RESEARCH ARTICLE

Mapping Research on ESG Disclosure and Firm Performance: A Systematic Bibliometric Analysis

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Abstract

An increasing apprehension regarding the societal and environmental consequences of corporate profit maximization has raised concerns about "ESG disclosure" and its influence on corporate performance. Thus, the current study conducts a bibliometric-based and systematic analysis to evaluate "the impact of ESG disclosure on firm performance". Using bibliometric methods, the current study aims to investigate the influential authors, most cited journals, and key trends in the existing literature on ESG disclosure and firm performance. Moreover, via a systematic analysis of relevant studies, the current study produces findings to assess the overall influence of ESG disclosure on the financial and operational performance of companies. The data from 10 years, i.e., 2015 to 2024, has been used for the study. The dataset includes 25 papers published from 2015 to 2024. These papers were found on Scopus using the keywords TITLE-ABS-KEY ("ESG disclosure") AND TITLE-ABS-KEY ("impact" OR "effect") AND TITLE-ABS-KEY ("firm profitability" OR "organization performance" OR "firm performance"). Tools like Excel and VOS Viewer were used for the analysis. The study identified four major clusters: "analyzing the interplay between corporate governance, environmental impact, and financial performance", "the evolution of ESG dynamics in emerging markets", "unlocking the nexus between ESG scores, financial performance, and governance disclosure" and "driving performance through ESG disclosure". The study offers an overview of existing knowledge by integrating bibliometric and systematic insights, offering practical implications for researchers on the ESG performance relationship.

Keywords: Bibliometric Analysis; Corporate Governance; ESG Disclosure; Firm Performance; Profitability; Systematic Analysis. Systematic Literature Review (SLR).

关键词:文献计量分析;公司治理;ESG 披露;公司绩效;盈利能力;系统分析。系统文献综述 (SLR)。

Introduction

The discourse of "Environmental, Social, and Governance (ESG)" standards and business sustainability has seen a notable acceleration in the last few years. This may be attributed mainly to the growing social anticipation for innovative modes of production and consumption (Nishitani, et al., 2021; Nishitani, et al., 2022). The concept of

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ESG emerged from SRI, or Socially Responsible Investment. Social investment as a concept has its roots in the era between the 1960s and the 1970s. After the Second World War, industrialization spread rapidly throughout the United States and Europe, causing a host of social and environmental issues and sparking several public environmental preservation initiatives. Consequently, ecologically conscious investments have gained traction in the financial market. In the United Nations report "Who Cares Wins" in 2004, the phrase "Environmental, Social and Governance" was first used (Yadav & Saini, 2023; Helmold, 2023). The ESG framework and some other considerations were subsequently formalized in 2006 with the establishment of the "United Nations Principles for Responsible Investment (UN-PRI)"(Gao, et al., 2021; Hoepner, et al., 2021). In the United States, sustainable investment is becoming more and more common. For instance, the overall investment into ESG funds increased from \$5 billion in 2018 to over USD 50 billion in 2020 (Atz, et al., 2023). Disclosure-related issues have always been a part of a company's existence. Disclosure is an important component of the economy, and information about businesses must be readily available to investors as well as other stakeholders to allocate money wisely and stay out of immediate danger (Alareeni & Hamdan, 2020; Ademi & Klungseth, 2022; Lunawat & Lunawat, 2022). As a result, for more than 20 years, "corporate disclosure of environmental, social, and governance (ESG)" components has changed in a few ways. Moreover, a growing multitude of organizations are now engaged in a diverse array of ESG disclosure endeavors, and this substantial issue has garnered considerable attention.

Numerous research works have examined different facets of ESG reporting. A series of research studies that looked at the amount of ESG disclosure found that, even though ESG Disclosure is still very low, it has grown with time (Suttipun & Yordudom, 2022; Sharma, et al., 2020). Additional studies investigated the factors that influence the level of "ESG disclosure" (Baldini, et al., 2018). The majority of studies focused on analyzing the influence of ESG disclosure on financial performance (Carnini Pulino, et al., 2022; Xie, et al., 2019; Özcan, 2021; Buallay, 2021; Matakanye, et al., 2021). However, there has been no bibliometric investigation on the association between ESG disclosure and company performance. Moreover, the study is important because there is a rising worldwide effort to define ESG standards and reduce risks to the environment, society, and economy for sustainable development. Accordingly, the primary goal of this study is to analyze and evaluate the body of literature about how incorporating ESG criteria affects the sustainability performance of businesses.

