NVEILING FUTURE PATHWAYS IN ESG AND SUSTAINABILITY: A BIBLIOMETRIC EXPLORATION OF EMERGING TRENDS AND RESEARCH GAPS

ORIGINALITY REPORT

11%	8%	7%	2%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	Tarek Rana, Md Jahidur Rahman, Peter Öhman. "Environmental, Social and Governance Accounting and Auditing - Perspectives from China", Routledge, 2025 Publication	1%
2	uia.brage.unit.no Internet Source	<1%
3	www.mdpi.com Internet Source	<1%
4	sustainability-directory.com Internet Source	<1%
5	Submitted to University of Greenwich Student Paper	<1%
6	www.diva-portal.org Internet Source	<1%
7	Bilal Mukhtar, Muhammad Kashif Shad, Kashif Ali, Lai Fong Woon, Ahmad Waqas. "Systematic literature review and retrospective bibliometric analysis on ESG research", International Journal of Productivity and Performance Management, 2024 Publication	<1%
8	Submitted to LIGS University Student Paper	<1%

9	systems.enpress-publisher.com Internet Source	<1%
10	advancesinresearch.id Internet Source	<1%
11	link.springer.com Internet Source	<1%
12	unipub.lib.uni-corvinus.hu Internet Source	<1%
13	hdl.handle.net Internet Source	<1%
14	Tarek Rana, Md Jahidur Rahman, Peter Öhman. "Carbon Accounting for Sustainability and Environmental Management - Case Studies from China", Routledge, 2025 Publication	<1%
15	Submitted to University of Westminster Student Paper	<1%
16	Submitted to The University of Law Ltd Student Paper	<1%
17	sedi.esteri.it Internet Source	<1%
18	Assunta Di Vaio, Tayyab Ali. "Accounting for Carbon Neutrality - Corporate Accountability in the Hydrogen Economy", Routledge, 2025 Publication	<1%
19	jurnalakuntansi.petra.ac.id Internet Source	<1%
20	iimsambalpur.ac.in Internet Source	<1%
21	intranet.ulc.edu.pe Internet Source	<1%

22	www-emerald-com-443.webvpn.sxu.edu.cn Internet Source	<1%
23	Ahmad Alqatan. "Corporate responses to boycott movements: impact on accounting and financial performance in the Middle East", International Journal of Islamic and Middle Eastern Finance and Management, 2025 Publication	<1%
24	Archana Saxena, Rajesh Singh, Anita Gehlot, Shaik Vaseem Akram et al. "Technologies Empowered Environmental, Social, and Governance (ESG): An Industry 4.0 Landscape", Sustainability, 2022 Publication	<1%
25	Gaurav Talan, Gagan Deep Sharma, Vijay Pareira, Glenn W. Muschert. "From ESG to holistic value addition: Rethinking sustainable investment from the lens of stakeholder theory", International Review of Economics & Finance, 2024 Publication	<1%
26	Marzanna K. Witek-Hajduk, Magda Górska Grginović, Bartosz Targański. "Digital Internationalisation of Firms - Strategies, Challenges and Legal Aspects", Routledge, 2025 Publication	<1%
27	Theerasak Nitlarp, Supaporn Kiattisin. "The Impact Factors of Industry 4.0 on ESG in the Energy Sector", Sustainability, 2022 Publication	<1%
28	bibliothek.fh-wien.ac.at Internet Source	<1%

29	conferinte.stiu.md Internet Source	<1%
30	innovation-entrepreneurship.springeropen.com Internet Source	<1%
31	osuva.uwasa.fi Internet Source	<1%
32	ouci.dntb.gov.ua Internet Source	<1%
33	perpus-utama.poltekkes-malang.ac.id Internet Source	<1%
34	www.researchgate.net Internet Source	<1%
35	Jan Bebbington, Carlos Larrinaga, Brendan O'Dwyer, Ian Thomson. "Routledge Handbook of Environmental Accounting", Routledge, 2021 Publication	<1%
36	Submitted to Oxford Brookes University Student Paper	<1%
37	Rsha Alghafes, Sitara Karim, Khaoula Aliani, Naila Qureishi, Lama Alkayed. "Influence of key ESG factors on Islamic banks' financial performance: Evidence from GCC countries", International Review of Economics & Finance, 2024 Publication	<1%
38	Submitted to University of West London Student Paper	<1%
39	d-nb.info Internet Source	<1%
40	dk.um.si Internet Source	

		<1%
41	docs.google.com Internet Source	<1%
42	ecohumanism.co.uk Internet Source	<1%
43	hh.se Internet Source	<1%
44	hj.diva-portal.org Internet Source	<1%
45	ierj.in Internet Source	<1%
46	ijidjournal.org Internet Source	<1%
47	ijmra.in Internet Source	<1%
48	mpra.ub.uni-muenchen.de Internet Source	<1%
49	www.iksadkongre.com Internet Source	<1%
50	www.scielo.br Internet Source	<1%
51	"Explainable Artificial Intelligence in the Digital Sustainability Administration", Springer Science and Business Media LLC, 2024 Publication	<1%
52	Bambang Tjahjadi, Noorlailie Soewarno, Tsanya El Karima, Annisa Ayu Putri Sutarsa. "Business strategy, spiritual capital and environmental sustainability performance: mediating roleofenvironmental management	<1%

process", Business Process Management Journal, 2022
Publication

53	Mohd Ma'Sum Billah, Rusni Hassan, Razali Haron, Nor Razinah Mohd Zain. "Islamic Sustainable Finance - Policy, Risk and Regulation", Routledge, 2024 Publication	<1%
54	Muhabbat Kurbanova, Kıymet Çalıyurt. "Chapter 1 The Concept of ESG in a Global Journey: Bibliometric Analysis", Springer Science and Business Media LLC, 2024 Publication	<1%
55	"Fuzzy Business Models and ESG Risk", Springer Science and Business Media LLC, 2023 Publication	<1%
56	Enrico Fioravante Geretto, Egidio Palmieri. "Innovation in Banking and Financial Intermediaries - The Disruptive Role of ESG Policies and Fintech Players", Routledge, 2025 Publication	<1%

Exclude quotes	On	Exclude matches	Off
Exclude bibliography	On		

Turnitin Originality Report

Processed on: 20-Jun-2025 08:38 WIB
ID: 2702604153
Word Count: 8101
Submitted: 1

NVEILING FUTURE PATHWAYS IN ESG AND SUSTAINABILITY: A BIBLIOMETRIC EXPLORATION OF EMERGING TRENDS AND RESEARCH GAPS By Ukdc Perpustakaan 2

Similarity Index	Similarity by Source
11%	Internet Sources: 8% Publications: 7% Student Papers: 2%

1% match (publications)
Tarek Rana, Md Jahidur Rahman, Peter Öhman. "Environmental, Social and Governance Accounting and Auditing - Perspectives from China", Routledge, 2025

< 1% match (Internet from 29-Aug-2023)
https://uia.brage.unit.no/uia-xmlui/bitstream/handle/11250/3080918/no.uia%3ainspera%3a148324416%3a34818547.pdf?isAllowed=y&sequence=1

< 1% match (Internet from 21-Sep-2023)
https://uia.brage.unit.no/uia-xmlui/bitstream/handle/11250/3081669/no.uia%3ainspera%3a143804064%3a92791161.pdf?isAllowed=y&sequence=1

< 1% match (Internet from 09-May-2025)
https://www.mdpi.com/2079-8954/13/5/315

< 1% match (Internet from 22-May-2025)
https://www.mdpi.com/1911-8074/18/5/245

< 1% match (Internet from 20-Mar-2025)
https://www.mdpi.com/2071-1050/17/6/2751

< 1% match (Internet from 21-Mar-2025)
https://sustainability-directory.com/term/regulatory-frameworks-for-esg/

< 1% match (student papers from 09-Sep-2024)
Submitted to University of Greenwich on 2024-09-09

< 1% match (Internet from 09-Jan-2025)
https://www.diva-portal.org/smash/get/diva2:1871973/FULLTEXT02.pdf

< 1% match (Bilal Mukhtar, Muhammad Kashif Shad, Kashif Ali, Lai Fong Woon, Ahmad Waqas. "Systematic literature review and retrospective bibliometric analysis on ESG research", International Journal of Productivity and Performance Management, 2024)
Bilal Mukhtar, Muhammad Kashif Shad, Kashif Ali, Lai Fong Woon, Ahmad Waqas. "Systematic literature review and retrospective bibliometric analysis on ESG research", International Journal of Productivity and Performance Management, 2024

< 1% match (student papers from 01-May-2024)
Submitted to LIGS University on 2024-05-01

< 1% match (Internet from 15-Aug-2024)
https://systems.enpress-publisher.com/index.php/jipd/article/viewFile/5272/3180

< 1% match (Internet from 01-Mar-2025)
http://advancesinresearch.id/index.php/AJEB/article/download/249/347

< 1% match (Internet from 16-Oct-2024)
https://link.springer.com/chapter/10.1007/978-3-031-70322-5_2?code=b35672a5-0136-46ba-adfb-32abf727eb9a&error=cookies_not_supported

< 1% match (Internet from 25-Apr-2025)
https://link.springer.com/article/10.1007/s10551-025-06002-z?code=37b9dc7f-d5d8-474a-bcb0-96942455866e&error=cookies_not_supported

< 1% match (Internet from 22-Oct-2024)
https://unipub.lib.uni-corvinus.hu/10408/1/Eurasia_Szemle_IV_1_ENG_online-2.pdf

< 1% match ()
"Enabling leadership of and innovation in South African mining companies : pursuing environmental, social, governance principles and the 2030 SDGs", University of Pretoria, 2024

< 1% match (publications)
Tarek Rana, Md Jahidur Rahman, Peter Öhman. "Carbon Accounting for Sustainability and Environmental Management - Case Studies from China", Routledge, 2025

< 1% match (student papers from 25-Apr-2025)
Submitted to University of Westminster on 2025-04-25

< 1% match (student papers from 26-Sep-2024)
Submitted to The University of Law Ltd on 2024-09-26

< 1% match (Internet from 20-Mar-2010)
http://sedi.esteri.it/portaledgcs/portaledgcs/italiano/DGCS/uffici/ufficioI/documents/Memorandum_Dac_Peer_Review_2009.pdf

< 1% match (publications)

Assunta Di Vaio, Tayyab Ali. "Accounting for Carbon Neutrality - Corporate Accountability in the Hydrogen Economy", Routledge, 2025

< 1% match (Internet from 29-Jan-2025)
https://jurnalakuntansi.petra.ac.id/index.php/aku/article/download/29797/21230

< 1% match (Internet from 12-Feb-2025)
https://iimsambalpur.ac.in/IMPeC-2025/pdf/Vol1.pdf

< 1% match (Internet from 09-Feb-2025)
https://intranet.ulc.edu.pe/storycelebshollywoodnews/proven-and-verified-companies-at-your-fingertips.html

< 1% match (Internet from 02-Jun-2024)
http://www-emerald-com-443.webvpn.sxu.edu.cn/insight/content/doi/10.1108/MEDAR-02-2021-1203/full/html

< 1% match (Ahmad Alqatan. "Corporate responses to boycott movements: impact on accounting and financial performance in the Middle East", International Journal of Islamic and Middle Eastern Finance and Management, 2025)
Ahmad Alqatan. "Corporate responses to boycott movements: impact on accounting and financial performance in the Middle East", International Journal of Islamic and Middle Eastern Finance and Management, 2025

< 1% match (Archana Saxena, Rajesh Singh, Anita Gehlot, Shaik Vaseem Akram et al. "Technologies Empowered Environmental, Social, and Governance (ESG): An Industry 4.0 Landscape", Sustainability, 2022)
Archana Saxena, Rajesh Singh, Anita Gehlot, Shaik Vaseem Akram et al. "Technologies Empowered Environmental, Social, and Governance (ESG): An Industry 4.0 Landscape", Sustainability, 2022

< 1% match (Gaurav Talan, Gagan Deep Sharma, Vijay Pareira, Glenn W. Muschert. "From ESG to holistic value addition: Rethinking sustainable investment from the lens of stakeholder theory", International Review of Economics & Finance, 2024)
Gaurav Talan, Gagan Deep Sharma, Vijay Pareira, Glenn W. Muschert. "From ESG to holistic value addition: Rethinking sustainable investment from the lens of stakeholder theory", International Review of Economics & Finance, 2024

< 1% match (publications)
Marzanna K. Witek-Hajduk, Magda Górska Grginović, Bartosz Targański. "Digital Internationalisation of Firms - Strategies, Challenges and Legal Aspects", Routledge, 2025

< 1% match (Theerasak Nitlarp, Supaporn Kiattisin. "The Impact Factors of Industry 4.0 on ESG in the Energy Sector", Sustainability, 2022)
Theerasak Nitlarp, Supaporn Kiattisin. "The Impact Factors of Industry 4.0 on ESG in the Energy Sector", Sustainability, 2022

< 1% match (Internet from 12-Feb-2025)
https://bibliothek.fh-wien.ac.at/obvsg/UF/2024/Amasya.Anzilni.pdf

< 1% match (Internet from 10-Jan-2025)
https://conferinte.stiu.md/sites/default/files/evenimente/CiasoS%202024-FULL%20Paper%20Proceedings%20Book.pdf

< 1% match (Internet from 25-Oct-2024)
https://innovation-entrepreneurship.springeropen.com/articles/10.1186/s13731-023-00317-9

< 1% match (Internet from 03-Jun-2025)
https://osuva.uwasa.fi/bitstream/handle/10024/19528/The%20Impact%20of%20ESG%20Ratings%20on%20Value%20Creation%20in%20 isAllowed=y&sequence=2

< 1% match (Internet from 11-Nov-2023)
https://ouci.dntb.gov.ua/works/4vBda6M4/

< 1% match (Internet from 11-Jun-2025)
https://perpus-utama.poltekkes-malang.ac.id/assets/file/jurnal/Jil._22_No_.1_(2024)_.pdf

< 1% match (Internet from 08-Sep-2022)
https://www.researchgate.net/publication/329964813_Evaluasi_Berjalan_Program_Penyediaan_Air_Minum_dan_Sanitasi_Berbasis_Masyara Berjalan-Program-Penyediaan-Air-Minum-dan-Sanitasi-Berbasis-Masyarakat.pdf

< 1% match (publications)
Jan Bebbington, Carlos Larrinaga, Brendan O'Dwyer, Ian Thomson. "Routledge Handbook of Environmental Accounting", Routledge, 2021

< 1% match (student papers from 17-May-2024)
Submitted to Oxford Brookes University on 2024-05-17

< 1% match (Rsha Alghafes, Sitara Karim, Khaoula Aliani, Naila Qureishi, Lama Alkayed. "Influence of key ESG factors on Islamic banks' financial performance: Evidence from GCC countries", International Review of Economics & Finance, 2024)
Rsha Alghafes, Sitara Karim, Khaoula Aliani, Naila Qureishi, Lama Alkayed. "Influence of key ESG factors on Islamic banks' financial performance: Evidence from GCC countries", International Review of Economics & Finance, 2024

