (2025). A Bibliometric Analysis of ESG Reporting and Corporate Performance: Trends, Themes, and Gaps. The International Journal of Commerce Management and Business Law in International Research, 2(3), 5–17. https://doi.org/10.5281/zenodo.15771510

Large asset managers such as Vanguard and BlackRock incorporate ESG considerations into their investing policies, supposing that businesses with high ESG performance are superior positioned to minimize risks while ultimately making capital out of opportunities in the end (Amel-Zadeh and Serafeim, 2018). The excessive growth of sustainable investment, which is anticipated to rise from $35 trillion in 2020 to $50 trillion by 2025, reflects an increase in investors' perspectives (Bloomberg Intelligence, 2021).

Beyond securities markets, ESG disclosure has become important because firms are under pressure from customers and employees to adopt sustainable practices. Research also suggests that companies with high ESG lucidity outperform their competitors in operational productivity, employee happiness, and customer care. (Edmans et.al., 2011) companies with higher levels of employee satisfaction, a critical social measure in ESG, constantly exceed those with lower levels of satisfaction. Although, organizations that prioritize environmental performance, such as reducing carbon emissions and protecting natural resources, usually see cost savings and better operational effectiveness, which greatly enhances financial performance (Friede, Busch, & Bassen, 2015).

The popularity of ESG disclosure has provoked much research interest, with scholars examining the relationship between economic performance and ESG practice transparency. According to past research, ESG disclosure may raise a company's value by highlighting its brand image, attracting long-term investors and competitors, cutting funding costs, and enhancing risk management. Eccles et al. (2014) found that organizations that lead the way in sustainability surpass their competitors over time in both financing and marketing criteria. This study supports the assumption that ESG disclosure correlates with greater economic performance, while also displaying a company's dedication to sustainability.

Given the growing importance of ESG disclosure in determining corporate success, this bibliometric analysis attempts to provide a comprehensive assessment of the current literature on this issue. The analysis provides significant insight into how ESG disclosure influences business performance by evaluating publishing patterns, citation metrics, and key themes, as well as recommendations for future research.

Review of Literature

ESG and Firm Performance (2014–2024)

The recent decade (2014–2024) saw a major increase in studies on the link between environmental, social, and governance (ESG) variables and firm performance. The article attempted to examine a variety of variables, including financial measures, industry impacts, and investor conduct, but it also provided an understanding of the subtle role ESG plays in organizational performance.

Investigations of ESG and Financial Measures, 2014–2017

Early research conducted during this time made it possible to understand the effect of ESG on organizational performance. ESG practices have been shown to improve interconnection with associates and operational efficiency, which, in turn, can boost financial performance (Friede et al., 2015). Most studies showed favorable results, and almost 90% identified a positive association between ESG and financial prosperity. Additionally, Eccles et al. (2014) revealed that companies with high sustainability perform in the financial market and in accounting profitability than their competitors with poor sustainability.

2018–2020: Regional and Sectoral Approaches

At the beginning of 2018, academics investigated geographical and sector-specific differences in the influence of ESG. Liang and Renneboog (2018) discovered that governance was decisive in determining the financial gains of ESG operations, particularly in advanced markets. In contrast, research on developing nations, as conducted by Boubaker et al. (2019), revealed that in areas with spotlight regulations, social and environmental issues have a greater effect on business valuation. According to Gupta et al. (2020), companies in India with larger market-to-book value ratios and profitability revealed more data related to ESG. However, leverage and foreign institutional investment (FII) have a bleak impact on ESG transparency, indicating that companies with greater borrowing capacity or FII are less likely to reveal. According to Yoon et al. (2020), ESG had a favorable impact on market performance, but it had conflicting results for accounting-based metrics such as ROA and ROE.

2021–2022: COVID-19 pandemic and ESG

The COVID-19 pandemic has provided a particular perspective for assessing ESG's function of ESGs in emergency situations. Businesses with well-built ESG policies have proved more resilient throughout the pandemic, revealing lower stock prices and faster recovery rates (Cheema-Fox et al., 2021). Azmi et al. (2021) found that ESG disclosure boosted business performance by approximately 4% in Malaysia, highlighting its significance in achieving an advantage over competition. Unsystematic connections were also the subject of this study. For instance, Xie et al. (2022) highlighted that environmental factors showed a U-shaped alliance with company success, indicating decreasing returns beyond a particular investment threshold, whereas social and governance elements showed positive correlations with firm performance. The association between (ESG) ratings and financial success are also positively mitigated by ESG-focused investors interested in ESG (Wang et al., 2022).

2023–2024: Advanced Models

Recent research has used more advanced approaches to understand how ESG affects company performance. According to Tang et al. (2024), there are differences in the financial advantages of ESG disclosure based on the business and level of exposure to ESG risks. Zhang et al. (2023) performed a meta-analysis until 2024, emphasizing how ESG evaluations and the variance across rating agencies affect investor decisions. Creditworthiness and cost of borrowing have also been the subject of research. Li et al. (2024), for example, demonstrated that lenders are increasingly considering ESG disclosure when evaluating creditworthiness, which plunges businesses to accept sustainable practices. Furthermore, regulations that promote ESG integration are necessary, especially in areas like Southeast Asia, where ESG acceptance is still developing, as stated by Khan et al. (2024).