The growing variety of software packages and diverse approaches has led to a significant interest in bibliometric analysis in recent years. Bibliometric studies, like other types of literature reviews, include a laid-out statement of their rigorous methodology (Parlina, et al., 2020; Rivai, et al., 2023; Parlina, et al., 2021). Bibliometrics is a scientific discipline that uses statistical and mathematical techniques to assess scientific endeavors (Gutiérrez-Salcedo, et al., 2018; Ellegaard & Wallin, 2015). Analyzing authors', countries', and institutions' performances allows these studies to analyze the intellectual framework of the field of study (Herrera-Franco, et al., 2021). Researchers may use this analytical tool to find patterns in various study disciplines and journal performance (Ellili, 2022). Moreover, the technical rigor of bibliometric analysis, which comprises a systematic study and analysis of worldwide published articles, has led to its widespread use in literature reviews (Li, et al., 2022; Kokol, et al., 2021). The use of semi-automated or automated quantitative data and methods gives bibliometric reviews a more objective and less biased viewpoint compared to other forms of review publications (Donthu, et al., 2021). Researchers can discover more about the body of knowledge and its organization in a given field by doing bibliometric analyses of literature on certain subjects (Wan and Dawod, 2022). Furthermore, it has the potential to provide insightful conclusions and potential avenues for further study (Lu, et al., 2019). Therefore, this study used Bibliometric analysis and systematic review to determine the most often discussed ESG disclosure studied in the literature to find the "impact of ESG disclosure on the firm performance".

The paper is organized into five sections. The first section presents the introduction of the paper. Section 2 addressed the methodological strategy used to accomplish the study's goal. The study's results are covered in Section 3, and the findings supported by the most current literature are presented in Section 4 and a conclusion is provided in Section 5.

Methodology

ESG disclosure has been a crucial component of investors' financial choices over the last ten years due to its capacity to provide solid proof of businesses' dedication to social and environmental transparency (Aluchna, et al., 2022). Therefore, the main research questions of the study are as follows: (1) What countries, organizations, and authors have made the most contributions to the body of knowledge about ESG disclosure? (2) Which works on ESG disclosure have received the highest citations? (3) Which reference journals have the most citations for publications on ESG disclosures? (4) Based on the literature, what are the primary effects of ESG disclosure on company performance? While bibliometric analyses is used to answer questions one to three, a systematic literature review is used to address question four. This section describes the methods and materials used for data collecting, data cleaning, and literature analysis to determine "the effect of ESG disclosure on company performance".

Framework for Data Analysis

Figure 1 displays the review process of the study. Keywords like as "ESG disclosure" AND "impact" OR "effect" AND "firm profitability" OR "organization performance" OR "firm performance" were utilized to explore within the "titles, abstracts, and keywords" of articles that have been indexed in Scopus since it offers access to scholarly papers, journals, and research pieces of the highest quality (Elsevier, 2020). These particular keywords were selected because they are closely related to the study objective of examining "the impact of ESG disclosure on firm performance". Collectively, they support the goals of the study, are consistent with the selected approach, and offer insightful information. To cover a period that includes the recent growth in interest and the publication of relevant studies, the search was limited to publications published and indexed in Scopus in the last 10 years only that is between the years 2015 to 2024. Using Boolean operators like OR and AND, the study created compound search phrases based on the keywords. The search took place in January of 2024. Table 1 shows the inclusion criteria of the papers for the study.

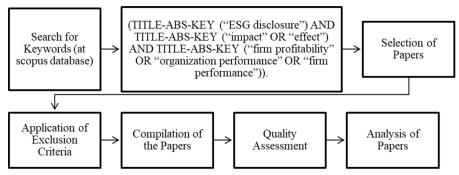


Figure 1: Bibliometric Literature Review Process

Initially, the search started with: (TITLE-ABS-KEY ("ESG disclosure") AND TITLE-ABS-KEY ("impact" OR "effect") AND TITLE-ABS-KEY ("firm profitability" OR "organization performance" OR "firm performance")). It produced thirty-five papers in all. Figure 2 illustrates the various phases of data screening. In the end, 25 publications were chosen for bibliometric analysis. Following screening, the data were uploaded to the VOS viewer for bibliometric analysis and exported to CSV Excel.

Analysis Tools and Setup

A diverse range of software has been utilized in the study for analysis and visualization. Excel was employed for the cleaning of data and descriptive analysis tasks, while VOS viewer was applied to visually represent the networks. When analyzing and visualizing data, VOS viewer is the go-to bibliometric visualization tool (Van Eck & Waltman, 2010).

Results

Trends in Publications on ESG Disclosure

The above Figure 3 displays the total number of articles published in the area of research on ESG disclosure. The first ESG disclosure study was published in 2015. The rate of progress in this particular domain was exceedingly slow from 2015 to 2019, with an annual publication limit of not more than two papers. Five papers containing ESG disclosures were published in 2020, an increase from the previous year. Subsequently, there was a decline in the

Table 1: Study Inclusion Criteria

Criteria basis	Inclusion criteria
Publication years	Papers published from 2015-2024.
Document status	Papers with publication status "final".
Document types	Papers type only articles, not books and chapters.
Author information	Papers with full author information.
Database	Scopus
Document contents	Papers that are about "the impact of ESG disclosure on firm performance".
Language	Paper published in the English language.

number of papers published, resulting in a single paper in 2021 before subsequent increases persisted until 2023 when they peaked at six papers annually. The following year, there was another decline in the quantity of publications, which amounted to two. There is evidence to imply that academic researchers are publishing their papers in the Scopus database, indicating a growing interest in ESG disclosure. This trend study attributes the rising amount of publications in the area of "ESG disclosure" to the growing incorporation of "ESG disclosure" into corporate strategy and reporting processes.