< 1% match (student papers from 06-May-2025)
Submitted to University of West London on 2025-05-06

< 1% match (Internet from 03-Apr-2025)
https://d-nb.info/1361963158/34

< 1% match (Internet from 31-May-2024)
https://dk.um.si/Dokument.php?dn=&id=179675

< 1% match (Internet from 28-Feb-2025)
https://docs.google.com/spreadsheets/d/1Y7Ys-qmeVJosp9uecCrb9zFTh7jiMuDb/edit?ouid=114138861653058999451&rtpof=true&sd=true&usp=sharing

< 1% match (Internet from 21-Jan-2025)
https://ecohumanism.co.uk/joe/ecohumanism/article/download/5301/5031/13757

< 1% match (Internet from 06-Aug-2022)
https://hh.se/download/18.6f1a42a7179c523f70534eaf/1622570982472/Full%20Conference%20Proceedings%20NBM%202021.pdf

< 1% match (Internet from 05-Nov-2021)
http://hj.diva-portal.org/smash/get/diva2:1590867/FULLTEXT01.pdf

< 1% match (Internet from 20-Jan-2024)
https://ierj.in/journal/index.php/ierj/article/download/3155/3502/6506

< 1% match (Internet from 03-Mar-2025)
https://ijidjournal.org/index.php/ijid/article/download/662/502

< 1% match (Internet from 26-Feb-2025)
https://ijmra.in/v7i12/Doc/23.pdf

< 1% match (Internet from 26-Nov-2024)
https://mpra.ub.uni-muenchen.de/122690/1/MPRA_paper_122690.pdf

< 1% match (Internet from 11-Feb-2025)
https://www.iksadkongre.com/_files/ugd/d0a9b7_7c76d69a2b564705b705a647bd56a296.pdf

< 1% match (Internet from 07-May-2024)
https://www.scielo.br/j/rcf/a/DvWLbmqgTxG9L4gqbmLGc5J/?lang=en

< 1% match ("Explainable Artificial Intelligence in the Digital Sustainability Administration", Springer Science and Business Media LLC, 2024)
"Explainable Artificial Intelligence in the Digital Sustainability Administration", Springer Science and Business Media LLC, 2024

< 1% match (Bambang Tjahjadi, Noorlailie Soewarno, Tsanya El Karima, Annisa Ayu Putri Sutarsa. "Business strategy, spiritual capital and environmental sustainability performance: mediating roleofenvironmental management process", Business Process Management Journal, 2022)
Bambang Tjahjadi, Noorlailie Soewarno, Tsanya El Karima, Annisa Ayu Putri Sutarsa. "Business strategy, spiritual capital and environmental sustainability performance: mediating roleofenvironmental management process", Business Process Management Journal, 2022

< 1% match (publications)
Mohd Ma'Sum Billah, Rusni Hassan, Razali Haron, Nor Razinah Mohd Zain. "Islamic Sustainable Finance - Policy, Risk and Regulation", Routledge, 2024

< 1% match (Muhabbat Kurbanova, Kıymet Çalıyurt. "Chapter 1 The Concept of ESG in a Global Journey: Bibliometric Analysis", Springer Science and Business Media LLC, 2024)
Muhabbat Kurbanova, Kıymet Çalıyurt. "Chapter 1 The Concept of ESG in a Global Journey: Bibliometric Analysis", Springer Science and Business Media LLC, 2024

< 1% match ("Fuzzy Business Models and ESG Risk", Springer Science and Business Media LLC, 2023)
"Fuzzy Business Models and ESG Risk", Springer Science and Business Media LLC, 2023

< 1% match (publications)
Enrico Fioravante Geretto, Egidio Palmieri. "Innovation in Banking and Financial Intermediaries - The Disruptive Role of ESG Policies and Fintech Players", Routledge, 2025

UNVEILING FUTURE PATHWAYS IN ESG AND SUSTAINABILITY: A BIBLIOMETRIC EXPLORATION OF EMERGING TRENDS AND RESEARCH GAPS Lusy1, Rafles Ginting2 Universitas Katolik Darma Cendika1, Universitas Tanjungpura2 1Corresponding author: margarethahulda@gmail.com INFORMASI ARTIKEL ABSTRAK Article history: Dikirim tanggal:19 /03/2025 Revisi pertama tanggal: 24/04/2025 Diterima tanggal: 03/06/2025 Tersedia online tanggal: 18/06/2025 Penelitian ini bertujuan mengidentifikasi peluang riset masa depan dalam bidang sustainability dan ESG melalui analisis bibliometric terhadap artikel Scopus periode 2014-2024, di bidang bisnis, manajemen dan akuntansi. Hasil menunjukkan bahwa topik dominan adalah pembangunan berkelanjutan, CSR, dan tata kelola, sementara investasi ESG, kinerja keuangan, dan teknologi baru masih kurang dieksplorasi. Didorong oleh ekspektasi pemangku kepentingan, regulasi dan kebutuhan legitimasi adopsi ESG, selaras dengan teori pemangku kepentingan, teori legitimasi, dan pandangan berbasis sumber daya alam (NRBV). Studi ini menyoroti perlunya pengembangan metrik ESG yang terstandarisasi, peningkatan keragaman regional, serta integrasi lintas disiplin untuk memperkuat pemahaman dan penerapan berkelanjutan. Penelitian ini berkontribusi dalam menjembatani kesenjangan riset, mengidentifikasi tren yang muncul, dan menyusun peta jalan ESG serta mengembangkan strategi keberlanjutan yang lebih efektif. Kata Kunci: analisis bibliometrik, ESG, NRBV, teori legitimasi, teori pemangku kepentingan ABSTRACT This study aims to identify future research opportunities in the field of sustainability and ESG through a bibliometric analysis of Scopus articles for the period 2014-2024, focusing on the fields of business, management, and accounting. The results show that the dominant topics are sustainable development, CSR, and governance, while ESG investment, financial performance, and new technologies are still under- explored. Driven by stakeholder expectations, regulations, and the need for legitimacy for ESG adoption, in line with stakeholder theory, legitimacy theory, and natural resource-based approach (NRBV). This study highlights the need for the development of standardized ESG metrics, increasing regional diversity, and cross-disciplinary integration to strengthen the understanding and implementation of sustainability. This study contributes to bridging the research gap, identifying emerging trends, developing an ESG roadmap and developing more effective sustainability strategies. Keywords: bibliometric analysis, ESG, NRBV, legitimacy theory stakeholder theory ©2018 FEB UNRAM. All rights reserved 1. Introduction Sustainability and ESG issues are becoming increasingly important as they relate to global challenges impacting various sectors, including the environment, economy, and society. Here are several reasons why this topic is important: Firstly, climate change and its impact in the 21st century affect the environment, economy, and human life. Research on sustainability helps identify mitigation and adaptation strategies that can be used to reduce greenhouse gas emissions and address the negative impacts of climate change, such as natural disasters and rising sea levels (Jarraud & Stei$n$er$, 2012). Second, companies that integrate ESG criteria tend to have lower risks and more stable long-term performance, influencing investors's decision-making (Ec$cles$ et$ al$., 2014). Thirdly, governments in many countries have begun enforcing regulations encouraging businesses to prioritize sustainability and ESG compliance (Klet$tner$ et$ al$., 2014). Lastly, companies adopting ESG practices often gain competitive advantage through improved efficiency, product innovation, and customer loyalty. This research is essential to explore how ESG principles foster innovation and help firms remain competitive globally (Porter$ & Kramer, 2011). The significance of ESG and sustainability research lies in its capacity to generate systematic and sustainable value (Schaltegger$ & Wagner, 2018). The terms ESG, sustainability, and CSR reporting are often used interchangeably in the industry. Companies are increasingly turning to ESG reporting to meet stakeholder information needs and demonstrate transparency in ESG risk management. The role

of financial professionals and implementation models can strengthen ESG reporting and sustainability (Raghavan$, 2022). ESG scores are also becoming a primary proxy for evaluating organizational sustainability, making it more accurate in reflecting sustainability principles (Clémen$t et$ al$., 2022). By deepening research in this field, systematic sustainable value can be created (Schaltegger$ & Wagner, 2018). The implementation and integration of sustainability and ESG principles still face significant challenges. The problems encountered include: Firstly, the lack of standards and consistency in ESG reporting. As the use of ESG data in investment decisions increases, it is important to understand and address the weaknesses in ESG measurement and data. If ESG data is inaccurate or lacks transparency, it could lead to misallocation of resources and failure to achieve global sustainability goals (Kotsan$tonis$ & Serafei$m$, 2019). Secondly, there is the issue of greenwashing, a misleading practice where companies claim to be environmentally friendly without making substantial changes, thus damaging public trust in corporate sustainability (In$ês et$ al$., 2023). Thirdly, the challenge of integrating ESG into business strategies includes understanding how to effectively implement ESG (Q. Sun et$ al$., 2024). Fourthly, the good implementation of ESG strategies is crucial for mitigating risks, enhancing investment efficiency, ensuring long-term sustainability development, and maintaining competitiveness in the global market (Xue$ et$ al$., 2023). Lastly, the importance of honest and transparent ESG implementation is to ensure that the positive impacts of ESG practices are reflected in financial performance (Lee$$ & Suh, 2022). These challenges highlight the urgency of research related to sustainability and ESG. The lack of understanding of the market valuation of sustainability represents an implementation gap related to sustainability and ESG. Previous research has shown that ESG practices can enhance the long-term value of a company, but how the equity market values a company's sustainability is still not fully understood (Barka et$ al$., 2023). Companies are increasingly expected to focus on non-financial aspects like ESG and report their performance. However, even with growing pressure from stakeholders, there remains a question of whether investing in ESG truly makes financial sense for companies. This reflects a gap between stakeholder expectations and the actual implementation within companies (Ay$doğmuş et$ al$., 2022), or the second implementation gap related to this topic. The third implementation gap highlights, that, despite the increasing global awareness and push towards sustainable energy, UNEP reports show that fossil fuels still dominate the global energy mix, just as they did 30 years ago (Nitlarp & Kia$t$tisin, 2022). The final implementation gap mentions that many businesses report adopting the SDGs and claim to adhere to sustainable investment principles, but in reality, their practices do not align with the stated sustainability goals (Talan et$ al$., 2024). There is a need to improve standards and transparency in the ESG rating system to make it more consistent and reliable, which represents a gap between perception and reality in the ESG rating system (Ber$g et$ al$., 2022). Some believe that ESG ratings are useful tools that can enhance a company's ESG performance based on the principle of "what gets measured gets done." In reality, there is criticism that ESG ratings can become a barrier to making a real impact on sustainability, potentially serving as a way to obscure inefficiencies in achieving actual ESG goals (Ad$e$mi$ & Klungset$h, 2022). Companies view investment in ESG as costly and not always providing clear financial benefits, while stakeholders have the expectation that improved ESG performance will yield significant benefits in terms of both reputation and financial returns (Ay$doğmuş et$ al$., 2022). This creates a gap between perception and reality regarding ESG. Sustainable investment is perceived as an approach that aligns investments with sustainability goals, but in reality, it often focuses on profitability and does not fully meet the intended sustainability objectives (Revelli,$ 2017). There is also inconsistency in the effectiveness of ESG performance on company value, highlighting a gap between expectations and reality (Gillan et$ al$., 2021). Many companies only list species counts or reports without providing sufficient details on how they are addressing extinction issues. In reality, these reports often do not reflect the actual actions taken to address the biodiversity crisis (Zhan$g & Noronha,$ 2023). This is another gap between perception and reality related to sustainability and ESG. The existing literature often shows inconsistent results regarding the impact of ESG on company performance or investor value. Some studies indicate that implementing ESG principles can enhance financial performance, while others show a neutral or even negative impact (Martiny et$ al$., 2024). Another research gap is the need to connect index performance with value-at-risk calculations to better understand the risk profile for investors (Shar$ma,$ 2023). A further research gap involves the limitations of predictive models, which tend to focus on retrospective accounting variables. Research has shown that these variables are ineffective in predicting future performance (Citterio$ & Kin$g, 2023). Although there is research on biodiversity accounting and extinction, there is still a lack of studies investigating the effectiveness of reporting and conservation actions (Kopnin$a$ et$ al$., 2024). Stakeholder theory suggests that companies that can align with all stakeholders will be more sustainable. However, in practice, there are real challenges in measuring and proving whether this approach truly yields financial benefits (Ay$doğmuş et$ al$., 2022). This gap represents an application gap in theory, as the implementation of theory in the real world does not always match the expected outcomes. Stakeholder Theory emphasizes the importance for companies to consider the interests of all stakeholders and align them with sustainability strategies such as ESG (Kal$ra,$ 2024). Stakeholder theory provides the basis that ESG commitment can influence risk and bank default, both directly and indirectly. The theoretical gap lies in understanding how ESG affects the cost of capital and cash flows of banks (Azmi et$ al$., 2021). ESG frameworks are often still evolving and have not fully translated stakeholder theory into effective practice (Bran$co, 2024). There is also a theoretical gap concerning biodiversity accounting and its implementation in corporate reporting practices (Robe$rts et$ al$., 2021). This research employs stakeholder theory, which refers to a company's ability to operate while considering and mitigating its impact on various stakeholders. By integrating sustainability into their business strategies, companies aim to create long-term value for all stakeholders, not just shareholders (Kal$ra,$ 2024). Sustainability and ESG within the framework of stakeholder theory offer a comprehensive approach to understanding and managing corporate social responsibility holistically, focusing on balancing economic profit, social responsibility, and environmental impact (Kal$ra,$ 2024). Sustainability within the stakeholder theory framework refers to a managerial approach that integrates concern for the long-term environmental, social, and economic impacts of business decisions (Goyal$, 2022). Experts agree that broad stakeholder engagement can strengthen sustainable business models (Freudenrei$c$h et$ al$., 2020). Stakeholder theory can justify the case for sustainable business, given the trade-offs between sustainability and economic performance (Valentin$ov, 2023). By using this theory, companies can demonstrate how sustainability-focused strategies can also support business goals and create economic value (Schaltegger$ et$ al$., 2019). Stakeholder theory recognizes that to achieve long-term sustainability, companies must pay attention to and manage the ecological, social, and governance impacts of their operations (C. Wan$g, 2024). This research also utilizes legitimacy theory, which is closely related to the concept of sustainability and ESG (Ak$hter$ et$ al$., 2023). Legitimacy Theory emphasizes that companies must be accountable to society and meet public expectations. Positive disclosure of sustainable environmental practices is a way for companies to meet societal expectations and demonstrate that they are acting as legitimate corporate citizens (Greg$ory et$ al$., 2016). Legitimacy Theory suggests that organizations must conform to social norms, values, and expectations to maintain legitimacy. This aligns with the research focus on sustainability and ESG, as companies use ESG reporting and sustainability initiatives to gain legitimacy among investors, regulators, and the public (Q. Sun et$ al$., 2024). Legitimacy theory helps explain companies' motivations for disclosing information related to ESG and Sustainability (Ak$hter$ et$ al$., 2023). Annual reports that include various sustainability initiatives represent symbolic legitimacy, even if the impact is limited (Crossley$ et$ al$., 2021). Legitimacy strategies involve manipulating and presenting symbols to shape public perceptions of the company (Crossley$ et$ al$., 2021). Sustainability must align with social impacts while striving to achieve sustainable economic goals can strengthen their legitimacy (Y. Sun et$ al$., 2024). Legitimacy theory suggests that ESG disclosures can be used by companies to enhance their legitimacy when facing public criticism or dissatisfaction (Y. Sun et$ al$., 2024). This study also employs the Natural-Resource Based View (NRBV) to understand how companies can manage their natural and relational resources to create sustainable competitive advantage. The NRBV theory acknowledges the importance of managing natural resources as part of a company's strategy. Sustainability is related to how companies use and protect their natural resources to achieve long-term competitive advantage (Andersén, 2021). The NRBV posits that companies can gain a competitive advantage by effectively managing and preserving natural resources. This theory is relevant to sustainability research, as ESG strategies increasingly focus on the sustainable use of resources, circular economy models, and green innovations (Andersén, 2021). Environmentally friendly business strategies contribute to improving environmental sustainability

