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## Article

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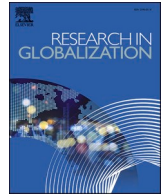
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# From board diversity to disclosure: A comprehensive review on board dynamics and ESG reporting<sup>☆</sup>

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## ABSTRACT

This study aims to provide a comprehensive overview of scholarly work and discussion on board diversity and ESG reporting, leading to the identification of prominent themes and potential future research. Based on 144 articles from the Web of Science (WoS) database, the study adopts numerical and visualization techniques using the Vosviewer and Biblioshiny R-package to examine the extant literature from 2011 to 2023. The outcomes of the scientific bibliographic coupling identified three dominant themes: Theme 1, 'Board Gender Diversity and Sustainability Reporting'; Theme 2, 'Importance of Governance Structures in shaping reporting practices' and Theme 3, 'Factors Shaping Integrated Reporting'. The review concludes that board diversity supports environmental, social, and governance reporting and proves integral to sustainable corporate practices and context-specific strategies. Policymakers should design inclusive governance frameworks by recognizing the role of board diversity in enhancing ESG reporting quality, leading to regulatory reforms that encourage greater gender diversity and transparency in sustainability practices. As for businesses, having diverse boards enhances decision-making and innovation, improving ESG reporting quality and fostering better sustainability outcomes. Finally, for academia, the research provides a foundation for future studies on the intersection of board diversity and ESG reporting, particularly in exploring cultural and regional variations, as well as the role of technology in improving disclosure quality. Thus, this study is expected to have far-reaching implications for policymaking, business strategies, societal decisions, and academic research, which could eventually contribute to quality sustainability reporting and business sustainability.

## 1. Introduction

### 1.1. Study Background

Boards of Directors (BODs) are key players in the governance landscape; overseeing management practices, optimizing resources allocation (Naciti, 2019; Frias-Aceituno, 2013; Nugroho and Eko, 2011), and promoting long-term value for organizations (Morris et al., 2021; Huse, 2007). As the BODs are the pulse of an entity, diversity amongst the board members is essential to an organization as it could significantly enhance organizational governance, sustainability, and achievement. A

diverse board represents members from various backgrounds, experiences, and demographics, leading to a more comprehensive and inclusive governing structure. It advances a governance body that reflects a wide range of ideas and experiences, taking into account differences in gender, ethnicity, age, skills, and life experiences. Board diversity can also be regarded as a strategic initiative to avoid homogeneity in leadership (Mahadeo et al., 2011), encourage innovation (Griffin et al., 2019), improve decision-making (Ben-Amar et al., 2011; Rao & Tilt, 2015), sustainable business practices (Abdou et al., 2020; Bufarwa et al., 2020; Malagila et al., 2020) and echoing the diverse perspectives of stakeholders. Ultimately, it should lead to enhanced financial

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performance (Abbas et al., 2023b; Ararat et al., 2010; Fernández-Temprano & Tejerina-Gaite, 2020; Leong et al., 2015; Shehata et al., 2017; Tajuddin et al., 2023) and aid businesses in navigating challenges in the global marketplaces. It should also address social equity concerns and promote an inclusive and egalitarian corporate culture (Buse et al., 2014; Rhode & Packel, 2010).

Prior studies have also emphasized the need for a more integrated approach to examining board diversity's influence on Environmental, Social, and Governance (hereafter, ESG) outcomes, particularly in cross-cultural and industry-specific contexts (Agnese et al., 2024; Helfaya et al., 2023; Temiz & Acar, 2023). Board diversity and ESG reporting are to some extent associated with and crucial to the sustainability of businesses (Dwekat et al., 2021; Shahbaz et al., 2020). The UN Global Compact first proposed the idea of ESG in 2004 with the intention of educating investors about the importance of both the financial and non-financial elements affecting the long-term sustainability and performance of companies. Environmental elements like emissions and carbon exposure, social factors like employment practices and human rights, and governance indicators like leadership efficacy and misconduct are all incorporated into the frontiers of ESG. Thus, it is now widely documented that ESG reporting has become an essential tool for businesses to convey their dedication to sustainability and ethical business practices (Karwowski & Raulinajtyś-Grzybek, 2021; Lokuwaduge & De Silva, 2020). This disclosure goes beyond traditional financial metrics (Kamaludin et al., 2022) as it informs stakeholders on governance practices, and environmental sustainability efforts (Abbas et al., 2023a; Arvidsson & Dumay, 2021; Eissa et al., 2024; Papoutsis & Sodhi, 2020), and social responsibility initiatives (Sharma et al., 2020). It also gives stakeholders transparent information about an organization's initiatives and accomplishments in terms of carbon footprint (Baratta et al., 2023; Kaplan & Ramanna, 2021; Luo & Tang, 2022) diversity and inclusion (Adediran, 2023; Manita et al., 2018), ethical governance, and community outreach. ESG reporting is now essential for companies looking to comply with international standards (Bose, 2020; Jia, 2020), reduce risks (Dye et al., 2021; Hoang, 2018; Kotsantonis et al., 2016), and show an earnest dedication to long-term societal and environmental well-being.