Research Methodology

1. **Data collection and search strategy**
   The data for this study were retrieved from SCOPUS in October 2024, which was chosen as the search engine because it is the most widely accepted and frequently used database for financial research (Bahoo et al., 2020; Khan et al., 2022). Ensure the inclusion of the most relevant high-quality research and comprehensive coverage of the topic. The timeframe for the document search was set between 2016 and 2024 (until October 2024), a timeframe marked by increasing global emphasis on sustainability and regulatory developments, such as the Paris Agreement in 2015 and the European Union's Sustainable Finance Disclosure Regulation (SFDR), which took effect in 2021 (Busch et al., 2021). The combinations of keywords and Booleans used for the document search included "ESG disclosure" OR "Sustainability disclosure" AND "Firm Performance".
2. **Inclusion and Exclusion Criteria**
   To explore the influence of ESG disclosures on business performance, we relied solely on peer-reviewed journal papers. Our selection criterion prioritized works available solely in English. Additionally, we eliminated conference papers, books, book chapters, and articles in press to guarantee the quality and applicability of the chosen literature, which resulted in a thorough comprehension of the state of affairs regarding the contribution of ESG Disclosure to business performance.
   The steps of the execution procedure followed to determine the final number of documents are shown in Fig. 1. Ultimately, 64 publications were chosen to study the current situation regarding the effect of ESG disclosure on business success.
3. **Bibliometric Analysis Tools**
   VOSviewer and Bibliometrix (Biblioshiny), and two comprehensive bibliometric analysis tools (Waltman, L., et al 2010; Aria, M., & Cuccurullo, C. 2017), were used to analyze the bibliometric data. Although Bibliometrix was used for descriptive analysis, such as determining the most influential articles, authors, and journals during a specific timeframe, VOSviewer was used to generate visual representations of the co-authorship, citation, and keyword co-occurrence networks. By combining these techniques, we have the ability to look at publication and citation trends, uncover significant research clusters, and uncover fresh topics.

Data Analysis

The two major techniques of bibliometric analysis are performance and descriptive analyses (Biju, H. et al 2024). Scopus and Bibliometrix were used for descriptive analysis, whereas VOSviewer was used for performance (science mapping). Fig. 1 illustrates the types of analyseis performed using descriptive and performance analysis techniques.

Descriptive Analysis

We conducted a descriptive analysis of the literature using Bibliometrix. This included examining the annual growth of publications, identifying the most productive authors, institutions, and journals, and analyzing the geographical distribution of research. The primary publication information is listed in Table 1. This study examined the effect of ESG disclosures on corporate performance, including participation from 50 journals worldwide. A relatively small number of writers (185) and a group of three co-authors per document were involved in the annual increase in the number of publications annually (1.95 on average) between 2016 and 2024, with an annual growth rate of 47.98%. Despite the modernity of ESG and its disclosure idea, the topic's effect is significant, with an average of 31.09 citations per article.

Table 1: Core Information

Description	Results
CORE INFORMATION ABOUT DATA	
Timespan	2016:2024
Sources (Journals, Books, etc)	50
Documents	64
Annual Growth Rate %	47.98
Document Average Age	1.95
Average citations per doc	31.09
References	4400
DOCUMENT CONTENTS	
Keywords Plus (ID)	71
Author's Keywords (DE)	184
AUTHORS	
Authors	185
Authors of single-authored docs	6
AUTHORS COLLABORATION	
Single-authored docs	7
Co-Authors per Doc	3

Table 1: Core Information	
Description	**Results**
International co-authorships %	18.75
DOCUMENT TYPES	
Article	64
Source: Biblioshiny	

Year wise articles and citation

The timeline of publication of the selected articles ranged from 2016 to 2024 (until October 2024), as depicted in Fig. 1. Among all years, 2024 (until October) had the highest number of documents published (23 articles). A tremendous increase in the number of published documents has shown a growing interest and pivot of researchers in the topic of research. Although the number of documents increased after 2021, there was an evident decline in the average citations per year of documents published. This shows that none of the new areas has been fully explored.

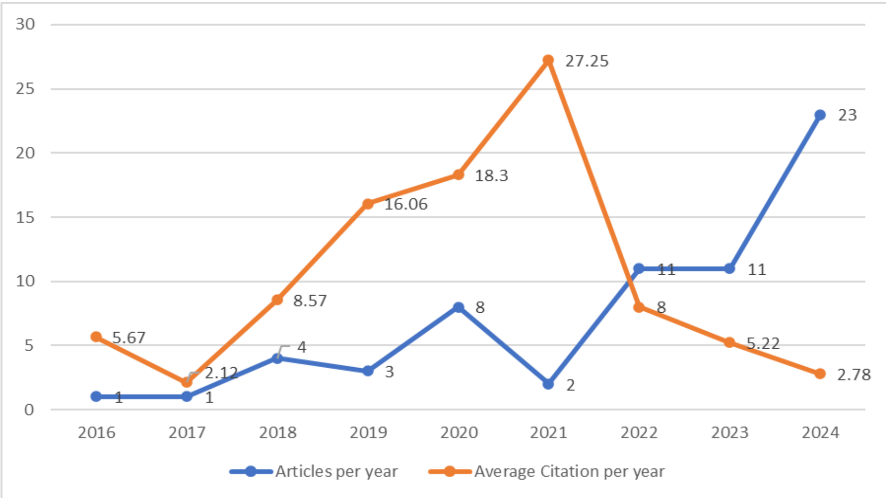

Fig. 1: ***Article production and Average citation per year*** *(till October 2024)*

Country-wise articles and authors's affiliation

Fig. 2 displays the top ten nations, whereas Fig. 3 depicts the authors' connections based on publications. India has the highest participation in articles (17). The list of publications by nation continues with Malaysia, Bahrain, and Indonesia, whose contributions are less significant than those of India (Fig. 3). Bahrain, Indonesia, Italy, and the United Kingdom all contributed equally (with five pieces of apiece). Ahlia University of Bahrain leads the affiliation top ten list (Fig. 4) with four papers, followed by Malaysia's Universiti Malaysia Terengganu with three. The limited number of published publications (64) from a wide variety of nations demonstrates a lack of collaboration in research.