performance through environmental management processes. This indicates that companies that utilize natural resources sustainably can strengthen their competitive position according to NRBV principles (Tjahjadi$ et$ al$., 2023). By applying green production innovations that reduce environmental impact, companies make more sustainable use of their resources, aligning with NRBV principles that emphasize the importance of resource management to achieve financial and environmental performance. Stakeholder theory emphasizes the importance of meeting the expectations of all stakeholders but does not always provide clear guidance on how to balance often conflicting interests (Wojewnik-Filipkowska$ et$ al$., 2021). This creates a gap in stakeholder theory when linked to the ESG context. ESG, as a tool for gaining legitimacy, is often measured through indicators that may not fully reflect the legitimacy accepted by all stakeholders (Bel$lucci$ et$ al$., 2021). This creates a gap between legitimacy theory and ESG. The NRBV theory focuses on how companies use internal environmental resources to gain a competitive advantage while providing positive environmental outcomes. However, this theory tends to emphasize internal resources over external relationships (Andersén, 2021). This also creates a gap between NRBV theory and ESG. Several empirical gaps discussing the relationship between ESG and theory and measurement show varied results (Chen$ et$ al$., 2023; Ber$g et$ al$., 2022; Ec$cles$ & Klimenko, 2019; F. Wan$g, 2024). This research makes several significant contributions : (1) theoretical advancement; (2) methodological contribution; and (3) practical implications. This study integrates Stakeholder Theory, Legitimacy Theory, and NRBV (to analyze ESG research trends, bridging the gap between theoretical perspectives and empirical findings. It highlights inconsistencies in ESG measurement and reporting, calling for greater standardization in sustainability research methodologies. By employing bibliometric analysis, trend analysis, citation mapping, and co-occurrence analysis, this study provides a data-driven approach to understanding the development of ESG research. The study identifies key research clusters and collaboration networks, offering a novel way to visualize academic contributions in this field. The findings can help academics, policymakers, and corporate leaders understand how sustainability research is evolving, and shaping future ESG regulations and investment strategies. By identifying underexplored research areas, such as ESG implementation in developing countries, financial performance impacts, and governance structures; this study directs future research efforts toward high-impact and actionable areas. The urgency of this research stems from the increasing global focus on sustainability, corporate accountability, and ESG-driven investment decisions. Several factors highlight why this study is essential at this moment: First, Regulatory and Market Pressures. Governments worldwide are tightening sustainability regulations (IFRS Sustainability Standards, SEC climate disclosure rules), requiring businesses to enhance ESG transparency and compliance. Investors are demanding clearer ESG disclosures, as ESG ratings are becoming a key determinant of corporate valuation and risk assessments. Second, Corporate Sustainability Challenges. Many companies struggle with greenwashing concerns and inconsistent ESG reporting frameworks, leading to stakeholder skepticism and reputational risks. There is a critical need for standardized, reliable ESG metrics that align with both financial and non-financial performance indicators. Third, Emerging research gaps and technological disruptions. The integration of AI, Blockchain, and big data in ESG reporting is underexplored, despite its potential to revolutionize sustainability transparency and accountability. Sustainability research has been disproportionately focused on developed countries, while developing economies remain underrepresented, despite facing greater environmental and social challenges. The purpose of this research is to identify and explore future research opportunities related to Sustainability and ESG by analyzing current trends, theoretical foundations, and implementation challenges. Through a bibliometric approach, this study aims to bridge the gaps between theory and practice, research focus, and practical needs. By Integrating Stakeholder Theory, Legitimacy Theory, and NRBV, the research seeks to provide a comprehensive understanding of how ESG practices are evolving and how they can be more effectively implemented. Based on the gaps in implementation, perception versus reality, research, and theory mentioned above, the research question is: What are the future research opportunities related to sustainability and ESG? This study addresses the question using a bibliometric approach. 2. Theoretical Framework Stakeholder Theory suggests that a company's success is determined not only by shareholders but also by a broader range of stakeholders, including employees, customers, suppliers, communities, and regulatory bodies. According to this theory, companies that align their operations with stakeholder expectations tend to enhance long-term sustainability (Bansal et$ al$., 2021). Companies that prioritize ESG factors create value for multiple stakeholders by addressing environmental concerns, ensuring ethical business practices, and fostering social responsibility. ESG reporting and transparency can strengthen stakeholder trust and corporate reputation. In the context of ESG and sustainability research, this theory is essential in explaining why companies adopt ESG strategies and how they balance financial performance with social and environmental responsibilities. Companies increasingly integrate ESG practices into their business strategies to align with the interests of various stakeholders, which affects corporate reputation, risk management, and long-term financial performance (Freudenrei$c$h et$ al$., 2020). Institutional investors are placing greater emphasis on ESG performance when making investment decisions, reinforcing the need for corporate ESG transparency and accountability (Ec$cles$ & Klim$e$nko, 2019). Governments and regulatory bodies are imposing ESG-related policies, requiring businesses to adapt their sustainability practices to comply with evolving regulations (Lee$$ & Suh, 2022). Legitimacy theory (Suchman$, 1995) posits that companies must align their activities with societal norms and values to gain legitimacy and maintain their social license to operate. This theory explains why firms engage in sustainability reporting and ESG Disclosures. Organizations use ESG reporting to demonstrate alignment with societal expectations and regulatory frameworks (Ak$hter$ et$ al$., 2023). Firms use ESG reporting to demonstrate compliance with environmental and social standards, thereby reducing reputational risks and gaining stakeholder trust (Crossley$ et$ al$., 2021). Some companies manipulate ESG disclosures to create a misleading perception of sustainability efforts without substantive action. This creates legitimacy gaps, where the perceived ESG performance differs from actual business practices (Bel$lucci$ et$ al$., 2021). As ESG disclosure frameworks (GRI, SASB) continue to evolve, firms must adapt their sustainability reporting strategies to maintain legitimacy in the eyes of investors and regulators (Y. Sun et$ al$., 2024). The NRBV extends the RBV by emphasizing that companies can achieve a competitive advantage through sustainable management of natural resources. NRBV often focuses more on internal environmental resources and lacks emphasis on external collaborations for sustainability (Andersén, 2021). Companies that prioritize eco-friendly production processes, circular economy models, and carbon footprint reduction align with NRBV principles, leading to long-term competitive advantages (Tjahjadi$ et$ al$., 2023). Organizations integrating renewable energy, carbon-neutral strategies, and climate resilience measures can differentiate themselves in the market while complying with global ESG standards (Andersén, 2021). NRBV supports the integration of AI, Blockchain, and Big Data analytics in ESG reporting to enhance transparency, accountability, and sustainability performance tracking (Xue$ et$ al$., 2023). In business and accounting research, sustainability is operationalized through ESG frameworks, corporate sustainability reporting, and impact measurement. Studies show that strong ESG performance is linked to improved financial stability, reduced risk exposure, and long-term shareholder value (Ay$doğmuş et$ al$., 2022). ESG ratings and sustainability indices, play a crucial role in assessing corporate sustainability efforts, but measurement inconsistencies remain a challenge (Ber$g et$ al$., 2022). Research indicates that ESG adoption varies across regions, with developed economies leading ESG integration while developing economies face structural barriers in sustainability implementation (Saleem$ et$ a$l., 2020). The concept of ESG has gained significant traction in both academic research and corporate strategy. ESG frameworks provide a structured way to evaluate corporate sustainability performance and risk management. Climate change mitigation, carbon footprint reduction, water resource management, and biodiversity conservation are key ESG topics that align with NRBV principles and corporate sustainability strategies. Labor rights, diversity and inclusion, CSR, and community engagement are core aspects that align with Stakeholder Theory, emphasizing business roles in addressing social inequalities. Corporate governance mechanisms, board diversity, executive compensation, and anti-corruption policies impact ESG transparency, legitimacy, and investor confidence. 3. Research Method This research is quantitative in nature and utilizes R Studio, an Integrated Development Environment, to analyze data, including Bibliometric analysis. The bibliometric approach allows us to identify major research trends, collaboration networks, among researchers, and gaps in the literature that require further exploration. Data collection was conducted using the keywords "Sustainability" and "ESG" within the Scopus database, covering the period from 2014 to 2024. Scopus was chosen because it is the most comprehensive database and is frequently used in academic research (Judij$an$to et$ a$l., 2024). The data was limited to articles specifically in Business, Management, and Accounting, resulting in 1.271 articles.

The data analysis techniques employed include Bibliometric analysis, citation analysis, word cloud analysis, trend analysis, co-occurrence analysis, and collaboration network analysis. The results of the search using the keywords are shown in Figure 1 below: Figure 1. Keyword Search. Data processing using R studio yielded 1.257 articles, as shown in Figure 2 below: Figure 2. Main Information The chart above systematically presents the method used in selecting articles for bibliometric analysis. The process involved multiple stages: (1) initial search (Scopus Database) – a total of 5.000 articles were retrieved using the keywords "Sustainability" and "ESG". (2) filtered by Business, Management, and Accounting – articles outside the relevant subject areas were excluded, reducing the dataset to 2.500 articles. (3) Filtered by period (2014-2024) – studies outside the specified timeframe were removed, leaving 1.800 articles. (4) After removing duplicates – duplicate entries and redundant studies were eliminated, resulting in 1.300 unique articles. (5) Final articles analyzed – after applying inclusion and exclusion criteria, a total of 1.271 articles were included in the final bibliometric analysis. Table 1. Article Selection Stages No Category Number of Articles 1. Initial search (Scopus Database) 2. Filtered by business, management, and accounting 3. Filtered by period (2014-2024) 4. After removing duplicates 5. Final articles analyzed 5.000 articles 2.500 articles 1.800 articles 1.300 unique articles 1.271 articles Source: Data processed by researchers (2025) 4. Results and Discussion Appendix 1 shows the trend analysis indicating that the average citations in 2014 started with the highest value, exceeding 20 citations. From 2015 to 2016, there was a sharp decline, reaching the lowest point at around 5 to 7 citations. In 2017, there was a slight increase, reaching 15 citations. The consistent decline from 2018 to 2024 suggests that the works became less relevant and have been replaced by newer, trendier topics. The proportion of various categories or keywords in the data is shown in the treemap in Appendix 2. A treemap is used to show the proportion or frequency of different categories or keywords in the data. From Figure 6, it is evident that the largest box in the treemap represents. Sustainable Development, encompassing 14% of the total or appearing 126 times. The second largest is Sustainability at 8%, followed by CSR (5%), Environmental (4%), Finance (3%), ESG (2%), Investment (2%), and other terms like corporate strategy, regression analysis, and climate change with proportions varying between 1% to 2%. Trend analysis of topics related to sustainability is shown in Appendix 3, illustrating the trending topics frequently discussed from 2016 to 2023. The most discussed topics in recent years are Sustainability, CSR, and Sustainable Development, as indicated by the large circles in 2022 and 2023. Additionally, topics like Innovation, Environment, and Governance have also been major points of focus during these years, although with slightly lower frequency compared to the main topics. Emerging topics that have gained more attention in recent years include Investment, Environmental Economics, and Financial Performance. Some topics have seen increased frequency over a shorter and less consistent period, such as CSR, Commerce, and Stakeholder. The Co-occurrence analysis is shown in Appendix 4. From Co-occurrence, it is evident that the red nodes tend to be associated with Sustainable Development, while the blue nodes are related to sustainability and aspects such as CSR and governance approach. The larger the node, the more frequently the keyword appears in the research. Edges are the connecting lines that show the relationships between different keywords. The thicker the line, the stronger or more frequent the relationship between the keywords in the articles. In Figure 8, the keywords with large node sizes – Sustainable Development, Sustainability, and CSR – indicate that they are central themes in the Literature analyzed. Additionally, keywords like Environmental, Governance, and Stakeholder also stand out, showing that they are topics frequently discussed alongside the main keywords. Collaboration network analysis shown in Appendix 5, illustrates the collaboration relationships between authors based on the scholarly works they have produced together. A link connecting two nodes indicates that the two authors have collaborated on at least one scholarly work. The thicker the line, the more frequently they have collaborated. The authors' names are displayed next to their nodes. Larger and more central names indicate that the authors have more collaborations or more publications within this network. From Figure 10, it is evident that authors Hussainey K and Agnese P. play a central role in this collaboration network, while other authors are more isolated or only collaborate with one or two other authors. Table 2. Findings Summary No Findings category Explanation of results 1. The treemap analysis The treemap highlights dominant themes such as Sustainable Development, Sustainability, CSR, Environmental Management, and Governance. These results suggest that Sustainable Development has been the most frequently discussed topic in ESG research, indicating its central role in academic discussions. 2. Trend analysis The results indicate that Sustainability, CSR, and Sustainable Development have remained key topics over the years, reinforcing their continued relevance in academic research. Topics such as Innovation, Governance, and Financial Performance have gained prominence in recent years, suggesting that researchers are increasingly interested in the economic and governance aspects of ESG. 3. Citation analysis The analysis shows that research from countries like the United States, the UK, and Italy has received the highest citations, indicating that ESG and sustainability discussions are primarily shaped by developed economies. This suggests a research gap, as developing countries have lower citation counts, implying a lack of ESG-focused studies in their regions. Future research could focus on ESG implementation and regulatory framework in developing economies to balance the global ESG disclosure. No Findings category Explanation of results 4. Co-occurrence analysis The results reveal that Sustainable Development, CSR, and Governance are closely connected, highlighting the strong linkage between corporate governance and sustainability initiatives. The connection between Environmental and Social aspects suggests that research increasingly integrates social and environmental factors when assessing ESG performance. Future research could explore how ESG governance structure influences environmental and social outcomes, and how businesses balance financial performance with ESG responsibilities. 5. Collaboration network analysis The findings indicate that a few researchers, such as Hussainey K. and Agnese P., play a central role in ESG research collaborations. Many other researchers appear isolated or have limited collaboration networks, suggesting that cross- disciplinary and international research collaborations are still underdeveloped. Source: Data processed by researchers (2025) The treemap analysis provides a visual representation of the frequency and proportion of various topics related to Sustainability and ESG in the literature. In relation to the research objectives, identifying future research opportunities and trends in ESG and sustainability. The treemap highlights dominant themes such as sustainable development, sustainability, CSR, environmental management, and governance. These results suggest that sustainable development has been the most frequently discussed topic in ESG research, indicating its central role in academic discussions. The presence of topics like CSR, governance, and finance in the treemap suggests that research on Corporate Sustainability Reporting, governance approaches, and financial implications of ESG practices are also prominent. However, smaller categories such as investment, regression analysis, and climate change indicate underexplored areas that present opportunities for future research, particularly in measuring financial performance, ESG investments, and climate-related ESG risks. Trend Analysis helps determine how specific ESG-related topics have evolved. In line with the research objective of exploring future research directions, this analysis shows which topics are emerging and which are declining. The results indicate that Sustainability, CSR, and Sustainable Development have remained key topics over the years, reinforcing their continued relevance in academic research. Topics such as Innovation, Governance, and Financial Performance have gained prominence in recent years, suggesting that researchers are increasingly interested in the economic and governance aspects of ESG. The rise of Environmental Economics and Investment as emerging themes suggests a growing focus on the financial sustainability of ESG initiatives, green finance, and sustainable investment strategies. These topics could be crucial for future studies. Citation analysis is used to identify the most influential studies in Sustainability and ESG research and to track the impact of specific topics over time. The analysis shows that research from countries like the United States, the UK, and Italy has received the highest citations, indicating that ESG and sustainability discussions are primarily shaped by developed economies. This suggests a research gap, as developing countries have lower citation counts, implying a lack of ESG-focused studies in their regions. Future research could focus on ESG implementation and regulatory framework in developing economies to balance the global ESG disclosure. Co-occurrence analysis visualizes the relationships between key concepts in ESG research. The results reveal that sustainable development, CSR, and governance are closely connected, highlighting the strong linkage between corporate governance and sustainability initiatives. The connection between Environmental and Social aspects suggests that research increasingly integrates social and environmental factors when assessing ESG performance. Future research could explore how ESG governance structure influences environmental and social outcomes, and how businesses balance financial performance with ESG responsibilities. Collaboration network analysis identifies leading researchers and institutions working in ESG and sustainability research. The findings indicate that a few researchers, such as Hussainey K. and Agnese P., play a central role in ESG research collaborations. Many other