Despite the increasing focus on board diversity and ESG, there remains a lack of comprehensive studies that synthesize their interrelationship within corporate governance frameworks. Failure to address this gap in research may lead to missed opportunities for businesses to optimize their governance structures for better ESG outcomes and subsequently, fail to meet increasing stakeholder and regulatory expectations. Thus, reviewing the existing literature on the association between board diversity and ESG reporting is crucial to understanding the wider implications of board composition on sustainability and governance practices.

Additionally, the growing regulatory focus on ESG reporting has intensified scrutiny on how corporate boards, particularly in terms of diversity, contribute to these disclosures. Diverse boards, composed of individuals with varying backgrounds, gender, and expertise, are increasingly seen as essential for driving comprehensive and transparent ESG reporting that meets evolving stakeholder expectations. Various frameworks such as IFRS Sustainability Disclosure Standards, SASB Standards, CDSB Framework, GRI Standards, CDP, TCFD, United Nations Global Compact, and Workforce Disclosure Initiative provide different methods for reporting ESG factors (Dutta & Paul, 2023). Companies must thoroughly evaluate their reporting needs, stakeholder expectations, and regulatory obligations to choose and apply the most appropriate ESG frameworks. One significant advancement is the introduction of compulsory ESG reporting regulations in certain regions. The European Union's Sustainable Finance Disclosure Regulation (SFDR) requires financial market players and advisors to reveal ESG-related information in their investment procedures (Sustainability-related disclosures in the financial services sector. Regulation -, 2019). The UK's Financial Conduct Authority (FCA) mandates premium-listed

businesses to disclose climate-related financial information (Review of TCFD-aligned Disclosures by Premium Listed Commercial Companies, 2022) in accordance with TCFD recommendations. In the United States, although there is no government requirement for ESG reporting, regulatory bodies such as the Securities and Exchange Commission (SEC) have implemented measures to improve ESG disclosure (Meng-Tao et al., 2022; Hazen, 2020; Ho & Virginia, 2021; Christensen et al., 2021). The SEC's proposed rule on climate-related risk disclosures for public corporations is in line with TCFD recommendations, indicating a possible move towards standardized ESG reporting in the country (Christensen et al., 2021; Hazen, 2020). Regulatory bodies in Asia-Pacific and Latin America are showing a growing interest in ESG reporting, as noted by Singhania & Saini (2021), (Lavin and Montecinos-Pearce, 2021), and Duran & Rodrigo (2018). Stock exchanges in countries such as Japan, Singapore, and Brazil have implemented ESG reporting guidelines or listing requirements to prompt companies to reveal ESG information to investors and stakeholders. In addition to obligatory legislation, voluntary initiatives, and industry-specific regulations significantly influence ESG reporting standards. Industry associations and initiatives such as the Task Force on Nature-related Financial Disclosures (TNFD) are creating frameworks to help corporations disclose biodiversity-related risks and possibilities (Deweerd et al., 2022).

In that regard, diverse boards with varied backgrounds and perspectives should have an impact on how organizations respond to ESG priorities and reporting. The board's effective management of environmental considerations distinctive to the business sector, virtuous approaches to social responsibility, and strategic governance choices catered to the circumstances of the corporation are all significant examples of this effect. A diverse board could contribute towards a distinct integration of ESG issues within the organization and the eventual reporting of non-financial concerns, which magnifies the comprehensiveness and breadth of the decision-making process. Beyond merely complying with legal requirements, the diversity payoff could profoundly shape a corporate culture that prioritizes ethical and sustainable business practices, which strengthens the legitimacy and effectiveness of ESG reporting systems.

## 1.2. Research gaps

This study aims to address the gap in understanding how board diversity influences ESG reporting and how governance frameworks and cultural contexts shape these outcomes. By integrating existing research on board diversity and ESG practices, the study provides a comprehensive framework to explore the regional, cultural, and governance factors that impact sustainability disclosures. Board diversity and ESG reporting have also been the subject of numerous review-based studies conducted recently (Khatib et al., 2023; Seow, 2023; Singhania & Chadha, 2023; Tsang et al., 2023, to mention a few). Therefore, our study aims to make a contribution to the growing body of research on board diversity and ESG by filling in important gaps in the recent review-based studies on these topics and providing a comprehensive analysis covering a range of aspects. Our goal is to provide a more thorough understanding of the ways in which different board qualities work together to affect the results of ESG reporting. The primary driving force for this initiative is a research study that was carried out in 2023 by Khatib et al. While Khatib et al.'s (2023) bibliometric analysis encompassing 991 articles from the Scopus database provides valuable insights into the global board diversity research, it primarily emphasizes the prevalence of gender diversity. Moreover, the review scrutinized board diversity in isolation, without considering its interrelation with other organizational components. The study points out the necessity for further exploration into diverse board attributes and their interactions, indicating a research gap. Tsang et al.'s (2023) seminal work on CSR disclosure within ESG is commendable. The authors examine the voluntary non-financial ESG disclosure from top accounting journals,

offering a comprehensive review categorizing motivations, consequences, and characteristics influencing ESG/CSR disclosure. Their work outlines avenues for future research, specifically focusing on CSR rating disagreements, CSR contracting, and nonfinancial rating agencies. The focal point predominantly centers around examining CSR practices and disclosures.