The Most Cited Papers on ESG Disclosure

The above Table 2 provides the top five cited papers on ESG disclosure that are available in the Scopus database from 2015 to 2024. The most cited paper was by Alareeni and Hamdan (2020) who examined the "ESG impact on performance of US S&P 500-listed firms". The second most cited paper was written by Arayssi, et al. (2016), who analyzed "the relation among Women on boards, sustainability reporting, and firm performance". The third most cited paper was written by Albitar, et al. (2020) related to "ESG disclosure and firm performance before and after IR: The moderating role of governance mechanisms". The fourth most cited paper was written by Mohammad and Wasiuzzaman (2021) who examine a "relationship between Environmental, Social, and Governance (ESG) disclosure, competitive advantage and performance of firms in Malaysia". In the fifth position, Buallay (2020) comprehensively explored "Sustainability reporting and firm's performance: Comparative study between manufacturing and banking sectors".

Top 10 Cited Authors, Affiliations, and Countries

The above Table 3 presents information on the top 10 cited authors along with their affiliation, country, and relevant metrics. For the search, a maximum of 25 authors per document and 1 document per author was used. It resulted in a total of 69 outputs. The table shows that Bahaaeddin Ahmed Alareeni and Allam Hamdan, affiliated with Middle East Technical University (Metu) in Turkey and Ahlia University in Bahrain, respectively, co-authored a paper with 169 citations, earning a total link strength of 27. Mahmoud

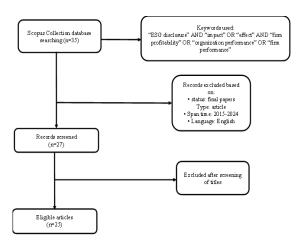


Figure 2: Screening Process

Arayssi, Mustafa Dah, and Mohammad Jizi, associated with the Adnan Kassar School of Business in Lebanon and Georgia College & State University in the United States, contributed a paper with 153 citations and a total link strength of 2 each. Khaldoon Albitar, Ali Meftah Gerged, Khaled Hussainey, and Nasir Kolade, affiliated with Portsmouth Business School and various universities in the United Kingdom and Libyan Arab Jamahiriya, collaborated on a paper with 133 citations and a total link strength of 14 each. Amina Buallay from Ahlia University in Bahrain authored two papers with a combined total of 112 citations and a total link strength of 11.

Top 10 Cited Reference Journals

The above Table 4 provides information on the top 10 cited reference journals based on the number of papers citing them, along with citation counts and additional metrics i.e., "SNIP (Source Normalized Impact per Paper)", which compares the number of citations to papers published in the journal to the predicted number of citations in the area; and "SJR (Scimago Journal Rank)", which attempts to capture the relationship between citations and the impact of a journal's reputation, quality, and topic field. For the search the maximum of 1 document of source and 0 citation of source used. It resulted in a total of 21 journals. The table shows that Corporate Governance (Bingley) is the most cited journal with 201 citations across 2 papers, featuring an SNIP of 1.901 and SJR of 1.349. Following closely the Sustainability Accounting, Management, and Policy Journal,

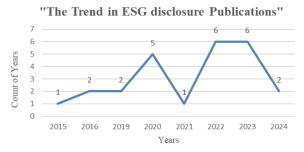


Figure 3: Trends in Publications on ESG Disclosure

cited in 1 paper with 153 citations and SNIP and SJR values of 1.332 and 0.943, respectively. Other significant journals include Cleaner Environmental Systems, "The International Journal of Productivity and Performance Management", and Sustainability (Switzerland), each with varying citation counts and impact metrics. Business Strategy and the Environment stands out with a high SJR of 2.87 despite a relatively lower citation count of 30. The list provides insights into the journals that are influential in the field of corporate governance, sustainability, and related topics.

The Most Frequent Keywords

The above Figure 4 shows the Keywords Analysis. A comprehensive keyword co-occurrence analysis has been carried out to comprehend the growth and evolution of research on the influence of "ESG disclosure on firm performance". To conduct a meaningful study, a minimum threshold of two occurrences for a certain term has been used. This resulted in a total of 23 items. As shown in Figure 4, there are four main clusters which are represented as follows:

Cluster 1 (red): "Analyzing the Interplay Between Corporate Governance, Environmental Impact, and Financial Performance"

This cluster covers the "environmental social and governance (ESG)" principles and environmental practices along with the complex link between corporate governance, environmental impact, and financial services.