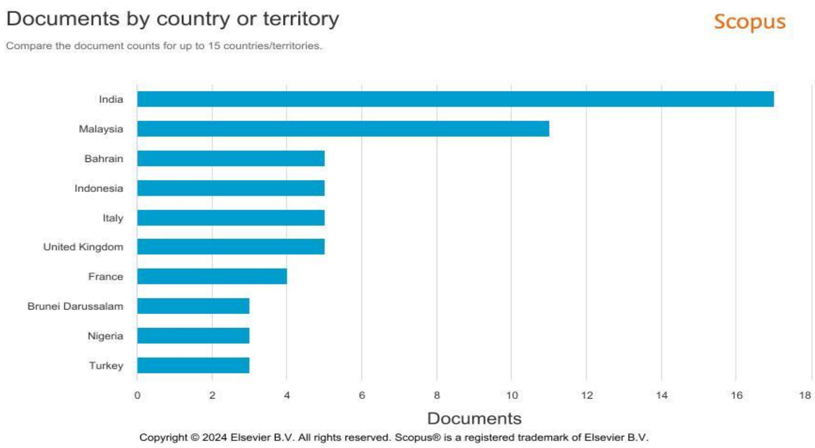

Fig. 2: ***Top 10 Country-wise articles*** **(***Source: Scopus***)**

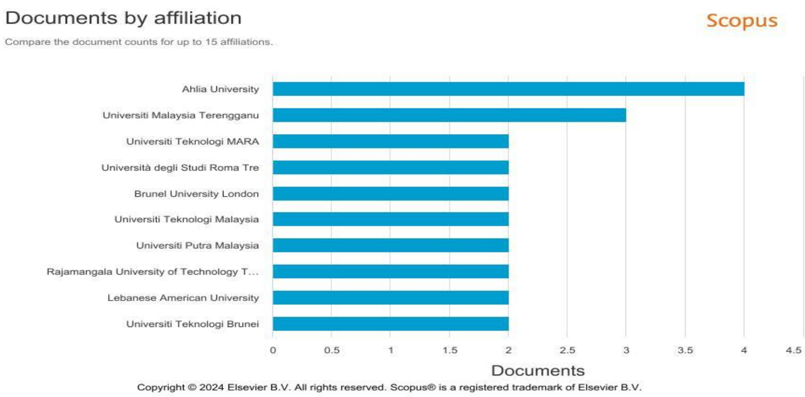

Fig. 3: ***Top 10 Articles by Authors's Affiliation*** **(***Source: Scopus***)**

Core Journals

The top ten journals based on the number of articles published on the subject of this study are listed in Table 2. This demonstrates that these top ten journals produced 23 papers out of a pool of 64, accounting for around 35% of the publications and indicating the topic's newness. Sustainability, published by the MDPI, exceeded the list with four papers and 160 citations, abiding by Business Strategy and Development, which had three articles and five citations. Among them, Corporate Governance (Bingley), published by Emerald, stands out, with an H-index of 2 for the two articles with the highest citation (337).

Table 2: Top 10 Journals with number of articles

Sources	**Articles**	**H-index**	**Total Citations**
Sustainability (Switzerland)	4	4	160
Business Strategy and Development	3	1	5
Business Strategy and The Environment	2	2	69
Cogent Business and Management	2	2	25
Cogent Economics and Finance	2	2	14
Corporate Governance (Bingley)	2	2	337
Corporate Social Responsibility and Environmental Management	2	2	194
International Journal of Accounting and Information Management	2	1	215
International Journal of Innovative Research and Scientific Studies	2	1	9
Meditari Accountancy Research	2	2	10

Top Cited Articles

The articles that received the most references, both in absolute and relative terms (citations annually), are listed in Table 3. Overall and in comparative contexts, the most referenced work is Alareeni and Hamdan (2020), with 282 citations, followed by Albitar K. et al. (2020), with 215 citations. However, when we compare the top ten papers using the Field-Weighted Citation Impact (FWCI), the order changes. The top two places remain intact, with Pulino et al. (2022) in third place (89 citations).

Table 3: Top 10 Cited articles

Authors	**Source Title**	**Cited by**	**Average Citation per year**	**FWCI**
Alareeni B.A.; Hamdan A. (2020)	Corporate Governance (Bingley)	282	56.4	14.38
Albitar K.; Hussainey K.; Kolade N.; Gerged A.M. (2020)	International Journal of Accounting and Information Management	215	43	13.2
Brogi M.; Lagasio V. (2019)	Corporate Social Responsibility and Environmental Management	189	41	7.92
Mohammad W.M.W.; Wasiuzzaman S. (2021)	Cleaner Environmental Systems	164	31.5	10.39
Karaman A.S.; Kilic M.; Uyar A. (2018)	Sustainability Accounting, Management and Policy Journal	105	29.67	3.31

Buallay A. (2020)	International Journal of Productivity and Performance Management	99	24	4.73
Pulino S.C.; Ciaburri M.; Magnanelli B.S.; Nasta L. (2022)	Sustainability (Switzerland)	89	21	10.46
Buallay A. (2019)	Journal of Applied Accounting Research	74	19.8	2.98
Al Hawaj A.Y.; Buallay A.M. (2022)	Journal of Sustainable Finance and Investment	63	17.33	7.94
Fahad P.; Busru S.A. (2020)	Corporate Governance (Bingley)	55	15	2.67

Performance Analysis

Keyword Analysis

Fig.4 showing minimum 2 keywords of the threshold limit of 239 keywords, The research visualization reveals the interconnections of firm performance with ESG-related themes, as well as the evolving emphasis on sustainability and governance in business research. The term "firm performance" is central to this network, with numerous connections to other topics. Key areas of focus in the study of firm performance include ESG disclosure, sustainability reporting, and environmental, which explore how responsible environmental practices, transparency, and governance affect financial and operational outcomes. Other notable clusters include "corporate social responsibility (CSR)" and "legitimacy theory," which emphasize theoretical frameworks and practices associated with corporate ethics, social responsibility, and maintaining legitimacy in society. The term "industrial performance" is located within the red cluster, indicating a focus on specific sectoral or regional studies related to firm and industrial outcomes. The network emphasizes how ESG research is interdisciplinary, including topics such as disclosure procedures, performance indicators, and theoretical perspectives on corporate responsibility.