researchers appear isolated or have limited collaboration networks, suggesting that cross-disciplinary and international research collaborations are still underdeveloped. Future research could benefit from greater international collaboration to incorporate diverse perspectives on ESG challenges and solutions, particularly from underrepresented regions. The findings of this bibliometric analysis on sustainability and ESG research highlight several key trends: (1) dominant research areas; (2) emerging themes; (3) geographical imbalance; (4) gaps in collaboration; and (5) measurement challenges. Dominant research areas: the analysis identified sustainable development, CSR, and governance as the most frequently studies topics, reinforcing their central role in ESG discourse. Emerging themes: topics such as innovation, ESG investment, and financial performance have gained prominence in recent years, indicating growing interest in the economic impact of ESG initiatives. Geographical imbalance: citation analysis revealed that research is dominated by developed countries, highlighting a gap in ESG studies focused on developing economies. Gaps in collaboration: collaboration network analysis showed limited international and cross-disciplinary research networks, suggesting the need for greater integration of diverse academic perspectives. Measurement challenges: the analysis emphasized inconsistencies in ESG measurement methodologies, revealing a gap in standardized reporting and evaluation frameworks. This article presents a comprehensive mapping of ESG and sustainability research from 2014 to 2024, emphasizing how academic discourse has predominantly centered on topics like Sustainable Development, CSR, and Governance. Through bibliometric analysis of Scopus-indexed articles in business, management, and accounting, the study uncovers a consistent focus on general principles and reporting, while highlighting that critical areas such as ESG investment, financial performance, and emerging technologies (AI and Blockchain in ESG reporting) remain underexplored. This imbalance reflects not only topical gaps but also geographical disparities, as research is largely dominated by developed countries like the US, UK, and Italy, leaving developing regions underrepresented and creating a knowledge gap that warrants cross-regional investigation (Sin$ghan$ia$$ et$ al$., 2024). Furthermore, the study reveals inconsistencies in ESG measurement methodologies, calling for the development of standardized metrics and the integration of interdisciplinary approaches to strengthen the field. Thematically interwoven through stakeholder theory, legitimacy theory, and the Natural Resource-Based View (NRBV), this research established a theoretical foundation for understanding how ESG practices align with stakeholder interest, enhance legitimacy, and support sustainable resource management. Altogether, the findings not only bridge the gap between ESG theory and practice but also construct a forward-looking roadmap for future research, offering strategic insight for scholars, policymakers, and business leaders to design more inclusive, effective, and context-sensitive sustainability initiatives. 5. Conclusion, Implications, and Limitations This study provides evidence that sustainable development, CSR, and governance remain the dominant areas in sustainability and ESG research. Through a bibliometric analysis of Scopus-indexed publications from 2014 to 2024, the findings reveal that stakeholder expectations, regulatory pressures, and the pursuit of corporate legitimacy continue to drive ESG adoption. However, newer themes such as ESG investment, financial performance, and the use of emerging technologies are gaining traction, reflecting a shift towards understanding the economic and strategic impact of ESG practices. The findings carry both theoretical and practical implications. Theoretically, the study reinforces the relevance of Legitimacy Theory, Stakeholder Theory, and the Natural Resource-Based View (NRBV) in explaining how firms respond to increasing sustainability pressures. Firms strategically use ESG disclosures not only to gain legitimacy but also to align with stakeholder expectations and enhance their financial performance. In particular, Stakeholder Theory posits that addressing the interests of diverse stakeholder groups, such as investors, customers, and communities; can foster trust and lead to improved financial outcomes. These theoretical perspectives are further supported by empirical findings that link ESG practices with stronger financial performance and greater corporate resilience (Steblianskaia et al., 2023). Practically, the results highlight the urgent need for a more standardized ESG measurement and reporting framework, especially as companies navigate growing demands for transparency and sustainability-driven value creation in an increasingly dynamic global environment (X. Wang et al., 2024). Despite its contributions, the study has several limitations. It relies solely on Scopus- indexed, English-language publications, which may exclude valuable perspectives from other databases and non-English sources. Furthermore, the analysis is based on quantitative bibliometric methods, limiting the depth of interpretation regarding how ESG is applied across different contexts. The evolving nature of ESG regulations and the lack of primary empirical data also constrain the study's ability to capture real-time changes and practical implementations within organizations. Future research should expand the scope of analysis by incorporating additional databases and multilingual sources to capture a more diverse global perspective. Combining bibliometric analysis with qualitative methods such as systematic literature reviews or case studies would provide richer insights. Researchers are also encouraged to conduct longitudinal and empirical studies that examine ESG practices in real-world settings, especially in developing countries and in relation to emerging technologies like AI, Blockchain, and Bid Data. This would help bridge the gap between theory and practice, supporting more context-sensitive and actionable ESG strategies. Acknowledgment Thank you to Universitas Katolik Darma Cendika (UKDC) for their support, which made it possible for this article to be completed successfully. References Ademi, B., & Klungseth, N. J. (2022). Does it pay to deliver superior ESG performance? Evidence from US S&P 500 companies. Journal of Global Responsibility, 13(4), 421–449. https://doi.org/10.1108/JGR-01-2022-0006 Akhter, F., Hossain, M. R., Elrehail, H., Rehman, S. U., & Almansour, B. (2023). Environmental disclosures and corporate attributes, from the lens of legitimacy theory: a Longitudinal analysis on a developing country. European Journal of Management and Business Economics, 32(3), 342–369. https://doi.org/10.1108/EJMBE-01-2021-0008 Andersén, J. (2021). A relational natural-resource-based view on product innovation: The Influence of green product innovation and green suppliers on differentiation advantage in small manufacturing Firms. Technovation, 104(February). https://doi.org/10.1016/j.technovation.2021.102254 Aydoğmuş, M., Gülay, G., & Ergun, K. (2022). Impact of ESG performance on firm value and profitability. Borsa Istanbul Review, 22, S119–S127. https://doi.org/10.1016/j.bir.2022.11.006 Azmi, W., Hassan, M. K., Houston, R., & Karim, M. S. (2021). ESG activities and banking performance: International evidence from emerging economies. Journal of International Financial Markets, Institutions, and Money, 70, 101277. https://doi.org/10.1016/j.intfin.2020.101277 Bansal, M., Samad, T. A., & Bashir, H. A. (2021). The sustainability reporting-firm performance nexus: Evidence from a threshold model. Journal of Global Responsibility, 12(4), 491–512. https://doi.org/10.1108/JGR-05-2021-0049 Barka, Z., Hamza, T., & Mrad, S. (2023). Corporate ESG Scores and Equity Market Misvaluation: Toward Ethical Investor Behavior. Economic Modelling, 127(August), 106467. https://doi.org/10.1016/j.econmod.2023.106467 Bellucci, M., Acuti, D., Simoni, L., & Manetti, G. (2021). Hypocrisy and legitimacy in the aftermath of a scandal: an experimental study of stakeholder perceptions of nonfinancial disclosure. Accounting, Auditing and Accountability Journal, 34(9), 151–163. https://doi.org/10.1108/AAAJ-01-2021-5113 Berg, F., Kölbel, J. F., & Rigobon, R. (2022). Aggregate confusion: The divergence of ESG ratings. Review of Finance, 26(6), 1315–1344. https://doi.org/10.1093/rof/rfac033 Branco, M. C. (2024). CSR research in corporate finance: A comment on Gillan et al., "Firms and social responsibility: a Review of ESG and CSR research in corporate finance." Sustainability Accounting, Management and Policy Journal, 15(1), 85–95. https://doi.org/10.1108/SAMPJ-05-2023-0269 Chen, S., Song, Y., & Gao, P. (2023). Environmental, Social, And Governance (ESG) performance and financial outcomes: Analyzing the impact of ESG on financial performance. Journal of Environmental Management, 345(June). https://doi.org/10.1016/j.jenvman.2023.118829 Citterio, A., & King, T. (2023). The role of Environmental, Social, and Governance (ESG) in predicting bank financial distress. Finance Research Letters, 51(July 2022), 103411. https://doi.org/10.1016/j.frl.2022.103411 Clément, A., Robinot, É., & Trespeuch, L. (2022). Improving ESG scores with sustainability concepts. Sustainability (Switzerland), 14(20). https://doi.org/10.3390/su142013154 Crossley, R. M., Elmagrhi, M. H., & Ntim, C. G. (2021). Sustainability and legitimacy theory: The case of sustainable social and environmental practices of small and medium-sized enterprises. Business Strategy and the Environment, 30(8), 3740–3762. https://doi.org/10.1002/bse.2837 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 Eccles, R. G., & Klimenko, S. (2019). The investor revolution. Harvard Business Review, 2019(May-June), 106–116. Freudenreich, B., Lüdeke-Freund, F., & Schaltegger, S. (2020). A stakeholder theory perspective on business models: Value creation for sustainability. Journal of Business Ethics, 166(1), 3–18. https://doi.org/10.1007/s10551-019-04112-z Gillan, S. L., Koch, A., & Starks, L. T. (2021). Firms and social responsibility: a Review of ESG and CSR research in corporate finance. Journal of Corporate Finance, 66(January), 101889. https://doi.org/10.1016/j.jcorpfin.2021.101889 Goyal, L. (2022). Stakeholder theory: Revisiting the origins.