Cluster 2 (Green): "The Evolution of ESG Dynamics in Emerging Markets"

This cluster explores the transformative potential of ESG disclosures in emerging markets. The study takes a deeper look at corporate environmental policies, examining their impact on corporate value and social performance.

Cluster 3 (blue): "Unlocking the Nexus between ESG Scores, Financial Performance, and Governance Disclosure"

This cluster explores the synergies between ESG scores, financial performance, and governance disclosure within the framework of integrated reporting. By examining how firms integrate ESG considerations into their reporting practices,

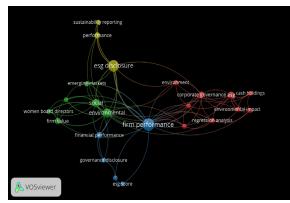


Figure 4: Keywords analysis

Table 2: The Most Cited Papers on ESG Disclosure

Author	Paper Title	year	Citations
"Alareeni B.A.; Hamdan A."	"ESG impact on performance of US S&P 500-listed firms"	2020	169
"Arayssi M.; Dah M.; Jizi M."	"Women on boards, sustainability reporting and firm performance"	2016	153
"Albitar K.; Hussainey K.; Kolade N.; Gerged A.M."	"ESG disclosure and firm performance before and after IR: The moderating role of governance mechanisms"	2020	133
"Mohammad W.M.W.; Wasiuzzaman S."	"Environmental, Social, and Governance (ESG) disclosure, competitive advantage and performance of firms in Malaysia"	2021	92
"Buallay A."	"Sustainability reporting and firm's performance: Comparative study between manufacturing and banking sectors"	2020	63

the studies uncover the impact on both financial and overall firm performance.

Cluster 4 (yellow): "Driving Performance through ESG Disclosure"

This cluster examines the important correlation between "ESG disclosure" and the performance of firms, focusing on the instrumental role of sustainability reporting.

The above Table 5 shows that based on occurrences, it appears that "firm performance" is the most frequently mentioned keyword, followed closely by "ESG disclosure." This suggests a focus on evaluating how companies perform and disclose information related to ESG factors. The prominence of "environmental" and "social" keywords indicates an interest in sustainability and social responsibility aspects within corporate operations. Additionally, the presence of "ESG" itself among the top keywords underscores the overarching emphasis on integrating ESG considerations into business practices and evaluation criteria. Overall, the data suggests a keen interest in understanding the relationship between firm performance and ESG disclosure, particularly concerning environmental and social factors.

Systematic Literature Review Based on Derived Themes

Analyzing the Interplay Between Corporate Governance, Environmental Impact, and Financial Performance As per Buallay (2019), initially, ESG has a favorable effect on market performance, lending credence to the value creation argument. whereas when it came to operational and financial performance, ESG has the opposite effect, lending credence to the idea that capital expenditures may be minimized. Similarly, Buallay (2020) showed that ESG factors have a beneficial effect on the manufacturing sector's operational, financial, and market performance. However, ESG has a detrimental impact on the banking industry's operational, financial, and market performance. On the other hand, Fayyaz, et al. (2023) showed that ESG disclosure moderates and partly mediates the association between a diverse board of directors and business performance. Similarly, Fuadah, et al. (2022) showed that ESG disclosure can be positively and significantly affected by both public and foreign ownership. Additionally, Alhares, et al. (2023) demonstrated that throughout the startup, growth, and shakeout/decline phases, there exists a substantially negative correlation between ESG disclosure and cash on hand. When a company has less cash on hand, it performs better and has a greater cash value (Atif, et al., 2022). Whereas, Arayssi, et al. (2016) discovered that having women on the board of directors has a positive impact on the risk and performance of the organization by encouraging investment in and reporting on effective social interactions.

Table 3: Top 10 Cited Authors, Affiliations, and Countries

Author	Documents	Citations	Total link strength	Country	Affiliation
Alareeni, Bahaaeddin Ahmed	1	169	27	Turkey	Middle East Technical University (Metu),
Hamdan, Allam	1	169	27	Bahrain	Ahlia University
Arayssi, Mahmoud	1	153	2	Lebanon	Adnan Kassar School of Business
Dah, Mustafa	1	153	2	Lebanon	Adnan Kassar School of Business
Jizi, Mohammad	1	153	2	United States	Georgia College & State University
Albitar, Khaldoon	1	133	14	United Kingdom	Portsmouth Business School
Gerged, Ali Meftah	1	133	14	Libyan Arab Jamahiriya	Misurata University
Hussainey, Khaled	1	133	14	United Kingdom	Faculty of Business and Law
Kolade, Nasir	1	133	14	United Kingdom	University of Northampton
Buallay, Amina	2	112	11	Bahrain	Ahlia University