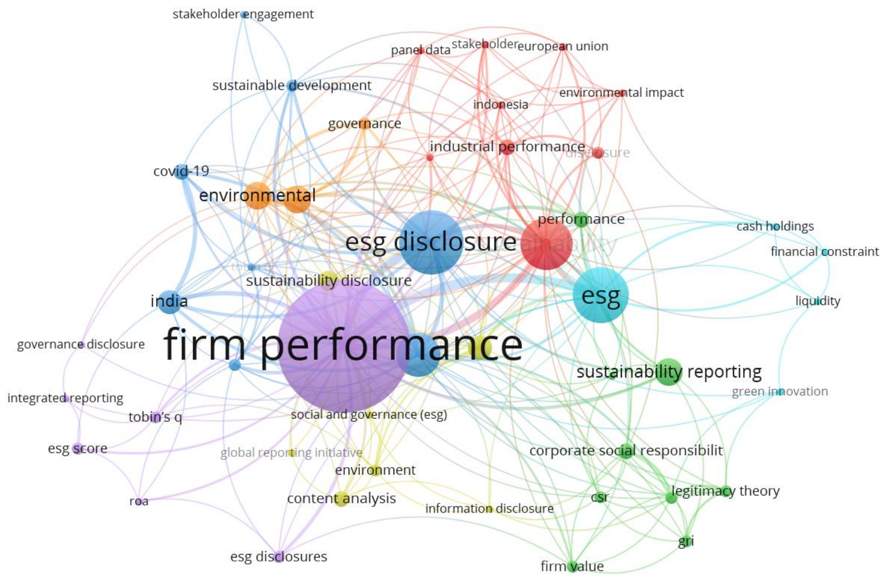

Fig. 4: ***Cartography analysis of keywords with 2 minimum co-occurring***
(Source: VOS viewer)

Citation Analysis of Documents

Important papers with a large number of citations are highlighted in the bibliometric network visualization (Fig.5) because they are important sources of information for this research network. With connections to several other authors and a notable impact on the literature, Alareeni (2020) is the most cited work (Table 4). Their wide-ranging relationships imply that they offer fundamental ideas or techniques that have been the basis of several further investigations. With a high number of citations and solid linkages, Albitar (2020) is well known, demonstrating its applicability and impact in related fields. The clustering of these papers, particularly that of Buallay (2019, 2020) and Brogi (2019), indicates that authors play a key role in developing research frameworks or trends that are regularly cited in other studies. Despite having fewer connections, documents such as Laskar (2018), Giron (2021), and Mohammad (2021) are significant within this network's smaller subgroups. This citation and co-citation pattern demonstrate how important information dissemination hubs Alareeni and Albitar's papers, supporting a significant portion of the research landscape. Based on the authors' recurrent citation patterns, network analysis identifies major themes or issues in the literature, most likely concentrating on related fields of management, sustainability, and finance.

Table 4: Most cited documents

Document	Citations	Links
Alareeni (2020)	282	10
Albitar (2020)	215	7
Li (2024)	5	7
Buallay (2019)	74	4
Veeravel (2024b)	3	4
Oware (2023)	2	4
Brogi (2019)	189	3
Buallay (2020)	99	3
Uwugibe (2018)	41	3
Narula (2024)	24	3
Fumagalli (2023)	0	3

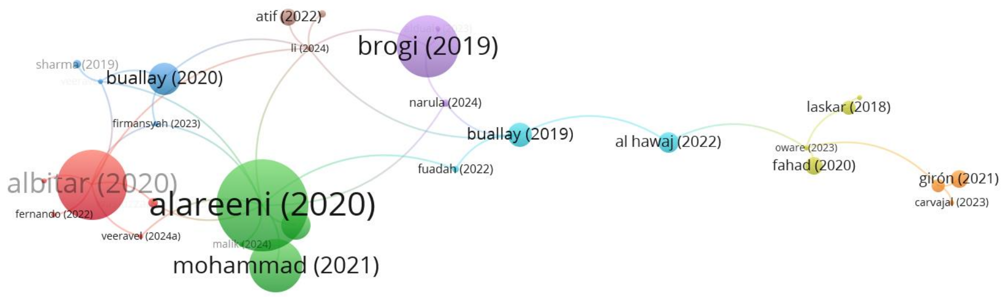

Fig. 5: ***Citation analysis of documents*** **(***Source: VOS Viewer***)**

Co- authorship analysis

The co-authorship network visualization from the VOS viewer illustrates the collaborative relationships between various authors, highlighting the patterns and clusters of academic cooperation (Fig. 6 and Table 5). Each node represents by an author, and the size of the node indicates how frequently they are connected to other writers. The diagram focuses on key researchers with at least 185 connections, with prominent clusters suggesting distinct collaborative groups within similar research fields or institutions. The connections between clusters also provide insight into interdisciplinary collaborations, with links connecting Khatib and Saleh F. A. to authors from green and blue clusters indicating cross-disciplinary work. The structure of this network emphasizes the influence of central authors who act as collaborative hubs, fostering the cross-pollination of ideas and contributing significantly to the field's academic network.