Journal of Public Affairs, 22(3). https://doi.org/10.1002/pa.2559 Gregory, A., Whittaker, J., & Yan, X. (2016). Corporate social performance, competitive advantage, earnings persistence, and firm value. Journal of Business Finance and Accounting, 43(1–2), 3–30. https://doi.org/10.1111/jbfa.12182 Inês, A., Diniz, A., & Moreira, A. C. (2023). A review of greenwashing and supply chain management: Challenges ahead. Cleaner Environmental Systems, 11(June). https://doi.org/10.1016/j.cesys.2023.100136 Jarraud, M., & Steiner, A. (2012). Summary for policymakers. In Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation: Special Report of the Intergovernmental Panel on Climate Change (Vol. 9781107025). Cambridge University Press, Cambridge. https://doi.org/10.1017/CBO9781139177245.003 Judijanto, L., Ladjin, N., Harsono, I., Amalia, M. M., & Sangaji, J. (2024). Bibliometric analysis of trends and patterns in Sustainable and Responsible Investments (SRI) research from 2000-2024. West Science Journal Economic and Entrepreneurship, 2(02), 168–177. https://doi.org/10.58812/wsjee.v2i02.892 Kalra, P. (2024). Corporate social responsibility and stakeholder theory: An integrated review. Journal of Management & Enterpreneurship, 18 No.I(II(January-March), 30– 40. https://doi.org/10.13140/RG.2.2.32886.82243 Klettner, A., Clarke, T., & Boersma, M. (2014). The governance of corporate sustainability: Empirical insights into the development, leadership, and implementation of responsible business strategy. Journal of Business Ethics, 122(1), 145–165. https://doi.org/10.1007/s10551-013-1750-y Kopnina, H., Zhang, S. R., Anthony, S., Hassan, A., & Maroun, W. (2024). The inclusion of biodiversity into Environmental, Social, and Governance (ESG) framework: A strategic integration of ecocentric extinction accounting. Journal of Environmental Management, 351(November 2023), 119808. https://doi.org/10.1016/j.jenvman.2023.119808 Kotsantonis, S., & Serafeim, G. (2019). Four things no one will tell you about ESG data. Journal of Applied Corporate Finance, 31(2), 50–58. https://doi.org/10.1111/jacf.12346 Lee, M. T., & Suh, I. (2022). Understanding the effects of environment, social, and governance conduct on financial performance: Arguments for a process and integrated modeling approach. Sustainable Technology and Entrepreneurship, 1(1), 100004. https://doi.org/10.1016/j.stae.2022.100004 Martiny, A., Taglialatela, J., Testa, F., & Iraldo, F. (2024). Determinants of Environmental Social and Governance (ESG) performance: A systematic literature review. Journal of Cleaner Production, 456(June 2023), 142213. https://doi.org/10.1016/j.jclepro.2024.142213 Nguyen, N. M., Abu Afifa, M. M., Thi Truc Dao, V., Van Bui, D., & Vo Van, H. (2025). Leveraging artificial intelligence and blockchain in accounting to boost ESG performance: The role of risk management and environmental uncertainty. International Journal of Organizational Analysis. https://doi.org/10.1108/IJOA-07- 2024-4652 Nitlarp, T., & Kiattisin, S. (2022). The impact factors of Industry 4.0 on ESG in the energy sector. Sustainability (Switzerland), 14(15). https://doi.org/10.3390/su14159198 Porter, M. E., & Kramer, M. R. (2011). Creating shared value. Harvard Business Review, 89(1–2). https://doi.org/10.2139/ssrn.3683975 Raghavan, K. (2022). ESG reporting impact on accounting, and finance. The Journal of Global Awareness, 3(1), 1–16. https://doi.org/10.24073/jga/3/01/09 Revelli, C. (2017). Socially Responsible Investing (SRI): From mainstream to margin? Research in International Business and Finance, 39, 711–717. https://doi.org/10.1016/j.ribaf.2015.11.003 Roberts, L., Hassan, A., Elamer, A., & Nandy, M. (2021). Biodiversity and extinction accounting for sustainable development: A systematic literature review and future research directions. Business Strategy and the Environment, 30(1), 705–720. https://doi.org/10.1002/bse.2649 Saleem, F., Zhang-Zhang, Y., Malik, M. I., & Allui, A. (2020). Revisiting stakeholder theory and environmentalism: Evidence from an emerging economy. Sustainability (Switzerland), 12(20), 1–20. https://doi.org/10.3390/su12208751 Schaltegger, S., Hörisch, J., & Freeman, R. E. (2019). Business cases for sustainability: A stakeholder theory perspective. Organization and Environment, 32(3), 191–212. https://doi.org/10.1177/1086026617722882 Schaltegger, S., & Wagner, M. (2018). Managing and measuring the business case for sustainability. Managing the Business Case for Sustainability, January, 1–27. https://doi.org/10.4324/9781351280525-1 Sharma, S. (2023). Does ESG risk management ensure better risk management? Evidence from India. Procedia Computer Science, 221, 912–919. https://doi.org/10.1016/j.procs.2023.08.068 Singhania, M., Saini, N., Shri, C., & Bhatia, S. (2024). Cross-country comparative trend analysis in ESG regulatory framework across developed and developing nations. Management of Environmental Quality: An International Journal, 35(1), 61–100. https://doi.org/10.1108/MEQ-02-2023-0056 Steblianskaia, E., Vasiev, M., Denisov, A., Bocharnikov, V., Steblyanskaya, A., & Wang, Q. (2023). Environmental-social-governance concept bibliometric analysis and systematic literature review: Do investors becoming more environmentally conscious? Environmental and Sustainability Indicators, 17(December), 100218. https://doi.org/10.1016/j.indic.2022.100218 Suchman, M. C. (1995). Managing legitimacy: Strategic and institutional approaches. The Academy of Management Review, 20(3), 571–610. Sun, Q., Li, Y., & Hong, A. (2024). Integrating ESG into corporate strategy: Unveiling the moderating effect of digital transformation on green innovation through employee insights. Systems, 12(5). https://doi.org/10.3390/systems12050148 Sun, Y., Zhao, D., & Cao, Y. (2024). The impact of ESG performance, reporting framework, and reporting assurance on the tone of ESG disclosures: Evidence from Chinese listed firms. Journal of Cleaner Production, 466(October 2023), 142698. https://doi.org/10.1016/j.jclepro.2024.142698 Talan, G., Deep, G., Pareira, V., & Muschert, G. W. (2024). From ESG to holistic value addition : Rethinking sustainable investment from the lens of stakeholder theory. International Review of Economics and Finance, 96(PA), 103530. https://doi.org/10.1016/j.iref.2024.103530 Tjahjadi, B., Soewarno, N., Karima, T. El, & Sutarsa, A. A. P. (2023). A business strategy, spiritual capital, and environmental sustainability performance: Mediating role of environmental management process. Business Process Management Journal, 29(1), 77–99. https://doi.org/10.1108/BPMJ-11-2021-0718 Valentinov, V. (2023). Sustainability and stakeholder theory: A processual perspective. Kybernetes, 52(13), 61–77. https://doi.org/10.1108/K-05-2023-0819 Wang, C. (2024). The relationship between ESG performance and corporate performance based on stakeholder theory. SHS Web of Conferences, 190, 03022. https://doi.org/10.1051/shsconf/202419003022 Wang, F. (2024). The impact of ESG on financial performance: An empirical analysis of listed companies in China. Advances in Economics, Management, and Political Sciences, 83(1), 207–214. https://doi.org/10.54254/2754-1169/83/20240748 Wang, X., Yin, Y., Chun, D., & Li, P. (2024). How Does ESG Disclosure Promote Technological Innovation? Moderating Effects Based on Product Market Competition. Kybernetes, 54(4), 2245–2267. https://doi.org/10.1108/K-08-2023-1398 Wojewnik-Filipkowska, A., Dziadkiewicz, A., Dryl, W., Dryl, T., & Bęben, R. (2021). Obstacles and challenges in applying stakeholder analysis to infrastructure projects: Is there a gap between stakeholder theory and practice? Journal of Property Investment and Finance, 39(3), 199–222. https://doi.org/10.1108/JPIF-03-2019-0037 Xue, R., Wang, H., Yang, Y., Linnenluecke, M. K., Jin, K., & Cai, C. W. (2023). The adverse impact of corporate ESG controversies on sustainable investment. Journal of Cleaner Production, 427(October), 139237. https://doi.org/10.1016/j.jclepro.2023.139237 Zhang, R., & Noronha, C. (2023). Assessing the nexus between cross-border infrastructure projects and extinction accounting—from the Belt and Road Initiative perspective. Social and Environmental Accountability Journal, 43(1), 30–55. https://doi.org/10.1080/0969160X.2022.2132969 Zhao, X., Nan, D., Chen, C., Zhang, S., Che, S. P., & Kim, J. H. (2023). Bibliometric study on environmental, social, and governance research using CiteSpace. Frontiers in Environmental Science, 10(January), 1–12. https://doi.org/10.3389/fenvs.2022.1087493 Appendix : Appendix 1. Average Citation per Year Appendix 2. Treemap Appendix 3. Trend Topics Appendix 4. Co-occurrence Appendix 5. Collaboration Network Analysis Jurnal Studi Akuntansi dan Keuangan Vol. 8(1), 2025, halaman 169 - 188 Jurnal Studi Akuntansi dan Keuangan Vol. 8(1), 2025, halaman 169 - 188 Jurnal Studi Akuntansi dan Keuangan Vol. 8(1), 2025, halaman 169 - 188 Jurnal Studi Akuntansi dan Keuangan Vol. 8(1), 2025, halaman 169 - 188 Jurnal Studi Akuntansi dan Keuangan Vol. 8(1), 2025, halaman 169 - 188 Jurnal Studi Akuntansi dan Keuangan Vol. 8(1), 2025, halaman 169 - 188 Jurnal Studi Akuntansi dan Keuangan Vol. 8(1), 2025, halaman 169 - 188 Jurnal Studi Akuntansi dan Keuangan Vol. 8(1), 2025, halaman 169 - 188 Jurnal Studi Akuntansi dan Keuangan Vol. 8(1), 2025, halaman 169 - 188 Jurnal Studi Akuntansi dan Keuangan Vol. 8(1), 2025, halaman 169 - 188 Jurnal Studi Akuntansi dan Keuangan Vol. 8(1), 2025, halaman 169 - 188 Jurnal Studi Akuntansi dan Keuangan Vol. 8(1), 2025, halaman 169 - 188 Jurnal Studi Akuntansi dan Keuangan Vol. 8(1), 2025, halaman 169 - 188 Jurnal Studi Akuntansi dan Keuangan Vol. 8(1), 2025, halaman 169 - 188 Jurnal Studi Akuntansi dan Keuangan Vol. 8(1), 2025, halaman 169 - 188 Jurnal Studi Akuntansi dan Keuangan Vol. 8(1), 2025, halaman 169 - 188 Jurnal Studi Akuntansi dan Keuangan Vol. 8(1), 2025, halaman 169 - 188 Jurnal Studi Akuntansi dan Keuangan Vol. 8(1), 2025, halaman 169 - 188 Jurnal Studi

Akuntansi dan Keuangan Vol. 8(1), 2025, halaman 169 - 188 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188

NVEILING FUTURE PATHWAYS IN ESG AND SUSTAINABILITY: A BIBLIOMETRIC EXPLORATION OF EMERGING TRENDS AND RESEARCH GAPS

by Ukdc Perpustakaan 2

Submission date: 20-Jun-2025 08:36AM (UTC+0700)
Submission ID: 2702604153
File name: 659-Article_Text-4517-1-10-20250618.pdf (881.79K)
Word count: 8101
Character count: 49821

AKURASI Jurnal Studi Akuntansi dan Keuangan
p-ISSN : 2720-9067
e-ISSN : 2685-1059
Program Studi Magister Akuntansi
Fakultas Ekonomi dan Bisnis
Universitas Mataram

UNVEILING FUTURE PATHWAYS IN ESG AND SUSTAINABILITY: A BIBLIOMETRIC EXPLORATION OF EMERGING TRENDS AND RESEARCH GAPS

Lusy[1], Rafles Ginting[2]
Universitas Katolik Darma Cendika[1], Universitas Tanjungpura[2]
[1]Corresponding author: margarethahulda@gmail.com

INFORMASI ARTIKEL

Article history:
Dikirim tanggal:19/03/2025
Revisi pertama tanggal: 24/04/2025
Diterima tanggal: 03/06/2025
Tersedia online tanggal: 18/06/2025

ABSTRAK

Penelitian ini bertujuan mengidentifikasi peluang riset masa depan dalam bidang sustainability dan ESG melalui analisis bibliometric terhadap artikel Scopus periode 2014-2024, di bidang bisnis, manajemen dan akuntansi. Hasil menunjukkan bahwa topik dominan adalah pembangunan berkelanjutan, CSR, dan tata kelola, sementara investasi ESG, kinerja keuangan, dan teknologi baru masih kurang dieksplorasi. Didorong oleh ekspektasi pemangku kepentingan, regulasi dan kebutuhan legitimasi adopsi ESG, selaras dengan teori pemangku kepentingan, teori legitimasi, dan pandangan berbasis sumber daya alam (NRBV). Studi ini menyoroti perlunya pengembangan metrik ESG yang terstandarisasi, peningkatan keragaman regional, serta integrasi lintas disiplin untuk memperkuat pemahaman dan penerapan berkelanjutan. Penelitian ini berkontribusi dalam menjembatani kesenjangan riset, mengidentifikasi tren yang muncul, dan menyusun peta jalan ESG serta mengembangkan strategi keberlanjutan yang lebih efektif.

Kata Kunci: analisis bibliometrik, ESG, NRBV, teori legitimasi, teori pemangku kepentingan

ABSTRACT

This study aims to identify future research opportunities in the field of sustainability and ESG through a bibliometric analysis of Scopus articles for the period 2014-2024, focusing on the fields of business, management, and accounting. The results show that the dominant topics are sustainable development, CSR, and governance, while ESG investment, financial performance, and new technologies are still under-explored. Driven by stakeholder expectations, regulations, and the need for legitimacy for ESG adoption, in line with stakeholder theory, legitimacy theory, and natural resource-based approach (NRBV). This study highlights the need for the development of standardized ESG metrics, increasing regional diversity, and cross-disciplinary integration to strengthen the understanding and implementation of sustainability. This study contributes to bridging the research gap, identifying emerging trends, developing an ESG roadmap and developing more effective sustainability strategies.

Keywords: bibliometric analysis, ESG, NRBV, legitimacy theory stakeholder theory

1. Introduction

Sustainability and ESG issues are becoming increasingly important as they relate to global challenges impacting various sectors, including the environment, economy, and society. Here are several reasons why this topic is important: Firstly, climate change and its impact in the 21st century affect the environment, economy, and human life. Research on sustainability helps identify mitigation and adaptation strategies that can be used to reduce greenhouse gas emissions and address the negative impacts of climate change, such as natural disasters and rising sea levels (Jarraud & Steiner, 2012). Second, companies that integrate ESG criteria tend to have lower risks and more stable long-term performance, influencing investors's decision-making (Eccles et al., 2014). Thirdly, governments in many countries have begun enforcing regulations encouraging businesses to prioritize sustainability and ESG compliance (Klettner et al., 2014). Lastly, companies adopting ESG practices often gain competitive advantage through improved efficiency, product innovation, and customer loyalty. This research is essential to explore how ESG principles foster innovation and help firms remain competitive globally (Porter & Kramer, 2011). The significance of ESG and sustainability research lies in its capacity to generate systematic and sustainable value (Schaltegger & Wagner, 2018).

The terms ESG, sustainability, and CSR reporting are often used interchangeably in the industry. Companies are increasingly turning to ESG reporting to meet stakeholder information needs and demonstrate transparency in ESG risk management. The role of financial professionals and implementation models can strengthen ESG reporting and sustainability (Raghavan, 2022). ESG scores are also becoming a primary proxy for evaluating organizational sustainability, making it more accurate in reflecting sustainability principles (Clément et al., 2022). By deepening research in this field, systematic sustainable value can be created (Schaltegger & Wagner, 2018).

The implementation and integration of sustainability and ESG principles still face significant challenges. The problems encountered include: Firstly, the lack of standards and consistency in ESG reporting. As the use of ESG data in investment decisions increases, it is important to understand and address the weaknesses in ESG measurement and data. If ESG data is inaccurate or lacks transparency, it could lead to misallocation of resources and failure to achieve global sustainability goals (Kotsantonis & Serafeim, 2019). Secondly, there is the issue of greenwashing, a misleading practice where companies claim to be environmentally friendly without making substantial changes, thus damaging public trust in corporate sustainability (Inês et al., 2023). Thirdly, the challenge of integrating ESG into business strategies includes understanding how to effectively implement ESG (Q. Sun et al., 2024). Fourthly, the good implementation of ESG strategies is crucial for mitigating risks, enhancing investment efficiency, ensuring long-term sustainability development, and maintaining competitiveness in the global market (Xue et al., 2023). Lastly, the importance of honest and transparent ESG implementation is to ensure that the positive impacts of ESG practices are reflected in financial performance (Lee & Suh, 2022).