Another review by Seow, R. Y. C. (2023), using a total of 35 articles published from 2006 to October 2022 from the Scopus, WoS, and Google Scholar databases explains factors influencing ESG Disclosure (ESGD) and provides a foundational exploration, explaining diverse elements such as natural disasters, political and legal systems, ownership, board characteristics, and CEO attributes. It outlines future research directions, including the impact of corporate governance, cultural variables, and industry-level factors on ESG, thus contributing to improved ESGD frameworks. The primary focus of the study was directed towards the antecedents of ESG disclosure. [Singhanian and Chadha's \(2023\)](#) scientometric analysis on sustainability reporting, encompassing 1434 articles from Web of Science database (published between 1992 and 2022) comprehensively map the intellectual structure of this field. Domain visualizations were constructed using CiteSpace software to identify networks of co-authorship, keywords, subject categories, institutions, and countries engaged in publishing on SR along with co-citation and cluster analysis. This study, while not directly focusing on board diversity, provides a broader context for the research landscape in sustainability reporting. Several potential research were also discussed, which includes exploring the link between circular economy and SR, the role of social media, blockchain, artificial intelligence, and other digital technologies in SR, attention on the MSME sector, mandatory reporting, assessment of real impact of SR on investor sentiments and financial analysts' valuations, assurance, standardization, financial-sector inclusive research, materiality issues, and understanding niche themes of SR, inclusive of monothematic reporting.

Our study differentiates itself by emphasizing the need to examine and synthesize the scholarly discussion on board diversity's diverse impact on ESG, considering not only its influence on reporting but also its potential implications on corporate governance, cultural variables, and stakeholder dynamics. It aims to broaden this scope by highlighting the nexus between board diversity and ESG considerations, thereby contributing to a more comprehensive understanding of sustainable business practices and bridging gaps left by existing studies. We aim to contribute to a more detailed understanding of the relationships within the dominion of ESG reporting, shedding light on unexplored dimensions and offering insights for future research directions. Thus, this study will conduct a thorough analysis of the body of research in the fields of board diversity and ESG reporting that is currently available from the Web of Science database. The study will use both the science mapping and performance evaluation techniques ([Donthu et al., 2021](#); [Kraus et al., 2022](#); [Lim & Kumar, 2023](#); [Mukherjee et al., 2022](#)), encompassing publication patterns, highly cited articles, prominent authors, impactful journals, and collaborative efforts among countries. Thematic topics will be explored in depth to provide a comprehensive understanding of board diversity and ESG reporting. Thereafter, the study will outline potential directions for future research in the said domain. Such insights are expected to play a critical role in addressing existing research gaps, resulting in meaningful contributions with significant ramifications for all parties involved in this conversation.

To achieve the research aims, the following research questions (RQs) are explored:

RQ1: What are the current trends on board diversity and ESG reporting in terms of publications, prominent journals, authors, articles, affiliated countries, and institutions?

RQ2: What are the major themes being discussed in this domain?

RQ3: What are the potential future areas of research and how it could contribute towards all stakeholders?

### 1.3. Study contribution

The study identifies three core themes: (1) Board Gender Diversity and Sustainability Reporting, (2) Governance Structures Shaping Reporting Practices, and (3) Factors Influencing Integrated Reporting. These findings emphasize the critical role of diverse boards in improving the quality and transparency of ESG disclosures. It could serve as a valuable guide for policymakers in developing informed and effective policies. The study also highlights the importance of enacting policies that promote inclusivity in corporate governance by demonstrating the benefits of board diversity on ESG disclosures. Furthermore, it offers insightful information about areas that need regulatory attention, aiding policymakers develop policies that encourage and promote inclusive activities. Businesses and firms can use the findings as a valuable resource for integrating ESG into their strategic plans as the study highlights the importance of diverse boards in promoting innovation and collaboration. In addition, the findings help with talent acquisition by underlining the importance of diverse leadership for organizations dedicated to ESG principles. In the societal context, the findings of the study empower consumers to make informed choices aligned with sustainable governance practices. Thus, empowering all stakeholders with valuable insights to ensure organizations uphold their ESG commitments. In academia, this research provides valuable insights for future studies, guiding scholars to examine the impact of board diversity on ESG reporting from different angles, with a special focus on analyzing this phenomenon through diverse cultural perspectives. This intellectual endeavor seeks to enhance our knowledge of the complexity in comprehending cultural sensitivities. The educational implications of this extend to future business leaders and scholars of governance, informing them on the critical role that diverse boards play in promoting credible and meaningful environmental, social, and governance (ESG) reporting. Thus, it has far-reaching implications for policymaking, business strategies, societal decisions, and academic studies in the field of board diversity and ESG reporting.

The study is organized in the following manner. Section 2 outlines the methodology used in the study, while Section 3 includes a descriptive analysis, bibliometric assessment, content evaluation, and suggestions for future research. Section 4 presents the conclusion.

## 2. Research methodology

Bibliometric analysis is a widely used rigorous approach to investigate and analyze substantial amounts of scientific data. Several prominent studies within this domain have employed the bibliometric methodology ([Sundarasan et al., 2024](#); [Khatib et al., 2023](#); [Saini et al., 2023](#); [Wang et al., 2024](#); [Baker et al., 2020b](#); [Mumu et al., 2021](#); [Ellili, 2022](#); [Ansari et al., 2022](#); [Ejaz et al., 2022](#)) but have taken into account a broader spectrum of diversity characteristics and their influence on corporate governance and the quality of sustainability reporting. On that note, this study conducted a bibliometric analysis by defining a search string based on board diversity (BD) and ESG reporting (ESGR). The application of these quantitative techniques allows the researchers to analyze the subtle changes in a particular field's development, while also revealing the new and developing areas within that field ([Donthu et al., 2021](#)). The primary aim is to ascertain effective and sustainable practices that contribute value to all stakeholders, while concurrently exploring novel avenues for future research endeavors.