Table 5. Co- Authorship of authors

Author	Documents	Citations
Khatib, Saleh F. A.	2	28
Abbasi, Bilal Ahmed	1	55
Alodat, Ahmad Yousef	2	29
Asiriuwa, Osariemen	1	41
Aslam, Ejaz	1	55
Aziz, Shahab	1	55
Bilal, Kanwal	1	55
Emmanuel, Ozordi	1	41
Eyitomi, Gbenedio Akpewenoghene	1	41
Irshad, Adil	1	55

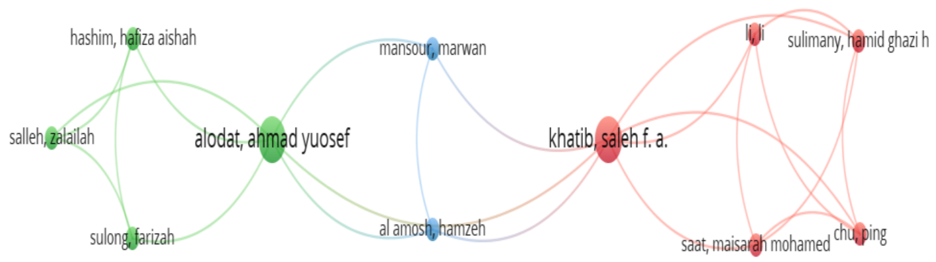

Fig.6: ***Co- authorship analysis of Authors*** **(***Source: VOS Viewer***)**

Co-Citation Analysis

The co-citation network visualization (Fig. 7 and Table 6) highlights important references based on how often they are cited together, highlighting important authors and pieces of work within the research domain. With their names at the center of the blue cluster, Friede, Busch, and Bassen are highly cited references, likely contributing significant insights on sustainability, environmental, or social governance. Fatemi, Glaum, and Kaiser are prominent in the yellow cluster, suggesting that their work may be foundational in financial reporting or disclosure themes. Porter and Kramer are prominent in the green cluster, indicating their influential role in strategic management or corporate social responsibility (CSR) concepts, connecting to numerous authors and linking different research streams. Co-citation network visualization highlights important references based on how often they are cited together, highlighting important authors and pieces of work within the research domain. Considering that their names are linked to other significant figures in this field, Ameer and Othman in the red cluster are particularly noteworthy and indicate a focus on sustainable methods. The clusters show different but related themes: red indicates sustainability impacts and determinants, yellow indicates financial performance and accounting standards, green indicates strategic management and sustainability frameworks, and blue indicates corporate governance and environmental disclosure. This network demonstrates the interwoven nature of research on sustainability, finance, and corporate governance by highlighting the substantial multidisciplinary overlap, even if each reference makes a distinct contribution.

Table 6. Top cited references

Cited Reference	Citations	Total Link
Buallay A., Is sustainability reporting (ESG) associated with performance? Evidence from...	7	93
Orlitzky M., Schmidt F.L., Rynes S.L., Corporate social and financial performance: A meta-an...	7	88
Friede G., Busch T., Bassen A., ESG and financial performance: Aggregated evidence from...	10	87
Duque-Grisales E., Aguilera-Caracuel J., Environmental, social and governance (ESG) score...	8	84
Alareeni B.A., Hamdan A., ESG impact on performance of US S&P 500-listed firms, corpora...	7	83
Eccles R.G., Ioannou I., Serafeim G., The impact of corporate sustainability on organizatio...	7	82
Aupperle K.E., Carroll A.B., Hatfield J.D., An empirical examination of the relationship betw...	6	76
Jensen M.C., Meckling W.H., Theory of the firm: Managerial behavior, agency costs and o...	6	76
Brooks C., Oikonomou I., The effects of environmental, social and governance disclosure...	6	73
Fatemi A., Glaum M., Kaiser S., ESG performance and firm value: The moderating role of di...	10	72

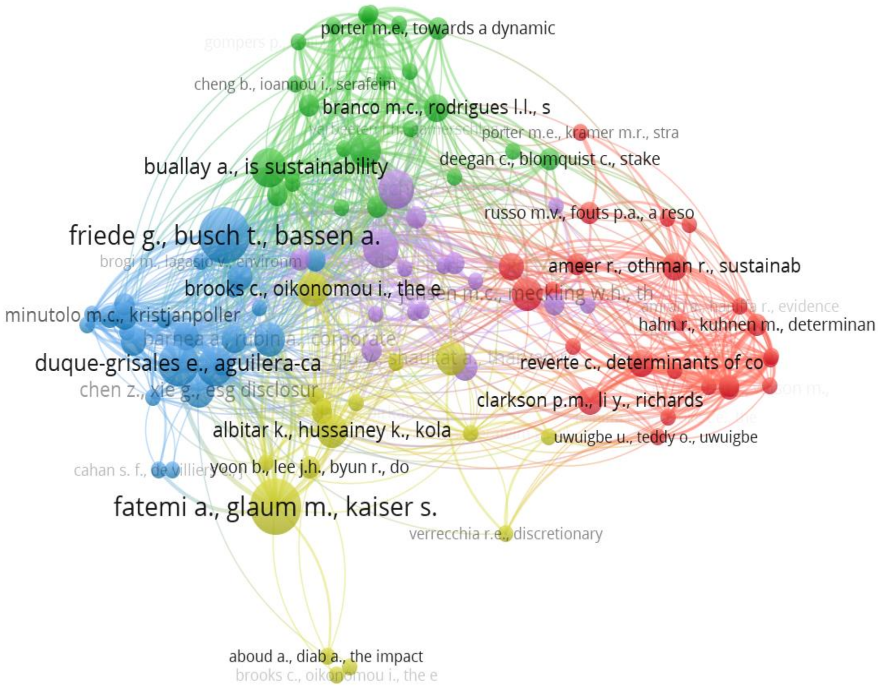

Fig. 7: ***Co-citation analysis of the most frequently cited references*** **(**Source: VOS Viewer**)**