Table 4: Top 10 Cited Reference Journals

Source	Paper	Citation	SNIP	SJR
Corporate Governance (Bingley)	2	201	1.901	1.349
Sustainability Accounting, Management, and Policy Journal	1	153	1.332	0.943
International Journal of Accounting and Information Management	1	133	1.332	0.943
Cleaner Environmental Systems	1	92	1.548	0.97
International Journal of Productivity and Performance Management	1	63	1.709	0.732
Journal of Applied Accounting Research	1	49	1.18	0.567
Sustainability (Switzerland)	2	41	1.198	0.664
International Journal of Economics and Management	1	34	0.465	0.247
Business Strategy and the Environment	1	30	2.754	2.87
Journal of Applied Business Research	1	21	0.116	0.124

The Evolution of ESG Dynamics in Emerging Markets

According to Sharma, et al. (2019) the emerging economy, India, demonstrated a negative correlation between ESG disclosure ratings and indicators of corporate performance. Similarly, Farooq, (2015) demonstrated that in emerging market contexts with greater information asymmetries, "ESG disclosure" has no significant impact on the performance of the firm. On the other hand, Bektur, & Arzova (2022) found that emerging markets failed to fully assess the link between female board members, business performance, and environmental, social, and governance (ESG) factors. Additionally, Lavin & Montecinos-Pearce (2022) showed that listed companies in emerging economies have higher interest rates on loan funding when they tend to be more transparent on environmental, social, and governance factors. on the other hand, Kenny, et al. (2022) discovered no statistically significant correlation between ESG disclosure and firm performance in the member nations of "ASEAN (The Association of Southeast Asian Nations)", even if the coefficient is positive. Finally, Alduais, (2023) Showed that excellent ESG standards reduce risk and capital equity costs. Chinese enterprises with excellent ESG ratings had reduced capital costs, demonstrating investor enthusiasm for ESG in the emerging economy of China.

Unlocking the Nexus between ESG Scores, Financial Performance, and Governance Disclosure

According to Sharma, et al. (2019), there has been no statistically significant relationship between ESG scores and company performance, suggesting that the effect of

Table 5: Top 5 Keywords As Per Occurrence

Keyword	Occurrences
Firm Performance	12
ESG Disclosure	10
Environmental	6
Social	5
ESG	4

ESG-related initiatives on bottom-line results has not yet materialized. In contrast, Sharma, et al. (2022) discovered that a company's market value has been positively impacted by ESG and governance pillar ratings, but the scores for the social and environmental pillars had no meaningful effect. Furthermore, ECG scores have a strong correlation with all ESG disclosures. On the other hand, Fahad and Busru (2021) found that CSR disclosure has a detrimental impact on Indian firms' profitability and value, with the "environmental disclosure score" and the "social disclosure score" being the primary factors influencing this negative effect. Further, Sharma, et al. (2020) proved that there exists a favorable and statistically significant correlation between ESGD score and company success. and concluded that companies that willingly participate in integrated reporting (IR) often have higher financial performance.

Driving Performance through ESG Disclosure

As per Atan, et al. (2016), there was no link between the amount of "ESG disclosure" and the firm's financial performance. Similarly, Firmansyah, et al. (2023) found that the influence of ESG and its component disclosure on firm profitability have shown weak or negative correlations. On the other hand, according to the findings by Wasiuzzaman, et al. (2022), ESGD substantially decreased the profitability of energy companies. In contrast, Alareeni and Hamdan (2020) have shown that ES0047 disclosure has a beneficial effect on performance metrics for businesses. Similarly, Mohammad and Wasiuzzaman (2021) showed that, even after considering competitive advantage, ESG disclosure has improved company performance. Moreover, Khanchel, et al. (2023) also demonstrated a good relationship between financial success and green innovation and two aspects of ESG disclosure (the governance and social components). Similarly, Veeravel, et al. (2024) proved that disclosures about ESG factors have a favorable effect on the financial results of businesses. Finally, Carnini Pulino, et al. (2022) also discovered that EBIT (Earnings before interest and taxes) has been a good indicator of a company's success and that "ESG disclosure" has a favorable correlation with this metric.

Conclusion

Studies on ESG have built a strong basis and seen different levels of expansion and enrichment in its substance and issues. The present study differentiates itself from previous literature reviews on ESG by using a more focused methodology. It constructs a research framework titled "Impact of ESG Disclosure on Firm Performance" by the analysis of literature visualization. Using the Scopus database, The present study analyzed the most significant 25 papers published between 2015 and 2024. VOSviewer was used to visually examine the number of articles, authors, institutions, countries, and keywords in the literature. The results of the study provide significant guidance and practical knowledge for the academic community to broaden the research on ESG value creation and for companies to adopt ESG practices. The primary findings may be summarized as follows:

The examination of patterns in publications on ESG disclosure indicates a steady rise in academic attention from 2015 to 2023, with intermittent variations in yearly publishing rates. Although there was a delayed start, the number of papers saw a significant increase after 2020, suggesting a rising incorporation of "ESG disclosure" into business planning and reporting procedures. Moreover, an analysis of the most frequently referenced publications reveals significant developments in the subject. These studies delve into several aspects, including the influence of ESG factors on company performance, the significance of governance structures, and comparative evaluations across different industries and geographical areas. Significantly, authors from many affiliations and nations have emerged as crucial contributors, emphasizing the worldwide significance of ESG research. Furthermore, examining highly cited reference journals provides valuable information about the prominent platforms that are impacting academic discussions on sustainability and corporate governance. The significance of keywords such as "firm performance" and "ESG disclosure" highlights the primary emphasis on comprehending the correlation between corporate factors, sustainability measures, and financial results. In summary, the results provide insight into the changing ESG research landscape, highlighting the diverse impact of ESG issues on organizational performance and shareholder value.

After thoroughly examining key authors, referenced journals, and topic trends, this study uncovers a diverse range of research that explores the complex link between ESG disclosure and company success. Although certain studies indicated a positive correlation, others revealed intricate factors that suggest the effects of ESG have been impacted by industry dynamics, geographical factors, and regulatory frameworks. Consequently, the study concludes that ESG continues to be an emerging field that is going to experience significant growth in the future, with a notable impact on sustainability.

Limitations and Future Work

Similar to previous academic research, the present study also has certain limitations. Primarily, the study only used data sourced solely from the Scopus database. In the future, bibliometric studies data may be extracted using other databases, such as the Web of Sciences. Furthermore, regarding the outcomes, there are several instances of redundant data in bibliometric studies, such as the presence of both single and plural forms of the same keyword or the usage of hyphens in identical compound words. That hampers the reliability of the findings to some degree.

In addition, researchers in the future should try using various retrieval tactics, such as doing more relevant searches. To further explore the possible connections between the subthemes that have been found, future research might build networks of bibliographical coupling and keyword co-occurrence using less stringent threshold levels. Related subtopics or other literature grouping strategies might lead to more productive study directions.

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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.
- Alareeni, B. A., & Hamdan, A. (2020). ESG impact on performance of US S&P 500-listed firms. *Corporate Governance: The International Journal of Business in Society, 20*(7), 1409-1428.
- Albitar, K., Hussainey, K., Kolade, N., & Gerged, A. M. (2020). ESG disclosure and firm performance before and after IR: The moderating role of governance mechanisms. *International Journal of Accounting & Information Management*, 28(3), 429-444.
- Alduais, F. (2023). Unravelling the intertwined nexus of firm performance, ESG practices, and capital cost in the Chinese business landscape. *Cogent Economics & Finance*, *11*(2), 2254589.
- Alhares, A. & Alemadi, N., Abu-Asi, T., & Al Abed, R., (2023). Environmental, social, and governance disclosure impact on cash holdings in OECD countries. Journal of Governance and Regulation. 12. 104-119. 10.22495/jgrv12i2art10.
- Aluchna, M., Roszkowska-Menkes, M., Kamiński, B., & Bosek-Rak, D. (2022). Do institutional investors encourage firm to social disclosure? The stakeholder salience perspective. *Journal of Business Research*, 142, 674-682.
- Arayssi, M., Dah, M., & Jizi, M. (2016). Women on boards, sustainability reporting and firm performance. Sustainability Accounting, Management and Policy Journal, 7(3), 376-401. Atan, R. U. H. A. Y. A., Razali, F. A., Said, J. A. M. A. L. I. A. H., & Zainun,