### 2.1. Data collection method and procedure

The data extraction commenced in March 2023. The database was extracted using the Web of Science database ([Kent Baker et al., 2020b](#); [Ülker et al., 2023](#); [Yilmaz & Tuzlukaya, 2023](#)), and a content analysis was conducted using the VOS viewer version 1.6.20 software ([Ellili, 2023](#); [Jain & Tripathi, 2023](#); [Khatib et al., 2023](#); [Sundarasan et al., 2023](#)). We selected the Web of Science for its high-quality, relevant

journals and robust citation structure, ensuring a focused and consistent bibliometric analysis of board diversity and ESG reporting, while avoiding complications from using multiple databases. As a first step to data extraction, a systematic search was performed, in the title, abstract, and keyword list, utilizing the specified terms ('sustainability' OR 'integrated' OR 'ESG\*' OR 'Environment, Social and Governance') AND ('Report\*' OR 'Reporting' OR 'disclosure') AND 'board diversity'. This initial process yielded a total of 2,514 scholarly articles. To ensure a refined dataset, we applied inclusion and exclusion criteria within the Web of Science database search. Firstly, we used the 'citation topics Meso – Management & Economics'. By integrating these precise terms into the search methodology, the study ensures the inclusion of relevant scholarly articles within the domains of economics and management. Subsequently, we limited the document type to include only Articles & Early Access. Further criteria were then applied, to focus on English-language articles within the domains of Business, Business Finance, and Management, resulting in a final selection of 144 articles published between 2011 and 2023. Each article was carefully assessed to ascertain its relevance to the study's objectives.

2.2. Data analysis techniques

As suggested by Donthu et al., (2021), a two-stage bibliometric analysis is adopted in this study, that is performance analysis and science mapping. In term off performance analysis, this paper used biblioshiny version 4.0 (Aria and Cuccurullo, 2017) to generate textual and graphic representations of the of the publication trends, most impactful papers, prominent authors, significant publishing sources, top countries, and affiliations. Complementing this, VosViewer software version 1.6.20 (Van Eck & Waltman, 2009) emerges as another powerful tool for visualizing the network of keywords and bibliographic coupling (Baker et al., 2020a, 2020b; Khan et al., 2020). VosViewer aids in classifying and grouping interconnected documents into coherent clusters and thematic entities. The themes are derived based on the output from the "biblio-coupling" of the 144 articles that were fed into the VosViewer software. Biblio-coupling in VosViewer refers to the method of analyzing bibliographic data to identify and visualize relationships between documents based on their shared references. VosViewer quantifies the strength of the connection between two documents by calculating the number of references they share. The more references two documents share, the stronger the biblio-coupling between them. VosViewer then generates a visual representation of the bibliographic coupling network. Nodes are positioned in the visualization based on their bibliographic relationships, with closely related documents placed closer to each other. The software identifies clusters or groups of documents with high

biblio-coupling, suggesting strong thematic or conceptual connections. So, based on the biblio-coupling output, the resulting visualization is analyzed to understand the structure of the literature, identify key documents or clusters, identify thematic relationships and inclusive suggestion for future research. In summary, biblio-coupling in Vos-Viewer is a tool for visually representing and analyzing the relationships between scholarly documents based on shared references. It helps researchers gain insights into the intellectual structure of a field and identify key themes or clusters within the literature.

3. Findings and discussions

3.1. Publication trend

Fig. 1 demonstrates the trajectory of publication trends (between 2011 and 2023), showing a notable surge in scholarly articles (reaching a total of 132 publications), centering on the nexus of board diversity and ESG reporting considerations. The initial years saw a modest number of articles, with a notable rise starting in 2017, peaking at 35 articles in 2022. The publication trend signifies an increased interest in exploring the intersection of board diversity and ESG and this could stem from the growing awareness of the crucial roles board diversity play in sustainability reporting, sustainable business practices, inclusive decision-making, and overall corporate governance. This growth can be also attributed to the increasing regulatory focus on ESG, as well as a broader recognition of the importance of diverse boards in driving effective governance and sustainability practices. The trend also signals a clear imperative for businesses to integrate ESG principles into their operational frameworks and strategic planning for sustained long-term sustainability, shifting priorities of businesses and regulators towards more inclusive and transparent governance structures, particularly in light of global challenges such as climate change, corporate social responsibility, and ethical leadership. The academic community's engagement with this topic suggests that there is a continued need for research exploring the complex dynamics between board composition and sustainable corporate practices, and the trend points to a maturing field with significant implications for both policy and practice in the corporate governance domain.