These challenges highlight the urgency of research related to sustainability and ESG. The lack of understanding of the market valuation of sustainability represents an implementation gap related to sustainability and ESG. Previous research has shown that

ESG practices can enhance the long-term value of a company, but how the equity market values a company's sustainability is still not fully understood (Barka et al., 2023). Companies are increasingly expected to focus on non-financial aspects like ESG and report their performance. However, even with growing pressure from stakeholders, there remains a question of whether investing in ESG truly makes financial sense for companies. This reflects a gap between stakeholder expectations and the actual implementation within companies (Aydoğmuş et al., 2022), or the second implementation gap related to this topic.

The third implementation gap highlights, that, despite the increasing global awareness and push towards sustainable energy, UNEP reports show that fossil fuels still dominate the global energy mix, just as they did 30 years ago (Nitlarp & Kiattisin, 2022). The final implementation gap mentions that many businesses report adopting the SDGs and claim to adhere to sustainable investment principles, but in reality, their practices do not align with the stated sustainability goals (Talan et al., 2024).

There is a need to improve standards and transparency in the ESG rating system to make it more consistent and reliable, which represents a gap between perception and reality in the ESG rating system (Berg et al., 2022). Some believe that ESG ratings are useful tools that can enhance a company's ESG performance based on the principle of "what gets measured gets done." In reality, there is criticism that ESG ratings can become a barrier to making a real impact on sustainability, potentially serving as a way to obscure inefficiencies in achieving actual ESG goals (Ademi & Klungseth, 2022). Companies view investment in ESG as costly and not always providing clear financial benefits, while stakeholders have the expectation that improved ESG performance will yield significant benefits in terms of both reputation and financial returns (Aydoğmuş et al., 2022). This creates a gap between perception and reality regarding ESG.

Sustainable investment is perceived as an approach that aligns investments with sustainability goals, but in reality, it often focuses on profitability and does not fully meet the intended sustainability objectives (Revelli, 2017). There is also inconsistency in the effectiveness of ESG performance on company value, highlighting a gap between expectations and reality (Gillan *et al*., 2021). Many companies only list species counts or reports without providing sufficient details on how they are addressing extinction issues. In reality, these reports often do not reflect the actual actions taken to address the biodiversity crisis (Zhang & Noronha, 2023). This is another gap between perception and reality related to sustainability and ESG.

The existing literature often shows inconsistent results regarding the impact of ESG on company performance or investor value. Some studies indicate that implementing ESG principles can enhance financial performance, while others show a neutral or even negative impact (Martiny et al., 2024). Another research gap is the need to connect index performance with value-at-risk calculations to better understand the risk profile for investors (Sharma, 2023). A further research gap involves the limitations of predictive models, which tend to focus on retrospective accounting variables. Research has shown that these variables are ineffective in predicting future performance (Citterio & King, 2023). Although there is research on biodiversity accounting and extinction, there is still a lack of studies investigating the effectiveness of reporting and conservation actions (Kopnina et al., 2024).

Stakeholder theory suggests that companies that can align with all stakeholders will be more sustainable. However, in practice, there are real challenges in measuring and proving whether this approach truly yields financial benefits (Aydoğmuş et al., 2022). This gap represents an application gap in theory, as the implementation of theory in the real world does not always match the expected outcomes. Stakeholder Theory emphasizes the importance for companies to consider the interests of all stakeholders and align them with sustainability strategies such as ESG (Kalra, 2024). Stakeholder theory provides the basis that ESG commitment can influence risk and bank default, both directly and indirectly. The theoretical gap lies in understanding how ESG affects the cost of capital and cash flows of banks (Azmi et al., 2021). ESG frameworks are often still evolving and have not fully translated stakeholder theory into effective practice (Branco, 2024). There is also a theoretical gap concerning biodiversity accounting and its implementation in corporate reporting practices (Roberts et al., 2021).

This research employs stakeholder theory, which refers to a company's ability to operate while considering and mitigating its impact on various stakeholders. By integrating sustainability into their business strategies, companies aim to create long-term value for all stakeholders, not just shareholders (Kalra, 2024). Sustainability and ESG within the framework of stakeholder theory offer a comprehensive approach to understanding and managing corporate social responsibility holistically, focusing on balancing economic profit, social responsibility, and environmental impact (Kalra, 2024). Sustainability within the stakeholder theory framework refers to a managerial approach that integrates concern for the long-term environmental, social, and economic impacts of business decisions (Goyal, 2022). Experts agree that broad stakeholder engagement can strengthen sustainable business models (Freudenreich et al., 2020). Stakeholder theory can justify the case for sustainable business, given the trade-offs between sustainability and economic performance (Valentinov, 2023). By using this theory, companies can demonstrate how sustainability-focused strategies can also support business goals and create economic value (Schaltegger et al., 2019). Stakeholder theory recognizes that to achieve long-term sustainability, companies must pay attention to and manage the ecological, social, and governance impacts of their operations (C. Wang, 2024).

This research also utilizes legitimacy theory, which is closely related to the concept of sustainability and ESG (Akhter et al., 2023). Legitimacy Theory emphasizes that companies must be accountable to society and meet public expectations. Positive disclosure of sustainable environmental practices is a way for companies to meet societal expectations and demonstrate that they are acting as legitimate corporate citizens (Gregory et al., 2016). Legitimacy Theory suggests that organizations must conform to social norms, values, and expectations to maintain legitimacy. This aligns with the research focus on sustainability and ESG, as companies use ESG reporting and sustainability initiatives to gain legitimacy among investors, regulators, and the public (Q. Sun et al., 2024). Legitimacy theory helps explain companies' motivations for disclosing information related to ESG and Sustainability (Akhter et al., 2023). Annual reports that include various sustainability initiatives represent symbolic legitimacy, even if the impact is limited (Crossley et al., 2021). Legitimacy strategies involve manipulating and presenting symbols to shape public perceptions of the company (Crossley et al., 2021). Sustainability must

align with social impacts while striving to achieve sustainable economic goals can strengthen their legitimacy (Y. Sun et al., 2024). Legitimacy theory suggests that ESG disclosures can be used by companies to enhance their legitimacy when facing public criticism or dissatisfaction (Y. Sun et al., 2024).

This study also employs the Natural-Resource Based View (NRBV) to understand how companies can manage their natural and relational resources to create sustainable competitive advantage. The NRBV theory acknowledges the importance of managing natural resources as part of a company's strategy. Sustainability is related to how companies use and protect their natural resources to achieve long-term competitive advantage (Andersén, 2021). The NRBV posits that companies can gain a competitive advantage by effectively managing and preserving natural resources. This theory is relevant to sustainability research, as ESG strategies increasingly focus on the sustainable use of resources, circular economy models, and green innovations (Andersén, 2021).

Environmentally friendly business strategies contribute to improving environmental sustainability performance through environmental management processes. This indicates that companies that utilize natural resources sustainably can strengthen their competitive position according to NRBV principles (Tjahjadi et al., 2023). By applying green production innovations that reduce environmental impact, companies make more sustainable use of their resources, aligning with NRBV principles that emphasize the importance of resource management to achieve financial and environmental performance.

Stakeholder theory emphasizes the importance of meeting the expectations of all stakeholders but does not always provide clear guidance on how to balance often conflicting interests (Wojewnik-Filipkowska et al., 2021). This creates a gap in stakeholder theory when linked to the ESG context. ESG, as a tool for gaining legitimacy, is often measured through indicators that may not fully reflect the legitimacy accepted by all stakeholders (Bellucci et al., 2021). This creates a gap between legitimacy theory and ESG. The NRBV theory focuses on how companies use internal environmental resources to gain a competitive advantage while providing positive environmental outcomes. However, this theory tends to emphasize internal resources over external relationships (Andersén, 2021). This also creates a gap between NRBV theory and ESG. Several empirical gaps discussing the relationship between ESG and theory and measurement show varied results (Chen et al., 2023; Berg et al., 2022; Eccles & Klimenko, 2019; F. Wang, 2024).

This research makes several significant contributions : (1) theoretical advancement; (2) methodological contribution; and (3) practical implications. This study integrates Stakeholder Theory, Legitimacy Theory, and NRBV (to analyze ESG research trends, bridging the gap between theoretical perspectives and empirical findings. It highlights inconsistencies in ESG measurement and reporting, calling for greater standardization in sustainability research methodologies. By employing bibliometric analysis, trend analysis, citation mapping, and co-occurrence analysis, this study provides a data-driven approach to understanding the development of ESG research. The study identifies key research clusters and collaboration networks, offering a novel way to visualize academic contributions in this field. The findings can help academics, policymakers, and corporate leaders understand how sustainability research is evolving, and shaping future ESG regulations and investment strategies. By identifying underexplored research areas, such as ESG

implementation in developing countries, financial performance impacts, and governance structures; this study directs future research efforts toward high-impact and actionable areas.

The urgency of this research stems from the increasing global focus on sustainability, corporate accountability, and ESG-driven investment decisions. Several factors highlight why this study is essential at this moment: First, Regulatory and Market Pressures. Governments worldwide are tightening sustainability regulations (IFRS Sustainability Standards, SEC climate disclosure rules), requiring businesses to enhance ESG transparency and compliance. Investors are demanding clearer ESG disclosures, as ESG ratings are becoming a key determinant of corporate valuation and risk assessments. Second, Corporate Sustainability Challenges. Many companies struggle with greenwashing concerns and inconsistent ESG reporting frameworks, leading to stakeholder skepticism and reputational risks. There is a critical need for standardized, reliable ESG metrics that align with both financial and non-financial performance indicators. Third, Emerging research gaps and technological disruptions. The integration of AI, Blockchain, and big data in ESG reporting is underexplored, despite its potential to revolutionize sustainability transparency and accountability. Sustainability research has been disproportionately focused on developed countries, while developing economies remain underrepresented, despite facing greater environmental and social challenges.

The purpose of this research is to identify and explore future research opportunities related to Sustainability and ESG by analyzing current trends, theoretical foundations, and implementation challenges. Through a bibliometric approach, this study aims to bridge the gaps between theory and practice, research focus, and practical needs. By Integrating Stakeholder Theory, Legitimacy Theory, and NRBV, the research seeks to provide a comprehensive understanding of how ESG practices are evolving and how they can be more effectively implemented. Based on the gaps in implementation, perception versus reality, research, and theory mentioned above, the research question is: What are the future research opportunities related to sustainability and ESG? This study addresses the question using a bibliometric approach.

2. Theoretical Framework

Stakeholder Theory suggests that a company's success is determined not only by shareholders but also by a broader range of stakeholders, including employees, customers, suppliers, communities, and regulatory bodies. According to this theory, companies that align their operations with stakeholder expectations tend to enhance long-term sustainability (Bansal et al., 2021). Companies that prioritize ESG factors create value for multiple stakeholders by addressing environmental concerns, ensuring ethical business practices, and fostering social responsibility. ESG reporting and transparency can strengthen stakeholder trust and corporate reputation.

In the context of ESG and sustainability research, this theory is essential in explaining why companies adopt ESG strategies and how they balance financial performance with social and environmental responsibilities. Companies increasingly integrate ESG practices into their business strategies to align with the interests of various stakeholders, which affects corporate reputation, risk management, and long-term financial performance

(Freudenreich et al., 2020). Institutional investors are placing greater emphasis on ESG performance when making investment decisions, reinforcing the need for corporate ESG transparency and accountability (Eccles & Klimenko, 2019). Governments and regulatory bodies are imposing ESG-related policies, requiring businesses to adapt their sustainability practices to comply with evolving regulations (Lee & Suh, 2022).

Legitimacy theory (Suchman, 1995) posits that companies must align their activities with societal norms and values to gain legitimacy and maintain their social license to operate. This theory explains why firms engage in sustainability reporting and ESG Disclosures. Organizations use ESG reporting to demonstrate alignment with societal expectations and regulatory frameworks (Akhter et al., 2023).

Firms use ESG reporting to demonstrate compliance with environmental and social standards, thereby reducing reputational risks and gaining stakeholder trust (Crossley et al., 2021). Some companies manipulate ESG disclosures to create a misleading perception of sustainability efforts without substantive action. This creates legitimacy gaps, where the perceived ESG performance differs from actual business practices (Bellucci et al., 2021). As ESG disclosure frameworks (GRI, SASB) continue to evolve, firms must adapt their sustainability reporting strategies to maintain legitimacy in the eyes of investors and regulators (Y. Sun et al., 2024).

The NRBV extends the RBV by emphasizing that companies can achieve a competitive advantage through sustainable management of natural resources. NRBV often focuses more on internal environmental resources and lacks emphasis on external collaborations for sustainability (Andersén, 2021). Companies that prioritize eco-friendly production processes, circular economy models, and carbon footprint reduction align with NRBV principles, leading to long-term competitive advantages (Tjahjadi et al., 2023). Organizations integrating renewable energy, carbon-neutral strategies, and climate resilience measures can differentiate themselves in the market while complying with global ESG standards (Andersén, 2021). NRBV supports the integration of AI, Blockchain, and Big Data analytics in ESG reporting to enhance transparency, accountability, and sustainability performance tracking (Xue et al., 2023).

In business and accounting research, sustainability is operationalized through ESG frameworks, corporate sustainability reporting, and impact measurement. Studies show that strong ESG performance is linked to improved financial stability, reduced risk exposure, and long-term shareholder value (Aydoğmuş et al., 2022). ESG ratings and sustainability indices, play a crucial role in assessing corporate sustainability efforts, but measurement inconsistencies remain a challenge (Berg et al., 2022). Research indicates that ESG adoption varies across regions, with developed economies leading ESG integration while developing economies face structural barriers in sustainability implementation (Saleem et al., 2020).

The concept of ESG has gained significant traction in both academic research and corporate strategy. ESG frameworks provide a structured way to evaluate corporate sustainability performance and risk management. Climate change mitigation, carbon footprint reduction, water resource management, and biodiversity conservation are key ESG topics that align with NRBV principles and corporate sustainability strategies. Labor rights, diversity and inclusion, CSR, and community engagement are core aspects that

align with Stakeholder Theory, emphasizing business roles in addressing social inequalities. Corporate governance mechanisms, board diversity, executive compensation, and anti-corruption policies impact ESG transparency, legitimacy, and investor confidence.

3. Research Method

This research is quantitative in nature and utilizes R Studio, an Integrated Development Environment, to analyze data, including Bibliometric analysis. The bibliometric approach allows us to identify major research trends, collaboration networks, among researchers, and gaps in the literature that require further exploration. Data collection was conducted using the keywords "Sustainability" and "ESG" within the Scopus database, covering the period from 2014 to 2024. Scopus was chosen because it is the most comprehensive database and is frequently used in academic research (Judijanto et al., 2024). The data was limited to articles specifically in Business, Management, and Accounting, resulting in 1.271 articles. The data analysis techniques employed include Bibliometric analysis, citation analysis, word cloud analysis, trend analysis, co-occurrence analysis, and collaboration network analysis. The results of the search using the keywords are shown in Figure 1 below:

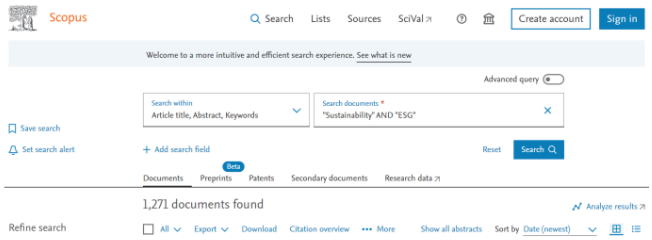


Figure 1. Keyword Search.