- S. A. U. N. A. H. (2016). Environmental, social and governance (ESG) disclosure and its effect on firm's performance: A comparative study. *International Journal of Economics and Management*, 10(2), 355-375.
- Atif, M., Liu, B., & Nadarajah, S. (2022). The effect of corporate environmental, social and governance disclosure on cash holdings: Life-cycle perspective. *Business Strategy and the Environment*, *31*(5), 2193-2212.
- Atz, U., Van Holt, T., Liu, Z. Z., & Bruno, C. C. (2023). Does sustainability generate better financial performance? review, meta-analysis, and propositions. *Journal of Sustainable Finance & Investment*, *13*(1), 802-825.
- Baldini, M., Maso, L. D., Liberatore, G., Mazzi, F., & Terzani, S. (2018). Role of country-and firm-level determinants in environmental, social, and governance disclosure. *Journal of Business Ethics*, *150*, 79-98.
- Bektur, Ç., & Arzova, S. B. (2022). The effect of women managers in the board of directors of companies on the integrated reporting: Example of Istanbul Stock Exchange (ISE) Sustainability Index. *Journal of Sustainable Finance & Investment*, 12(2), 638-654.
- Buallay, A. (2019). Between cost and value: Investigating the effects of sustainability reporting on a firm's performance. *Journal of Applied Accounting Research*, 20(4), 481-496.
- Buallay, A. (2020). Sustainability reporting and firm's performance: Comparative study between manufacturing and banking sectors.
- Buallay, A. (2021). Sustainability reporting and agriculture industries' performance: worldwide evidence. *Journal of Agribusiness in Developing and Emerging Economies*, 12(5), 769-790.
- Carnini Pulino, S., Ciaburri, M., Magnanelli, B. S., & Nasta, L. (2022). Does ESG disclosure influence firm performance?. *Sustainability*, *14*(13), 7595.
- Donthu, N., Kumar, S., Mukherjee, D., Pandey, N., & Lim, W. M. (2021). How to conduct a bibliometric analysis: An overview and guidelines. *Journal of business research*, 133, 285-296.
- Ellegaard, O., & Wallin, J. A. (2015). The bibliometric analysis of scholarly production: How great is the impact?. *Scientometrics*, 105, 1809-1831.
- Ellili, N. O. D. (2022). Bibliometric analysis and systematic review of environmental, social, and governance disclosure papers: current topics and recommendations for future research. *Environmental Research Communications*.
- Elsevier, S. (2020). Scopus content coverage guide', Amesterdam. *Elsevier BV*, *2*, 947-55.
- Fahad, P., & Busru, S. A. (2021). CSR disclosure and firm performance: evidence from an emerging market. *Corporate Governance: The International Journal of Business in Society*, 21(4), 553-568.
- Farooq, O. (2015). Financial centers and the relationship between ESG disclosure and firm performance: Evidence from an emerging market. *Journal of Applied Business Research (JABR)*, 31(4), 1239-1244.
- Fayyaz, U. E. R., Jalal, R. N. U. D., Venditti, M., & Minguez-Vera, A. (2023). Diverse boards and firm performance: The role of environmental, social and governance disclosure. *Corporate Social Responsibility and Environmental Management*, 30(3), 1457-1472.
- Firmansyah, E. A., Umar, U. H., & Jibril, R. S. (2023). Investigating the effect of ESG disclosure on firm performance: The case

- of Saudi Arabian listed firms. Cogent Economics & Finance, 11(2), 2287923.
- Fuadah, L. L., Mukhtaruddin, M., Andriana, I., & Arisman, A. (2022). The ownership structure, and the environmental, social, and governance (ESG) disclosure, firm value and firm performance: The audit committee as moderating variable. *Economies*, 10(12), 314.
- Gao, S., Meng, F., Gu, Z., Liu, Z., & Farrukh, M. (2021). Mapping and clustering analysis on environmental, social and governance field a bibliometric analysis using Scopus. *Sustainability*, 13(13), 7304.
- Gutiérrez-Salcedo, M., Martínez, M. Á., Moral-Munoz, J. A., Herrera-Viedma, E., & Cobo, M. J. (2018). Some bibliometric procedures for analyzing and evaluating research fields. Applied intelligence, 48, 1275-1287.
- Helmold, M. (2023). Environmental, Social, and (Corporate) Governance (ESG) as Part of Quality Management. In Virtual and Innovative Quality Management Across the Value Chain: Industry Insights, Case Studies and Best Practices (pp. 175-185). Cham: Springer International Publishing.
- Herrera-Franco, G., Montalván-Burbano, N., Mora-Frank, C., & Moreno-Alcívar, L. (2021). Research in Petroleum and Environment: A Bibliometric Analysis in South America. *International Journal of Sustainable Development & Planning*, 16(6).
- Hoepner, A. G., Majoch, A. A., & Zhou, X. Y. (2021). Does an asset owner's institutional setting influence its decision to sign the principles for responsible investment?. Journal of Business Ethics, 168, 389-414.
- Kenny, F., Nurcholifah, S., & Pulungan, A. H. (2022). Disclosure of environmental, social, and governance on firm performance pre and post introduction of integrated reporting: Evidence from ASEAN countries. *International Journal of Energy Economics and Policy*, 12(6), 377.
- Khanchel, I., Lassoued, N., & Baccar, I. (2023). Sustainability and firm performance: the role of environmental, social and governance disclosure and green innovation. Management Decision. https://doi.org/10.1108/md-09-2021-1252
- Kokol, P., Blažun Vošner, H., & Završnik, J. (2021). Application of bibliometrics in medicine: a historical bibliometrics analysis. Health Information & Libraries Journal, 38(2), 125-138.
- Lavin, J. F., & Montecinos-Pearce, A. A. (2022). Heterogeneous Firms and Benefits of ESG Disclosure: Cost of Debt Financing in an Emerging Market. Sustainability, 14(23), 15760.
- Li, R. Y. M., Li, B., Zhu, X., Zhao, J., Pu, R., & Song, L. (2022). Modularity clustering of economic development and ESG attributes in prefabricated building research. Frontiers in Environmental Science, 10, 977887.
- Lu, C., Bing, Z., Bi, Z., Liu, M., Lu, T., Xun, Y., ... & Yang, K. (2019). Top-100 most cited publications concerning network pharmacology: a bibliometric analysis. *Evidence-based complementary and alternative medicine*, 2019.
- Lunawat, A., & Lunawat, D. (2022). Do Environmental, Social, and Governance Performance Impact Firm Performance? Evidence from Indian Firms. Indonesian Journal of Sustainability Accounting and Management, 6(1).
- Matakanye, R. M., van der Poll, H. M., & Muchara, B. (2021). Do companies in different industries respond differently to stakeholders' pressures when prioritising environmental, social and governance sustainability performance?.