3.2. Most prominent sources (journals)

Table 1 outlines a diverse spectrum of journals in areas such as business strategy, accounting research, financial reporting, and corporate governance. Notably, Meditari Accountancy Journal excels with an impressive ABDC-A ranking, affirming their leadership in this specific

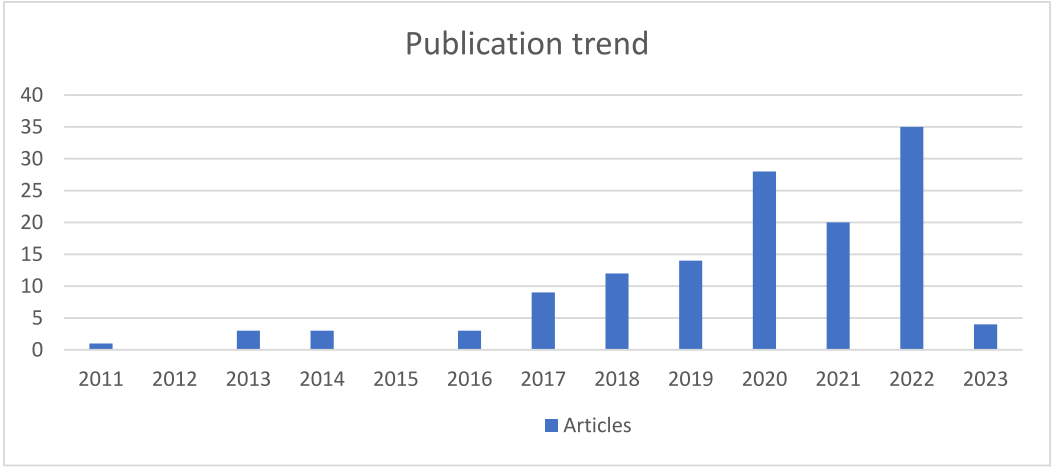


Fig. 1. Publication trends between the years 2011 to 2023. The data was extracted from Web of Science database using the search term "board diversity and "ESG performance".



**Table 1**

The ranking of the most prominent sources in the Web of Science database relating to board diversity and ESG reporting between 2011 and 2023.

| Sources   | Articles published | ABDC ranking | ABS ranking | SJR ranking | Publishers                  |
|---|--------------------|--------------|-------------|-------------|-----------------------------|
| Business strategy and the environment                                 | 8                  | C            | 1           | Q1          | Wiley-Blackwell Publishing  |
| Corporate social responsibility and environmental management          | 6                  | B            | 2           | Q2          | Wiley-Blackwell Publishing  |
| Journal of applied accounting research                                | 6                  | B            | 2           | Q2          | Emerald Group Publishing    |
| Journal of financial reporting and accounting                         | 6                  | C            | –           | Q3          | Emerald Group Publishing    |
| Meditari accountancy research   | 6                  | A            | 1           | Q1          | Emerald Group Publishing    |
| Corporate governance-the international journal of business in society | 5                  | B            | 3           | Q1          | The University of Melbourne |
| International journal of disclosure and governance                    | 4                  | B            | –           | Q2          | Palgrave Macmillan          |
| Social Responsibility journal   | 4                  | B            | –           | Q1          | Emerald Group Publishing    |

domain. The number of published articles varies across the journals, ranging from 4 to 8. Prominent publishers in this field include Emerald Group Publishing, Wiley-Blackwell Publishing, and Palgrave Macmillan. ABDC, ABS, and SJR rankings serve as proxies for journal quality and impact within their respective domains. The inclusion of articles on board diversity and ESG in the abovementioned journals indicate the journals' commitment to addressing contemporary issues in corporate governance and sustainability reporting, reflecting their pivotal role in advancing scholarly conversations.

### 3.3. Most prominent documents (Articles)

Table 2 provides information on top 10 articles based on number of citations (as of March 2024). The most cited article are: "The Role of the Board in the Dissemination of Integrated Corporate Social Reporting" by Jose V. Frias-Aceituno, Lazaro Rodriguez –Ariza, I.M Garcia-Sanchez and "The Influence of Governance Structure and Strategic Corporate Social Responsibility Toward Sustainability Reporting Quality" by Azlan Amran, Shiau Ping Lee, S.Susela Devi. These articles meticulously analyze the mechanisms through which boards contribute to the integration of social and environmental dimensions into corporate reporting, providing valuable insights for academics, practitioners, and policymakers interested in enhancing corporate transparency and accountability. They also examined how the strategic alignment of CSR initiatives and governance practices impacts the effectiveness and reliability of sustainability reporting.

To surmise, the listed documents encompass a broad spectrum of topics in corporate governance and sustainability reporting. They

**Table 2**

The ranking of the most cited documents and researchers in the Web of Science database relating to board diversity and ESG Reporting.

| Authors                        | Document   | Total Citations |
|--------------------------------|--|-----------------|
| Frias-Aceituno et al. (2013)   | The Role of the Board in the Dissemination of Integrated Corporate Social Reporting  | 842             |
| Amran et al. (2014)            | The Influence of Governance Structure and Strategic Corporate Social Responsibility Toward Sustainability Reporting Quality    | 762             |
| Fernandez-Feijoo et al. (2014) | Women on Boards: Do They affect Sustainability Reporting   | 428             |
| Al-Shaer and Zaman (2016)      | Board gender diversity and sustainability reporting quality.   | 463             |
| Rosati and Faria (2019)        | Business contribution to the Sustainable Development Agenda: Organizational factors related to early adoption of SDG reporting | 423             |
| Arayssi et al. (2016)          | Women on boards, sustainability reporting and firm performance   | 297             |
| Adams (2017)                   | Conceptualizing the contemporary corporate value creation process  | 297             |
| Vitolla et al. (2019)          | Board characteristics and integrated reporting quality: an agency theory perspective   | 349             |
| Bae et al. (2018)              | A Cross-Country Investigation of Corporate Governance and Corporate Sustainability Disclosure: A Signaling Theory Perspective  | 352             |
| Kılıç and Kuzey (2018)         | Determinants of forward-looking disclosures in integrated reporting  | 282             |