Overview highlighting the connection between ESG and firm performance

A recent research investigation examined the relationship between ESG disclosure and business performance, yielding varying results. Multiple studies have found a relationship between ESG disclosure and financial performance measures, such as EBIT, ROA, ROE, and Tobin's Q (Pulino et al., 2022; Veeravel et al., 2024). However, Khandelwal et al. (2023) discover a negative ESG disclosure premium, contradicting previous findings. Between 2010 and 2021, S&P 500 companies' adoption of ESG reporting broadened significantly, from 35% to 86% (Rouen et al., 2022). Notably, the widespread use of voluntary standards has led to an 11% increase in material ESG disclosures, particularly among businesses that did not engage in the standard-setting process (Rouen et al., 2022). These findings underline the increasing relevance of ESG disclosure policies and their potential influence on business performance while also demonstrating the relationship's complexity and variability across settings and methods.

Table 7 provides a snapshot of studies conducted on ESG disclosure and its association with firm performance.

Table 7: Snippet of studies conducted

Title	Publisher	Year	Findings
Does ESG disclosure influence firm performance? (Carnini Pulino et al., 2022)	MDPI (Sustainability)	2022	The E (Environmental) and S (Social) pillars positively influence firm performance, while the G (Governance) pillar does not have a significant impact. Customers value and acknowledge the importance of companies' environmental and social efforts.
Determinants of environmental, social and corporate governance (ESG) disclosure: a study of Indian companies (Sharma et al., 2020)	Palgrave Macmillan Ltd (International Journal of Disclosure and Governance)	2020	Companies with higher profitability, as indicated by ROCE and ROA, along with better market performance, measured by the market-to-book value ratio, tend to disclose more extensive ESG information. On the other hand, Foreign Institutional Investors (FIIs) and higher leverage (debt to equity ratio) show a negative and significant association with ESG disclosures. This suggests that companies with better FIIs may not necessarily provide more ESG information, and those with higher leverage may tend to be less transparent.
ESG disclosures and corporate performance: A non-linear and	Elsevier	2024	Social and Governance Scores consistently show a positive linear relationship with financial, operational, and market-based performance indicators. In contrast,

disaggregated approach (Agarwala et al., 2024)	(Journal of Cleaner Production)		the Environmental Score demonstrates a U-shaped relationship with market performance, suggesting that after a certain threshold, additional investment in environmental practices can boost performance.
Impact of ESG disclosure on firm performance and cost of debt: Empirical evidence from India (Malik & Kashiramka, 2024)	Elsevier (Journal of Cleaner Production)	2024	The effect of ESG disclosure on financial success varies by industry. Different sectors experience varying levels of benefit from ESG initiatives, especially during crises like the pandemic COVID-19. Lenders take ESG disclosure into account when assessing creditworthiness
ESG disclosure and financial performance: Moderating role of ESG investors (Chen & Xie, 2022)	Elsevier (International Review of Financial Analysis)	2022	ESG disclosure draws in ESG investors, who play a positive role in moderating the relationship between ESG ratings and financial performance.
ESG impact on performance of US S&P 500-listed firms (Alareeni & Hamdan, 2020)	Emerald (Corporate Governance (Bingley))	2020	The study shows that overall ESG disclosure positively impacts firm performance. However, while EVN and CSR disclosures are negatively related to ROA and ROE, they positively influence Tobin's Q. Conversely, CG disclosure is positively related to ROA and Tobin's Q but shows a negative association with ROE.
Environmental, Social and Governance (ESG) disclosure, competitive advantage and performance of firms in Malaysia (Mohammad & Wasiuzzaman, 2021)	Emerald (Cleaner Environmental Systems)	2021	In Malaysia, ESG disclosure enhances firm performance by approximately 4%, even when considering competitive advantage. High ESG scores are linked with a stronger competitive edge, indicating a need for policies that support ESG integration in investments and value creation.
A worldwide sectoral analysis of sustainability reporting and its impact on firm performance (Al Hawaj & Buallay, 2021)	Taylor and Francis (Journal of Sustainable Finance and Investment)	2021	The study identifies sector-specific differences in how sustainability reporting (ESG) impacts firm performance indices such as ROA, ROE, and Tobin's Q. It offers a benchmark for firms across various sectors on ESG adoption and underscores the economic implications of sustainability disclosure with macroeconomic insights.
Nexus between corporate social responsibility and financial and non-financial sectors' performance: a non-linear and disaggregated approach (Shabbir et al., 2020)	Springer (Environmental Science and Pollution Research)	2020	The study identifies a negative relationship between CSP and returns on capital in a linear model. However, in a non-linear model, there is a positive long-term link between CSP and accounting-based performance. Additionally, there is a U-shaped relationship between CFP and governance components, highlighting the government's role in improving both CSP and CFP.
ESG disclosure and Firm Performance: A bibliometric and meta-analysis (Khan, 2022)	Elsevier (Research in International Business and Finance)	2022	Identified gaps include: 1. The influence of different rating agencies' results on the relationship between ESG and firm performance. 2. How investors consider ESG indicators when making investment decisions. 3.The effect of non-financial disclosures on market efficiency.

Limitations and future direction

This study had significant limitations. First, the Scopus database is the sole source of accessible data. Adding a few additional databases, such Web of Science, Emerald, or Google Scholar, might improve the study's data collection even if it is the largest and most trustworthy database. Second, the information we collect eliminates gray literature, which might be helpful in acquiring other perspectives.

The analysis of ESG factors in connection with business performance is a recent advancement in both scholarly and applied studies. Based on the performance analysis and comprehensive review of the literature, Table 8. identifies research gaps and makes recommendations for future research.