- Sustainability, 13(21), 12022.
- Mohammad, W. M. W., & Wasiuzzaman, S. (2021). Environmental, Social and Governance (ESG) disclosure, competitive advantage and performance of firms in Malaysia. *Cleaner Environmental Systems*, *2*, 100015.
- Narula, R., Rao, P., Kumar, S., & Matta, R. (2024). ESG scores and firm performance-evidence from emerging market. *International Review of Economics & Finance*, 89, 1170-1184.
- Nishitani, K., Kokubu, K., Wu, Q., Kitada, H., Guenther, E., & Guenther, T. (2022). Material flow cost accounting (MFCA) for the circular economy: An empirical study of the triadic relationship between MFCA, environmental performance, and the economic performance of Japanese companies. Journal of Environmental Management, 303, 114219.
- Nishitani, K., Nguyen, T.B. H., Trinh, T. Q., Wu, Q., & Kokubu, K. (2021). Are corporate environmental activities to meet sustainable development goals (SDGs) simply greenwashing? An empirical study of environmental management control systems in Vietnamese companies from the stakeholder management perspective. Journal of Environmental Management, 296, 113364.
- Özcan, İ. Ç. (2021). Do the Companies Benefit from Improved Disclosure Performance? Evidence from the Airport Industry. New Approaches to CSR, Sustainability and Accountability, Volume II, 113-124.
- Parlina, A., Ramli, K., & Murfi, H. (2020). Theme mapping and bibliometrics analysis of one decade of big data research in the scopus database. Information, 11(2), 69.
- Parlina, A., Ramli, K., & Murfi, H. (2021). Exposing emerging trends in smart sustainable city research using deep autoencoders-based fuzzy c-means. Sustainability, 13(5), 2876.
- Rivai, F. A., Navimipour, N. J., & Yalcın, S. (2023). Multimedia big data computing mechanisms: a bibliometric analysis. Multimedia Tools and Applications, 82(2), 2765-2781.
- Sharma, D., Bhattacharya, S., & Thukral, S. (2019). Resource-based view on corporate sustainable financial reporting and firm performance: Evidences from emerging Indian economy.

- International Journal of Business Governance and Ethics, 13(4), 323-344.
- Sharma, P., Panday, P., & Dangwal, R. C. (2020). Determinants of environmental, social and corporate governance (ESG) disclosure: a study of Indian companies. International Journal of Disclosure and Governance, 17, 208-217.
- Sharma, R. B., Lodha, S., Sharma, A., Ali, S., & Elmezughi, A. M. (2022). Environment, social and governance reporting and firm performance: Evidence from GCC countries. International Journal of Innovative Research and Scientific Studies, 5(4), 419-427.
- Suttipun, M., & Yordudom, T. (2022). Impact of environmental, social and governance disclosures on market reaction: an evidence of Top50 companies listed from Thailand. Journal of Financial Reporting and Accounting, 20(3/4), 753-767.
- Van Eck, N., & Waltman, L. (2010). Software survey: VOSviewer, a computer program for bibliometric mapping. scientometrics, 84(2), 523-538.
- Veeravel, V., Sadharma, E. K. S., & Kamaiah, B. (2024). Do ESG disclosures lead to superior firm performance? A method of moments panel quantile regression approach. Corporate Social Responsibility and Environmental Management, 31(1), 741-754.
- Wan, G., & Dawod, A. Y. (2022). ESG Rating and Northbound Capital Shareholding Preferences: Evidence from China. Sustainability, 14(15), 9152.
- Wasiuzzaman, S., Ibrahim, S. A., & Kawi, F. (2022). Environmental, social and governance (ESG) disclosure and firm performance: does national culture matter?. Meditari Accountancy Research, (ahead-of-print).
- Xie, J., Nozawa, W., Yagi, M., Fujii, H., & Managi, S. (2019). Do environmental, social, and governance activities improve corporate financial performance?. Business Strategy and the Environment, 28(2), 286-300.
- Yadav, M., & Saini, M. (2023). Environmental, social and governance literature: a bibliometric analysis. International Journal of Managerial and Financial Accounting, 15(2), 231-254.