explore the overarching role of boards and governance structures in integrated corporate social reporting (Amran et al., 2014; Bae et al., 2018; Frias-Aceituno et al., 2013). A more focused analysis is presented on the exploration of gender diversity's impact on sustainability reporting practices (Al-Shaer & Zaman, 2016). Furthermore, these articles investigate organizational determinants influencing the early adoption of Sustainable Development Goals reporting (Rosati & Faria, 2019) and the nexus between women on boards, sustainability reporting, and firm performance (Arayssi et al., 2016; Fernandez-Feijoo et al., 2013). Additionally, they scrutinize the contemporary corporate value creation process (Adams, 2017). Collectively, these contributions offer diverse perspectives on the complexities and interrelationships within corporate governance, sustainability reporting, and organizational dynamics. These articles are particularly influential because they provide comprehensive analyses of how board structures and governance practices shape corporate transparency and sustainability reporting. By examining mechanisms such as the strategic alignment of CSR initiatives, gender diversity on boards, and the adoption of sustainability reporting frameworks, these studies have highlighted the crucial role of boards in integrating social and environmental dimensions into corporate disclosures. Their findings have significantly influenced subsequent research by establishing a foundation for understanding the link between governance structures, corporate social responsibility, and sustainability reporting. They also offer valuable insights for policymakers and practitioners, pushing the field toward greater accountability and transparency in corporate governance. This body of work has inspired further exploration into the impact of diverse boards on sustainability outcomes and the adoption of integrated reporting practices globally.

### 3.4. Most prominent authors

Table 3 provides information on the most relevant authors related to the field of ESG reporting and board diversity. Two prominent authors, Nicolo Raimo from LUM University and Filippo Vitolla from Università

**Table 3**

The ranking of the most cited researchers in the Web of Science database relating to board diversity and ESG reporting.

| Authors                      | Authors Affiliation                  | # of Articles | Country                 |
|------------------------------|--------------------------------------|---------------|-------------------------|
| Nicolo Raimo                 | LUM University                       | 7             | Italy                   |
| Filippo Vitolla              | Università LumJean                   | 5             | Italy                   |
| Habiba Al-Shaer              | Monnet-BARI                          | 4             | UK                      |
| Isabel –Maria Garcia-Sanchez | Newcastle University of Salamanca    | 4             | Spanish                 |
| Azlan Amran                  | University Sains Malaysia            | 3             | Malaysia                |
| Amirreza Kazemikha           | University of Bologna                | 3             | Italy                   |
| Mohammad Jizi                | Georgia College and State University | 3             | Georgia                 |
| Mete Kilic                   | USC Marshall School of Business      | 3             | Los Angeles, California |
| Cemil Kuzey                  | Murray State University              | 3             | US                      |
| Warren Maroun                | University of the Witwatersrand      | 3             | South Africa            |

LumJean Monnet-Bari in Italy, have emerged as leading researchers in the field of ESG and board diversity. Raimo’s research focuses on board characteristics and integrated reporting quality, as evidenced by his publication record of 7 articles. Vitolla’s work focuses on gender diversity and sustainability reporting, with 5 published articles to his credit. Western countries such as the UK, Spanish, Georgia, LA, the USA, and South Africa have contributed 3 to 4 articles equally. The representation from Asian countries is relatively limited, with Azlan Amran of the University Sains Malaysia being the sole contributor. Amran’s research centers around sustainability reporting, corporate social responsibility, and corporate governance, as showcased through his 4 published articles. Regional priorities, academic traditions, and societal needs can influence disciplinary preferences. However, the data indicates a need for quality scholarly endeavors, particularly in the Asia Pacific region, with a specific focus on culturally diverse nations such as China and India. Undertaking robust research in the domains of board diversity and ESG or sustainability has the potential to substantially enrich the existing body of knowledge, offering valuable insights into the relationship between sustainability reporting, board diversity, regional variations, and global trends.

3.5. Number of articles by country

Table 4 highlights the number of articles by country in the area of board diversity and ESG reporting for the years 2011 to 2023. The distribution of articles across countries in the provided list reflects varying degrees of scholarly output in the field of corporate governance, sustainability reporting, or related subjects. Italy stands out with the highest number of articles at 54, suggesting a robust academic presence and possibly a strong emphasis on these topics within the Italian academic landscape. The United Kingdom follows closely with 42 articles, showcasing a significant contribution to the global discourse on corporate governance. Malaysia, with 35 articles, emerges as a notable contributor, indicating a growing interest and engagement in these areas within the Southeast Asian context. The presence of Australia (13 articles), the USA (11 articles), and Spain (17 articles) highlights their active participation in advancing research on corporate governance and sustainability reporting. Nigeria’s representation with 19 articles signifies a noteworthy contribution from the African continent, reflecting a growing awareness of these issues. Lebanon, China, and Korea exhibit moderate involvement, each contributing 8, 18, and 7 articles, respectively. This distribution underlines a global scholarly effort, but variations may stem from regional research priorities, academic traditions, and evolving interests in corporate governance and sustainability reporting. The higher publication rates in Italy and the UK on board diversity and ESG reporting can be attributed to stronger regulatory frameworks, such as the EU’s Non-Financial Reporting Directive, and greater academic interest in corporate governance. These countries have well-established research infrastructures and policies promoting responsible business practices. In contrast, countries with lower publication rates may face less regulatory pressure or fewer academic resources, though growing interest is emerging, especially in regions like Southeast Asia. Exploring these regional variations highlights how regulatory, cultural, and institutional factors influence research output globally. As stated in the earlier section, it is envisioned that more