Table 8: Potential avenues for future study	
Future research directions	**References**
To investigate the relationship between ESG ratings and probability of default	Khan, M. A. (2022)
To explore how various stakeholders (investors, customers, employees) perceive and respond to ESG disclosures	Alareeni, B. A., & Hamdan, A. (2020)
To explore the processes via which effective ESG practices increase stakeholder relationships and contribute to better financial performance.	Albitar, K., et al (2020)
To investigate how organizations with varied levels of competitive advantage handle ESG reporting and how this affects their financial results.	Mohammad, W. M. W., & Wasiuzzaman , S. (2021)
To investigate the effectiveness of existing regulations (e.g., EU's SFDR, SEBI's BRSR, or GRI) in curbing greenwashing	Authors' suggestion
To investigate whether greenwashing leads to reputational damage and whether companies can recover from it.	Authors' suggestion
To study how RegTech solutions can streamline ESG data collection, management, and reporting, especially in jurisdictions with rapidly changing ESG regulations	Authors' suggestion

Conclusion

Environmental, social, and governance (ESG) disclosure has become a key source of concern for corporations, as constituents demand greater transparency, ethical standards, and sustainable practices. According to previous studies, ESG practices can improve a company's image and resiliency while also having a direct impact on its financial performance by building relationships with investors, regulators, and the general public. Substantial asset managers incorporate ESG concerns into investment evaluation to attract investment and lower risks, putting more pressure on firms to disclose their ESG practices. This trend analyzes the strategic relevance of ESG disclosure, as investors increasingly assume that a company's long-term growth is determined by its identical ESG performance. International legislative measures, such as the EU's Non-Financial Reporting Directive (NFRD), which command honesty in environmental and social policies, help enhance ESG integration into corporate strategy. Furthermore, the study highlighted that organizations that actively participate in ESG projects are prone to do better in terms of customer loyalty and operational efficiency. Environmental sustainability programs can result in cost savings and operational improvements as businesses manage their resources more efficiently, thereby improving their financial results. Research into how ESG practices affect risk management, company worth, and reputation has given rise to renewed interest in ESG disclosure investigations. ESG disclosure and financial success are strongly associated, particularly for firms with high ESG ratings, which highlights improved company value, lower capital costs, and higher performance. However, the link between ESG elements and financial success may vary by industry but not geography, demonstrating that ESG benefits are nuanced and contextual. Despite rising awareness of ESG disclosure as a valuable corporate tool, current research techniques have limitations. Grey literature, which might provide alternative perspectives, is usually excluded from the study, and data collection is frequently confined to certain databases, such as Scopus. Future studies could address these deficiencies by broadening data sources, analyzing the influence of rating agency variability on ESG performance, and reviewing stakeholder perspectives on ESG initiatives. Furthermore, analyzing the interaction between a company's default risk and ESG ratings may shed light on the role of ESG in corporate risk assessment. Finally, ESG disclosure is a strategic investment that may help companies gain an edge in the market, boost stakeholder confidence, and ensure their long-term success.

Acknowledgement

The authors would like to express their sincere gratitude to Doon University and HNB Garhwal University for providing the necessary facilities and support to carry out this research. We also thank Dr. Vaishali, Assistant Professor, Doon University, for her valuable guidance and insightful suggestions during the course of this study.

Financial Support and Sponsorship

I, on behalf of other authors, declare no conflict of interest. The head of my department has forwarded the covering
hereby affirm that all authors have agreed to the submission and that there are no conflicts of interest. Ethical
considerations have been duly observed, and all sources have been properly cited. This research received no specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

References

1. Agarwala, N., Jana, S., & Sahu, T. N. (2024). ESG disclosures and corporate performance: A non-linear and disaggregated approach. *Journal of Cleaner Production*, *437*, 140517. https://doi.org/10.1016/j.jclepro.2023.140517
2. Alareeni, B. A., & Hamdan, A. (2020). ESG impact on performance of US S&P 500-listed firms. *Corporate Governance: The International Journal of Business in Society*, *20*(7), 1409–1428. https://doi.org/10.1108/cg-06-2020-0258