Data processing using R studio yielded 1.257 articles, as shown in Figure 2 below:

Figure 2. Main Information

The chart above systematically presents the method used in selecting articles for bibliometric analysis. The process involved multiple stages: (1) initial search (Scopus Database) – a total of 5.000 articles were retrieved using the keywords "Sustainability" and "ESG". (2) filtered by Business, Management, and Accounting – articles outside the relevant subject areas were excluded, reducing the dataset to 2.500 articles. (3) Filtered by period (2014-2024) – studies outside the specified timeframe were removed, leaving 1.800 articles. (4) After removing duplicates – duplicate entries and redundant studies were eliminated, resulting in 1.300 unique articles. (5) Final articles analyzed – after applying inclusion and exclusion criteria, a total of 1.271 articles were included in the final bibliometric analysis.

Table 1. Article Selection Stages

No	Category	Number of Articles
1.	Initial search (Scopus Database)	5.000 articles
2.	Filtered by business, management, and accounting	2.500 articles
3.	Filtered by period (2014-2024)	1.800 articles
4.	After removing duplicates	1.300 unique articles
5.	Final articles analyzed	1.271 articles

Source: Data processed by researchers (2025)

4. Results and Discussion

Appendix 1 shows the trend analysis indicating that the average citations in 2014 started with the highest value, exceeding 20 citations. From 2015 to 2016, there was a sharp decline, reaching the lowest point at around 5 to 7 citations. In 2017, there was a slight increase, reaching 15 citations. The consistent decline from 2018 to 2024 suggests that the works became less relevant and have been replaced by newer, trendier topics.

The proportion of various categories or keywords in the data is shown in the treemap in Appendix 2. A treemap is used to show the proportion or frequency of different categories or keywords in the data. From Figure 6, it is evident that the largest box in the treemap represents. Sustainable Development, encompassing 14% of the total or appearing 126 times. The second largest is Sustainability at 8%, followed by CSR (5%), Environmental (4%), Finance (3%), ESG (2%), Investment (2%), and other terms like corporate strategy, regression analysis, and climate change with proportions varying between 1% to 2%.

Trend analysis of topics related to sustainability is shown in Appendix 3, illustrating the trending topics frequently discussed from 2016 to 2023. The most discussed topics in recent years are Sustainability, CSR, and Sustainable Development, as indicated by the large circles in 2022 and 2023. Additionally, topics like Innovation, Environment, and Governance have also been major points of focus during these years, although with slightly lower frequency compared to the main topics. Emerging topics that have gained more attention in recent years include Investment, Environmental Economics, and Financial Performance. Some topics have seen increased frequency over a shorter and less consistent period, such as CSR, Commerce, and Stakeholder.

The Co-occurrence analysis is shown in Appendix 4. From Co-occurrence, it is evident that the red nodes tend to be associated with Sustainable Development, while the blue nodes are related to sustainability and aspects such as CSR and governance approach. The larger the node, the more frequently the keyword appears in the research. Edges are the connecting lines that show the relationships between different keywords. The thicker the line, the stronger or more frequent the relationship between the keywords in the articles. In Figure 8, the keywords with large node sizes – Sustainable Development, Sustainability, and CSR – indicate that they are central themes in the Literature analyzed. Additionally, keywords like Environmental, Governance, and Stakeholder also stand out, showing that they are topics frequently discussed alongside the main keywords.

Collaboration network analysis shown in Appendix 5, illustrates the collaboration relationships between authors based on the scholarly works they have produced together. A link connecting two nodes indicates that the two authors have collaborated on at least one scholarly work. The thicker the line, the more frequently they have collaborated. The authors' names are displayed next to their nodes. Larger and more central names indicate that the authors have more collaborations or more publications within this network. From Figure 10, it is evident that authors Hussainey K and Agnese P. play a central role in this collaboration network, while other authors are more isolated or only collaborate with one or two other authors.

Table 2. Findings Summary

No	Findings category	Explanation of results
1.	The treemap analysis	The treemap highlights dominant themes such as Sustainable Development, Sustainability, CSR, Environmental Management, and Governance. These results suggest that Sustainable Development has been the most frequently discussed topic in ESG research, indicating its central role in academic discussions.
2.	Trend analysis	The results indicate that Sustainability, CSR, and Sustainable Development have remained key topics over the years, reinforcing their continued relevance in academic research. Topics such as Innovation, Governance, and Financial Performance have gained prominence in recent years, suggesting that researchers are increasingly interested in the economic and governance aspects of ESG.
3.	Citation analysis	The analysis shows that research from countries like the United States, the UK, and Italy has received the highest citations, indicating that ESG and sustainability discussions are primarily shaped by developed economies. This suggests a research gap, as developing countries have lower citation counts, implying a lack of ESG-focused studies in their regions. Future research could focus on ESG implementation and regulatory framework in developing economies to balance the global ESG disclosure.

No	Findings category	Explanation of results
4.	Co-occurrence analysis	The results reveal that Sustainable Development, CSR, and Governance are closely connected, highlighting the strong linkage between corporate governance and sustainability initiatives. The connection between Environmental and Social aspects suggests that research increasingly integrates social and environmental factors when assessing ESG performance. Future research could explore how ESG governance structure influences environmental and social outcomes, and how businesses balance financial performance with ESG responsibilities.
5.	Collaboration network analysis	The findings indicate that a few researchers, such as Hussainey K. and Agnese P., play a central role in ESG research collaborations. Many other researchers appear isolated or have limited collaboration networks, suggesting that cross-disciplinary and international research collaborations are still underdeveloped.

Source: Data processed by researchers (2025)

The treemap analysis provides a visual representation of the frequency and proportion of various topics related to Sustainability and ESG in the literature. In relation to the research objectives, identifying future research opportunities and trends in ESG and sustainability. The treemap highlights dominant themes such as sustainable development, sustainability, CSR, environmental management, and governance. These results suggest that sustainable development has been the most frequently discussed topic in ESG research, indicating its central role in academic discussions. The presence of topics like CSR, governance, and finance in the treemap suggests that research on Corporate Sustainability Reporting, governance approaches, and financial implications of ESG practices are also prominent. However, smaller categories such as investment, regression analysis, and climate change indicate underexplored areas that present opportunities for future research, particularly in measuring financial performance, ESG investments, and climate-related ESG risks.

Trend Analysis helps determine how specific ESG-related topics have evolved. In line with the research objective of exploring future research directions, this analysis shows which topics are emerging and which are declining. The results indicate that Sustainability, CSR, and Sustainable Development have remained key topics over the years, reinforcing their continued relevance in academic research. Topics such as Innovation, Governance, and Financial Performance have gained prominence in recent years, suggesting that researchers are increasingly interested in the economic and governance aspects of ESG. The rise of Environmental Economics and Investment as emerging themes suggests a growing focus on the financial sustainability of ESG initiatives, green finance, and sustainable investment strategies. These topics could be crucial for future studies.

Citation analysis is used to identify the most influential studies in Sustainability and ESG research and to track the impact of specific topics over time. The analysis shows that research from countries like the United States, the UK, and Italy has received the highest citations, indicating that ESG and sustainability discussions are primarily shaped by developed economies. This suggests a research gap, as developing countries have lower citation counts, implying a lack of ESG-focused studies in their regions. Future research could focus on ESG implementation and regulatory framework in developing economies to balance the global ESG disclosure.

Co-occurrence analysis visualizes the relationships between key concepts in ESG research. The results reveal that sustainable development, CSR, and governance are closely connected, highlighting the strong linkage between corporate governance and sustainability initiatives. The connection between Environmental and Social aspects suggests that research increasingly integrates social and environmental factors when assessing ESG performance. Future research could explore how ESG governance structure influences environmental and social outcomes, and how businesses balance financial performance with ESG responsibilities.

Collaboration network analysis identifies leading researchers and institutions working in ESG and sustainability research. The findings indicate that a few researchers, such as Hussainey K. and Agnese P., play a central role in ESG research collaborations. Many other researchers appear isolated or have limited collaboration networks, suggesting that cross-disciplinary and international research collaborations are still underdeveloped. Future research could benefit from greater international collaboration to incorporate diverse perspectives on ESG challenges and solutions, particularly from underrepresented regions.

The findings of this bibliometric analysis on sustainability and ESG research highlight several key trends: (1) dominant research areas; (2) emerging themes; (3) geographical imbalance; (4) gaps in collaboration; and (5) measurement challenges. Dominant research areas: the analysis identified sustainable development, CSR, and governance as the most frequently studies topics, reinforcing their central role in ESG discourse. Emerging themes: topics such as innovation, ESG investment, and financial performance have gained prominence in recent years, indicating growing interest in the economic impact of ESG initiatives. Geographical imbalance: citation analysis revealed that research is dominated by developed countries, highlighting a gap in ESG studies focused on developing economies. Gaps in collaboration: collaboration network analysis showed limited international and cross-disciplinary research networks, suggesting the need for greater integration of diverse academic perspectives. Measurement challenges: the analysis emphasized inconsistencies in ESG measurement methodologies, revealing a gap in standardized reporting and evaluation frameworks.

This article presents a comprehensive mapping of ESG and sustainability research from 2014 to 2024, emphasizing how academic discourse has predominantly centered on topics like Sustainable Development, CSR, and Governance. Through bibliometric analysis of Scopus-indexed articles in business, management, and accounting, the study uncovers a consistent focus on general principles and reporting, while highlighting that critical areas such as ESG investment, financial performance, and emerging technologies (AI and Blockchain in ESG reporting) remain underexplored. This imbalance reflects not only

topical gaps but also geographical disparities, as research is largely dominated by developed countries like the US, UK, and Italy, leaving developing regions underrepresented and creating a knowledge gap that warrants cross-regional investigation (Singhania et al., 2024). Furthermore, the study reveals inconsistencies in ESG measurement methodologies, calling for the development of standardized metrics and the integration of interdisciplinary approaches to strengthen the field. Thematically interwoven through stakeholder theory, legitimacy theory, and the Natural Resource-Based View (NRBV), this research established a theoretical foundation for understanding how ESG practices align with stakeholder interest, enhance legitimacy, and support sustainable resource management. Altogether, the findings not only bridge the gap between ESG theory and practice but also construct a forward-looking roadmap for future research, offering strategic insight for scholars, policymakers, and business leaders to design more inclusive, effective, and context-sensitive sustainability initiatives.

5. Conclusion, Implications, and Limitations

This study provides evidence that sustainable development, CSR, and governance remain the dominant areas in sustainability and ESG research. Through a bibliometric analysis of Scopus-indexed publications from 2014 to 2024, the findings reveal that stakeholder expectations, regulatory pressures, and the pursuit of corporate legitimacy continue to drive ESG adoption. However, newer themes such as ESG investment, financial performance, and the use of emerging technologies are gaining traction, reflecting a shift towards understanding the economic and strategic impact of ESG practices.

The findings carry both theoretical and practical implications. Theoretically, the study reinforces the relevance of Legitimacy Theory, Stakeholder Theory, and the Natural Resource-Based View (NRBV) in explaining how firms respond to increasing sustainability pressures. Firms strategically use ESG disclosures not only to gain legitimacy but also to align with stakeholder expectations and enhance their financial performance. In particular, Stakeholder Theory posits that addressing the interests of diverse stakeholder groups, such as investors, customers, and communities; can foster trust and lead to improved financial outcomes. These theoretical perspectives are further supported by empirical findings that link ESG practices with stronger financial performance and greater corporate resilience (Steblianskaia et al., 2023). Practically, the results highlight the urgent need for a more standardized ESG measurement and reporting framework, especially as companies navigate growing demands for transparency and sustainability-driven value creation in an increasingly dynamic global environment (X. Wang et al., 2024).

Despite its contributions, the study has several limitations. It relies solely on Scopus-indexed, English-language publications, which may exclude valuable perspectives from other databases and non-English sources. Furthermore, the analysis is based on quantitative bibliometric methods, limiting the depth of interpretation regarding how ESG is applied across different contexts. The evolving nature of ESG regulations and the lack of primary empirical data also constrain the study's ability to capture real-time changes and practical implementations within organizations. Future research should expand the scope of analysis by incorporating additional databases and multilingual sources to capture a more diverse

global perspective. Combining bibliometric analysis with qualitative methods such as systematic literature reviews or case studies would provide richer insights. Researchers are also encouraged to conduct longitudinal and empirical studies that examine ESG practices in real-world settings, especially in developing countries and in relation to emerging technologies like AI, Blockchain, and Bid Data. This would help bridge the gap between theory and practice, supporting more context-sensitive and actionable ESG strategies.

Acknowledgment

Thank you to Universitas Katolik Darma Cendika (UKDC) for their support, which made it possible for this article to be completed successfully.