**Table 4**  
Publication trends by country relating to board diversity and ESG reporting between 2011 and 2023.

| Country        | # of articles | Country   | # of articles |
|----------------|---------------|-----------|---------------|
| Italy          | 54            | Spain     | 17            |
| United Kingdom | 42            | Australia | 13            |
| Malaysia       | 35            | USA       | 11            |
| Nigeria        | 19            | Lebanon   | 8             |
| China          | 18            | Korea     | 7             |

quality research is undertaken in the Asia Pacific region in the current domain of discussion.

3.6. Keyword analysis

The keyword analysis was undertaken using the VosViewer software, with a minimum of 10 occurrences and it reveals three clusters (Fig. 2), which coincides with the biblio-coupling network (Fig. 3) and thematic analysis. It provides interesting insights into the literature on board diversity and ESG reporting. Despite the central theme of the study, the prominence of the term “determinants” (61 occurrences and 427 total link strength) suggests a strong focus on understanding the underlying factors influencing sustainability reporting. Notably, governance, integrated reporting, performance, corporate social responsibility, and disclosure emerged as key issues of interest, stressing the diverse nature of ESG-related research. It also suggests that researchers are particularly interested in identifying and analyzing the various influences that shape organizations’ decisions to engage in ESG reporting. By focusing on determinants, scholars aim to uncover the underlying drivers, motivations, and contextual factors that impact the adoption and implementation of sustainability reporting initiatives. This emphasis reflects a critical endeavor to enhance our comprehension of the diverse aspects surrounding corporate sustainability practices and disclosures. This emphasis on determinants, particularly governance features, aligns with the thematic analysis in the proceeding section.

3.7. Bibliographic coupling

The visual representation in Fig. 3 shows the bibliographic analysis, presenting three thematic clusters: red, green, and blue. Each cluster describes a unique domain of scholarly investigation. However, a visible overlap between the red and blue clusters was observed upon meticulous manual inspection of the articles. Thus, we reclassified a few articles, leading to a refined distinction in their respective focuses. The red cluster (theme 1) now exclusively centers on gender diversity and ESG reporting – scrutinizing the developing landscape of corporate governance, shedding light on how gender diversity within boards influences ESG reporting practices. Conversely, the blue cluster covers a more comprehensive spectrum, addressing a broader array of articles that examine board diversity (in a general context) and ESG reporting. The blue network, representing theme 2, emphasizes the pivotal role of governance structures in shaping reporting practices. In the green network, corresponding to theme 3, the focus pivots towards the factors shaping integrated reporting. This cluster systematically examines the elements that contribute to the evolution and implementation of integrated reporting. This refined categorization enhances the precision of thematic explanations, facilitating a more specialized examination of the scholarship within each cluster.

4. Thematic discussion and future research

The proceeding section discusses the theoretical frameworks underpinning the examined articles. Subsequently, it provides an analysis of the articles within each cluster, followed by a comprehensive discussion on potential avenues for future research.

4.1. Theoretical underpinning

4.1.1. Agency theory

Agency theory is one of the most prominent frameworks used to analyze corporate governance, particularly the relationship between shareholders (principals) and management (agents). In the context of board diversity and ESG reporting, agency theory emphasizes the importance of reducing information asymmetry and aligning the interests of managers with those of shareholders. Diverse boards, especially those with independent directors, are seen as more effective in