3. Al Hawaj, A. Y., & Buallay, A. M. (2021). A worldwide sectorial analysis of sustainability reporting and its impact on firm performance. *Journal of Sustainable Finance & Investment*, *12*(1), 62–86. https://doi.org/10.1080/20430795.2021.1903792
4. Amel-Zadeh, A., & Serafeim, G. (2018). Why and How Investors Use ESG Information: Evidence from a Global Survey. *Financial Analysts Journal*, 74(3), 87-103.
5. Aria, M., & Cuccurullo, C. (2017). bibliometrix : An R-tool for comprehensive science mapping analysis. *Journal of Informetrics*, *11*(4), 959–975. https://doi.org/10.1016/j.joi.2017.08.007
6. Azmi, W., Khalid, F., & Zaini, R. (2021). ESG disclosure and competitive advantage: Evidence from Malaysia. *Cleaner Environmental Systems, 23,* 100–107. https://doi.org/10.1016/j.cesys.2021.100107
7. Biju, H., Mukthar, K. P. J., Dhia, A., Selvaratnam, D. P., Singh, S. K., & Singh, J. K. (2024). A bibliometric analysis of financial technology: Unveiling the landscape of a rapidly evolving field. *Discover Sustainability*, *5*(1). https://doi.org/10.1007/s43621-024-00256-9
8. Bloomberg Intelligence. (2021). ESG assets may hit $53 trillion by 2025, a third of global AUM. *Bloomberg*. Retrieved from https://www.bloomberg.com
9. Boubaker, S., Cellier, A., & Manita, R. (2019). Does it pay to go green? *Journal of Business Research, 96,* 336–346. https://doi.org/10.1016/j.jbusres.2018.07.014
10. Chen, Z., & Xie, G. (2022). ESG disclosure and financial performance: Moderating role of ESG investors. *International Review of Financial Analysis*, *83*, 102291. https://doi.org/10.1016/j.irfa.2022.102291
11. Cheema-Fox, A., LaPerla, B. R., Serafeim, G., & Wang, H. (2021). Resiliency of environmental and social stocks: An analysis of the COVID-19 pandemic. *Journal of Environmental Finance, 7*(3), 45–62. https://doi.org/10.1016/j.envfin.2021.02.003
12. Eccles, R. G., Ioannou, I., & Serafeim, G. (2014). The impact of corporate sustainability on organizational processes and performance. *Management Science, 60*(11), 2835–2857. https://doi.org/10.1287/mnsc.2014.1984
13. Edmans, A. (2011). Does the Stock Market Fully Value Intangibles? Employee Satisfaction and Equity Prices. *Journal of Financial Economics*, 101(3), 621-640.
14. Friede, G., Busch, T., & Bassen, A. (2015). ESG and financial performance: Aggregated evidence from more than 2000 empirical studies. *Journal of Sustainable Finance & Investment, 5*(4), 210–233 https://doi.org/10.1080/20430795.2015.1118917
15. Gupta, P., Choudhary, S., & Goyal, P. (2020). Determinants of ESG disclosure: Evidence from India. *International Journal of Disclosure and Governance, 17*(4), 305–319. https://doi.org/10.1057/s41310-020-00080-3
16. Khan, M. A. (2022). ESG disclosure and Firm performance: A bibliometric and meta analysis. *Research in International Business and Finance*, *61*, 101668. https://doi.org/10.1016/j.ribaf.2022.101668
17. Khan, M., Zafar, A., & Ali, H. (2024). ESG integration and policy implications for emerging economies. *Environmental Science and Pollution Research, 31*(12), 1401–1417. https://doi.org/10.1007/s11356-024-1417-3
18. Khandelwal, V., Sharma, P., & Chotia, V. (2023). ESG disclosure and firm performance: An asset-pricing approach. *Risks*, *11*(6), 112. https://doi.org/10.3390/risks11060112
19. Liang, H., & Renneboog, L. (2018). On the foundations of corporate social responsibility. *The Journal of Finance, 73*(2), 853–910. https://doi.org/10.1111/jofi.12622
20. Lozano, R. (2015). A Holistic Perspective on Corporate Sustainability Drivers. *Corporate Social Responsibility and Environmental Management*, 22(1), 32-44.
21. Malik, N., & Kashiramka, S. (2024). “Impact of ESG disclosure on firm performance and cost of debt: Empirical evidence from India.” *Journal of Cleaner Production*, *448*, 141582. https://doi.org/10.1016/j.jclepro.2024.141582
22. Mohammad, W. M. W., & Wasiuzzaman, S. (2021). Environmental, Social and Governance (ESG) disclosure, competitive advantage and performance of firms in Malaysia. *Cleaner Environmental Systems*, *2*, 100015. https://doi.org/10.1016/j.cesys.2021.100015
23. Pulino, S.C., Ciaburri, M., Magnanelli, B. S., & Nasta, L. (2022). Does ESG disclosure influence firm performance? *Sustainability*, *14*(13), 7595. https://doi.org/10.3390/su14137595
24. Rouen, E., Sachdeva, K., & Yoon, A. (2022). The evolution of ESG reports and the role of voluntary standards. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.4227934
25. Shabbir, M. S., Aslam, E., Irshad, A., Bilal, K., Aziz, S., Abbasi, B. A., & Zia, S. (2020). Nexus between corporate social responsibility and financial and non-financial sectors’ performance: A non-linear and disaggregated approach. *Environmental Science and Pollution Research*, *27*(31), 39164–39179. https://doi.org/10.1007/s11356-020-09972-x
26. Sharma, P., Panday, P., & Dangwal, R. C. (2020). Determinants of environmental, social and corporate governance (ESG) disclosure: A study of Indian companies. *International Journal of Disclosure and Governance*, *17*(4), 208–217. https://doi.org/10.1057/s41310-020-00085-y
27. Tang, Y., Chen, Z., & Li, M. (2024). ESG and firm performance: An industry-level analysis. *Journal of Cleaner Production, 350,* 140–155. https://doi.org/10.1016/j.jclepro.2024.140155
28. Trotta, A., Rania, F., & Strano, E. (2024). Exploring the linkages between FinTech and ESG: A bibliometric perspective. *Research in*

International Business and Finance, *69*, 102200. https://doi.org/10.1016/j.ribaf.2023.102200

29. Veeravel, V., Murugesan, V. P., & Narayanamurthy, V. (2024). Does ESG disclosure really influence the firm performance? Evidence from India. *The Quarterly Review of Economics and Finance*, *95*, 193–202. https://doi.org/10.1016/j.qref.2024.03.008
30. Waltman, L., van Eck, N. J., & Noyons, E. C. M. (2010). A unified approach to mapping and clustering of bibliometric networks. *Journal of Informetrics*, *4*(4), 629–635. https://doi.org/10.1016/j.joi.2010.07.002
31. Xie, X., Huo, D., & Li, L. (2022). Non-linear impact of ESG on firm performance: Evidence from global markets. *Journal of Cleaner Production, 337,* 130–145. https://doi.org/10.1016/j.jclepro.2022.130145
32. Yoon, B., Lee, J., & Byun, R. (2020). Does ESG performance enhance firm value? *Corporate Governance: An International Review, 28*(1), 287–305. https://doi.org/10.1111/corg.12324
33. Zhang, X., Liu, J., & Wang, R. (2024). Meta-analysis of ESG disclosures and financial outcomes. *Research in International Business and Finance, 61,* 101–112. https://doi.org/10.1016/j.ribaf.2024.101112