References

Ademi, B., & Klungseth, N. J. (2022). Does it pay to deliver superior ESG performance? Evidence from US S&P 500 companies. *Journal of Global Responsibility*, *13*(4), 421–449. https://doi.org/10.1108/JGR-01-2022-0006

Akhter, F., Hossain, M. R., Elrehail, H., Rehman, S. U., & Almansour, B. (2023). Environmental disclosures and corporate attributes, from the lens of legitimacy theory: a Longitudinal analysis on a developing country. *European Journal of Management and Business Economics*, *32*(3), 342–369. https://doi.org/10.1108/EJMBE-01-2021-0008

Andersén, J. (2021). A relational natural-resource-based view on product innovation: The Influence of green product innovation and green suppliers on differentiation advantage in small manufacturing Firms. *Technovation*, *104*(February). https://doi.org/10.1016/j.technovation.2021.102254

Aydoğmuş, M., Gülay, G., & Ergun, K. (2022). Impact of ESG performance on firm value and profitability. *Borsa Istanbul Review*, *22*, S119–S127. https://doi.org/10.1016/j.bir.2022.11.006

Azmi, W., Hassan, M. K., Houston, R., & Karim, M. S. (2021). ESG activities and banking performance: International evidence from emerging economies. *Journal of International Financial Markets, Institutions, and Money*, *70*, 101277. https://doi.org/10.1016/j.intfin.2020.101277

Bansal, M., Samad, T. A., & Bashir, H. A. (2021). The sustainability reporting-firm performance nexus: Evidence from a threshold model. *Journal of Global Responsibility*, *12*(4), 491–512. https://doi.org/10.1108/JGR-05-2021-0049

Barka, Z., Hamza, T., & Mrad, S. (2023). Corporate ESG Scores and Equity Market Misvaluation: Toward Ethical Investor Behavior. *Economic Modelling*, *127*(August), 106467. https://doi.org/10.1016/j.econmod.2023.106467

Bellucci, M., Acuti, D., Simoni, L., & Manetti, G. (2021). Hypocrisy and legitimacy in the aftermath of a scandal: an experimental study of stakeholder perceptions of nonfinancial disclosure. *Accounting, Auditing and Accountability Journal*, *34*(9), 151–163. https://doi.org/10.1108/AAAJ-01-2021-5113

Berg, F., Kölbel, J. F., & Rigobon, R. (2022). Aggregate confusion: The divergence of ESG ratings. *Review of Finance*, *26*(6), 1315–1344.

https://doi.org/10.1093/rof/rfac033

Branco, M. C. (2024). CSR research in corporate finance: A comment on Gillan et al., "Firms and social responsibility: a Review of ESG and CSR research in corporate finance." *Sustainability Accounting, Management and Policy Journal*, *15*(1), 85–95. https://doi.org/10.1108/SAMPJ-05-2023-0269

Chen, S., Song, Y., & Gao, P. (2023). Environmental, Social, And Governance (ESG) performance and financial outcomes: Analyzing the impact of ESG on financial performance. *Journal of Environmental Management*, *345*(June). https://doi.org/10.1016/j.jenvman.2023.118829

Citterio, A., & King, T. (2023). The role of Environmental, Social, and Governance (ESG) in predicting bank financial distress. *Finance Research Letters*, *51*(July 2022), 103411. https://doi.org/10.1016/j.frl.2022.103411

Clément, A., Robinot, É., & Trespeuch, L. (2022). Improving ESG scores with sustainability concepts. *Sustainability (Switzerland)*, *14*(20). https://doi.org/10.3390/su142013154

Crossley, R. M., Elmagrhi, M. H., & Ntim, C. G. (2021). Sustainability and legitimacy theory: The case of sustainable social and environmental practices of small and medium-sized enterprises. *Business Strategy and the Environment*, *30*(8), 3740–3762. https://doi.org/10.1002/bse.2837

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

Eccles, R. G., & Klimenko, S. (2019). The investor revolution. *Harvard Business Review*, *2019*(May-June), 106–116.

Freudenreich, B., Lüdeke-Freund, F., & Schaltegger, S. (2020). A stakeholder theory perspective on business models: Value creation for sustainability. *Journal of Business Ethics*, *166*(1), 3–18. https://doi.org/10.1007/s10551-019-04112-z

Gillan, S. L., Koch, A., & Starks, L. T. (2021). Firms and social responsibility: a Review of ESG and CSR research in corporate finance. *Journal of Corporate Finance*, *66*(January), 101889. https://doi.org/10.1016/j.jcorpfin.2021.101889

Goyal, L. (2022). Stakeholder theory: Revisiting the origins. *Journal of Public Affairs*, *22*(3). https://doi.org/10.1002/pa.2559

Gregory, A., Whittaker, J., & Yan, X. (2016). Corporate social performance, competitive advantage, earnings persistence, and firm value. *Journal of Business Finance and Accounting*, *43*(1–2), 3–30. https://doi.org/10.1111/jbfa.12182

Inês, A., Diniz, A., & Moreira, A. C. (2023). A review of greenwashing and supply chain management: Challenges ahead. *Cleaner Environmental Systems*, *11*(June). https://doi.org/10.1016/j.cesys.2023.100136

Jarraud, M., & Steiner, A. (2012). Summary for policymakers. In *Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation: Special Report of the Intergovernmental Panel on Climate Change* (Vol. 9781107025). Cambridge University Press, Cambridge. https://doi.org/10.1017/CBO9781139177245.003

Judijanto, L., Ladjin, N., Harsono, I., Amalia, M. M., & Sangaji, J. (2024). Bibliometric analysis of trends and patterns in Sustainable and Responsible Investments (SRI) research from 2000-2024. *West Science Journal Economic and Entrepreneurship*, *2*(02), 168–177. https://doi.org/10.58812/wsjee.v2i02.892

Kalra, P. (2024). Corporate social responsibility and stakeholder theory: An integrated review. *Journal of Management & Enterpreneurship*, *18 No.I(II*(January-March), 30–40. https://doi.org/10.13140/RG.2.2.32886.82243

Klettner, A., Clarke, T., & Boersma, M. (2014). The governance of corporate sustainability: Empirical insights into the development, leadership, and implementation of responsible business strategy. *Journal of Business Ethics*, *122*(1), 145–165. https://doi.org/10.1007/s10551-013-1750-y

Kopnina, H., Zhang, S. R., Anthony, S., Hassan, A., & Maroun, W. (2024). The inclusion of biodiversity into Environmental, Social, and Governance (ESG) framework: A strategic integration of ecocentric extinction accounting. *Journal of Environmental Management*, *351*(November 2023), 119808. https://doi.org/10.1016/j.jenvman.2023.119808

Kotsantonis, S., & Serafeim, G. (2019). Four things no one will tell you about ESG data. *Journal of Applied Corporate Finance*, *31*(2), 50–58. https://doi.org/10.1111/jacf.12346

Lee, M. T., & Suh, I. (2022). Understanding the effects of environment, social, and governance conduct on financial performance: Arguments for a process and integrated modeling approach. *Sustainable Technology and Entrepreneurship*, *1*(1), 100004. https://doi.org/10.1016/j.stae.2022.100004

Martiny, A., Taglialatela, J., Testa, F., & Iraldo, F. (2024). Determinants of Environmental Social and Governance (ESG) performance: A systematic literature review. *Journal of Cleaner Production*, *456*(June 2023), 142213. https://doi.org/10.1016/j.jclepro.2024.142213

Nguyen, N. M., Abu Afifa, M. M., Thi Truc Dao, V., Van Bui, D., & Vo Van, H. (2025). Leveraging artificial intelligence and blockchain in accounting to boost ESG performance: The role of risk management and environmental uncertainty. *International Journal of Organizational Analysis*. https://doi.org/10.1108/IJOA-07-2024-4652

Nitlarp, T., & Kiattisin, S. (2022). The impact factors of Industry 4.0 on ESG in the energy sector. *Sustainability (Switzerland)*, *14*(15). https://doi.org/10.3390/su14159198

Porter, M. E., & Kramer, M. R. (2011). Creating shared value. *Harvard Business Review*, *89*(1–2). https://doi.org/10.2139/ssrn.3683975

Raghavan, K. (2022). ESG reporting impact on accounting, and finance. *The Journal of Global Awareness*, *3*(1), 1–16. https://doi.org/10.24073/jga/3/01/09

Revelli, C. (2017). Socially Responsible Investing (SRI): From mainstream to margin? *Research in International Business and Finance*, *39*, 711–717. https://doi.org/10.1016/j.ribaf.2015.11.003

Roberts, L., Hassan, A., Elamer, A., & Nandy, M. (2021). Biodiversity and extinction accounting for sustainable development: A systematic literature review and future

research directions. *Business Strategy and the Environment*, *30*(1), 705–720. https://doi.org/10.1002/bse.2649

Saleem, F., Zhang-Zhang, Y., Malik, M. I., & Allui, A. (2020). Revisiting stakeholder theory and environmentalism: Evidence from an emerging economy. *Sustainability (Switzerland)*, *12*(20), 1–20. https://doi.org/10.3390/su12208751

Schaltegger, S., Hörisch, J., & Freeman, R. E. (2019). Business cases for sustainability: A stakeholder theory perspective. *Organization and Environment*, *32*(3), 191–212. https://doi.org/10.1177/1086026617722882

Schaltegger, S., & Wagner, M. (2018). Managing and measuring the business case for sustainability. *Managing the Business Case for Sustainability*, *January*, 1–27. https://doi.org/10.4324/9781351280525-1

Sharma, S. (2023). Does ESG risk management ensure better risk management? Evidence from India. *Procedia Computer Science*, *221*, 912–919. https://doi.org/10.1016/j.procs.2023.08.068

Singhania, M., Saini, N., Shri, C., & Bhatia, S. (2024). Cross-country comparative trend analysis in ESG regulatory framework across developed and developing nations. *Management of Environmental Quality: An International Journal*, *35*(1), 61–100. https://doi.org/10.1108/MEQ-02-2023-0056

Steblianskaia, E., Vasiev, M., Denisov, A., Bocharnikov, V., Steblyanskaya, A., & Wang, Q. (2023). Environmental-social-governance concept bibliometric analysis and systematic literature review: Do investors becoming more environmentally conscious? *Environmental and Sustainability Indicators*, *17*(December), 100218. https://doi.org/10.1016/j.indic.2022.100218

Suchman, M. C. (1995). Managing legitimacy: Strategic and institutional approaches. *The Academy of Management Review*, *20*(3), 571–610.

Sun, Q., Li, Y., & Hong, A. (2024). Integrating ESG into corporate strategy: Unveiling the moderating effect of digital transformation on green innovation through employee insights. *Systems*, *12*(5). https://doi.org/10.3390/systems12050148

Sun, Y., Zhao, D., & Cao, Y. (2024). The impact of ESG performance, reporting framework, and reporting assurance on the tone of ESG disclosures: Evidence from Chinese listed firms. *Journal of Cleaner Production*, *466*(October 2023), 142698. https://doi.org/10.1016/j.jclepro.2024.142698

Talan, G., Deep, G., Pareira, V., & Muschert, G. W. (2024). From ESG to holistic value addition : Rethinking sustainable investment from the lens of stakeholder theory. *International Review of Economics and Finance*, *96*(PA), 103530. https://doi.org/10.1016/j.iref.2024.103530

Tjahjadi, B., Soewarno, N., Karima, T. El, & Sutarsa, A. A. P. (2023). A business strategy, spiritual capital, and environmental sustainability performance: Mediating role of environmental management process. *Business Process Management Journal*, *29*(1), 77–99. https://doi.org/10.1108/BPMJ-11-2021-0718

Valentinov, V. (2023). Sustainability and stakeholder theory: A processual perspective. *Kybernetes*, *52*(13), 61–77. https://doi.org/10.1108/K-05-2023-0819

Wang, C. (2024). The relationship between ESG performance and corporate performance

based on stakeholder theory. *SHS Web of Conferences*, *190*, 03022. https://doi.org/10.1051/shsconf/202419003022

Wang, F. (2024). The impact of ESG on financial performance: An empirical analysis of listed companies in China. *Advances in Economics, Management, and Political Sciences*, *83*(1), 207–214. https://doi.org/10.54254/2754-1169/83/20240748

Wang, X., Yin, Y., Chun, D., & Li, P. (2024). How Does ESG Disclosure Promote Technological Innovation? Moderating Effects Based on Product Market Competition. *Kybernetes*, *54*(4), 2245–2267. https://doi.org/10.1108/K-08-2023-1398

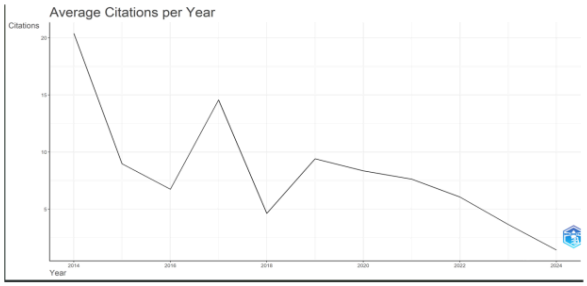
Wojewnik-Filipkowska, A., Dziadkiewicz, A., Dryl, W., Dryl, T., & Bęben, R. (2021). Obstacles and challenges in applying stakeholder analysis to infrastructure projects: Is there a gap between stakeholder theory and practice? *Journal of Property Investment and Finance*, *39*(3), 199–222. https://doi.org/10.1108/JPIF-03-2019-0037

Xue, R., Wang, H., Yang, Y., Linnenluecke, M. K., Jin, K., & Cai, C. W. (2023). The adverse impact of corporate ESG controversies on sustainable investment. *Journal of Cleaner Production*, *427*(October), 139237. https://doi.org/10.1016/j.jclepro.2023.139237

Zhang, R., & Noronha, C. (2023). Assessing the nexus between cross-border infrastructure projects and extinction accounting—from the Belt and Road Initiative perspective. *Social and Environmental Accountability Journal*, *43*(1), 30–55. https://doi.org/10.1080/0969160X.2022.2132969

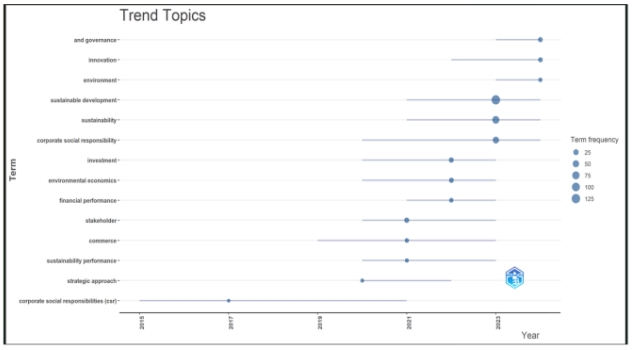
Zhao, X., Nan, D., Chen, C., Zhang, S., Che, S. P., & Kim, J. H. (2023). Bibliometric study on environmental, social, and governance research using CiteSpace. *Frontiers in Environmental Science*, *10*(January), 1–12. https://doi.org/10.3389/fenvs.2022.1087493

Appendix :

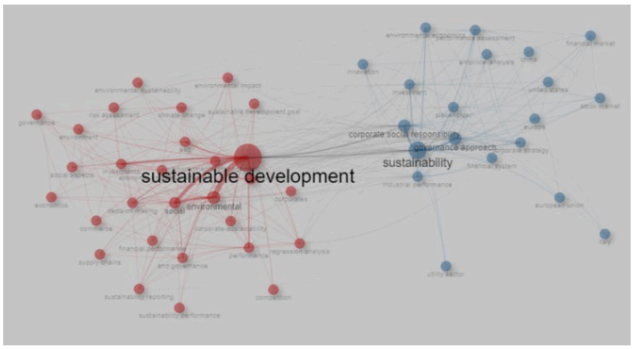


Appendix 1. Average Citation per Year

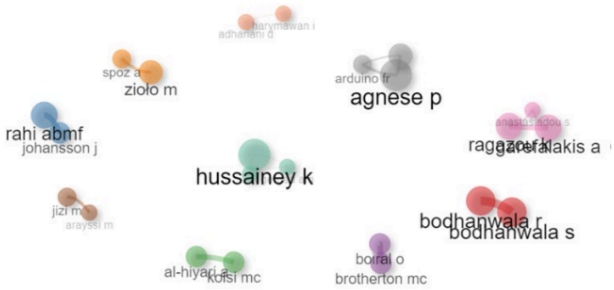
Appendix 2. Treemap



Appendix 3. Trend Topics



Appendix 4. Co-occurrence



Appendix 5. Collaboration Network Analysis