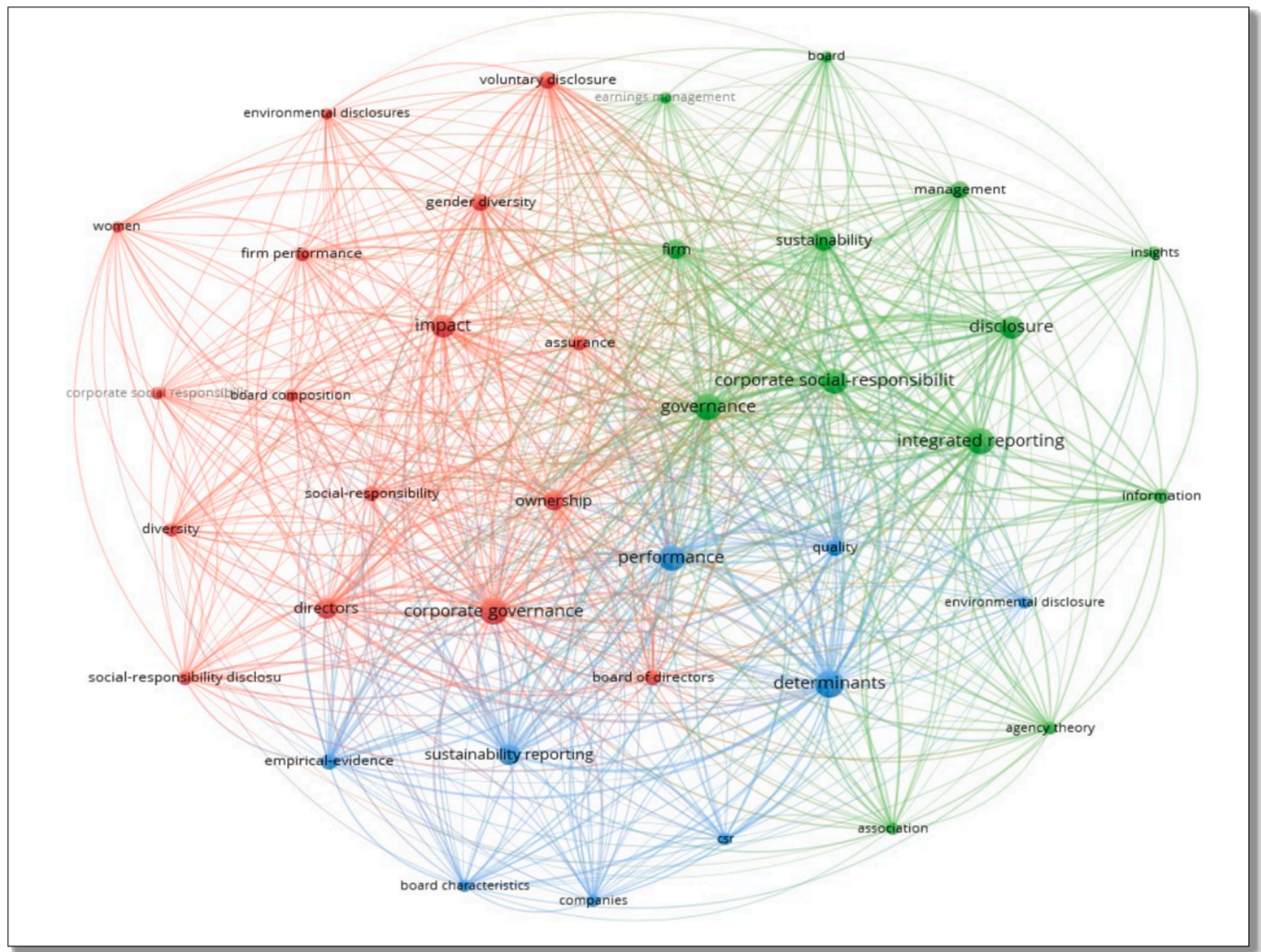


Fig. 2. Co- Occurrence network for all keywords Source: Generated using VosViewer on data.

monitoring management and ensuring that firms disclose ESG information that reflects long-term sustainability goals rather than short-term financial gains (Shamil, 2014; Cooray et al., 2020; Vitolla et al., 2019; Vitolla et al., 2020; Bae et al., 2018). Agency theory also supports the notion that gender-diverse boards can mitigate agency conflicts by providing a broader range of perspectives, enhancing the quality of governance, and promoting transparent ESG reporting.

#### 4.1.2. Stakeholder theory

Stakeholder theory is frequently applied in studies examining the relationship between board diversity and ESG reporting. This theory suggests that organizations are accountable not only to shareholders but also to a broader set of stakeholders, including employees, customers, regulators, and society at large. Diverse boards are better positioned to understand and respond to the needs of various stakeholders, which can enhance the quality and relevance of ESG disclosures (Bender et al., 2017; Giannarakis, 2020). The incorporation of diverse perspectives ensures that ESG reporting addresses social and environmental concerns, thereby fulfilling the ethical responsibilities of the firm and aligning corporate activities with stakeholder interests (Frias-Aceituno et al., 2013; Arayssi et al., 2016).

#### 4.1.3. Legitimacy theory

Legitimacy theory focuses on an organization's need to maintain its social legitimacy by aligning its activities with societal expectations. In

the context of ESG reporting, companies use disclosures to demonstrate their commitment to sustainable and ethical practices. Diverse boards can play a crucial role in ensuring that ESG disclosures are credible and reflect a genuine commitment to social and environmental governance, which helps build and maintain corporate legitimacy. The presence of women and other minorities on boards can signal to external stakeholders that the company values diversity and is responsive to societal demands for transparency and accountability (Dilling & Caykoylu, 2019; Rosati & Faria, 2019).

#### 4.1.4. Resource dependency theory

Resource dependency theory posits that organizations must secure critical resources from the external environment, and board diversity is a mechanism through which firms can access these resources. Diverse boards bring varied expertise, connections, and insights that can enhance a company's ability to navigate complex ESG reporting requirements and foster relationships with external stakeholders, such as regulators, investors, and NGOs (Al-Shaer & Zaman, 2018; Mahmood & Orazalin, 2017). The presence of diverse directors, particularly those with expertise in sustainability or governance, can lead to more effective ESG disclosures by ensuring that the board has the necessary knowledge to oversee and guide ESG strategies (Mudiyansele, 2018).

#### 4.1.5. Signaling theory

Signaling theory suggests that companies use ESG disclosures as



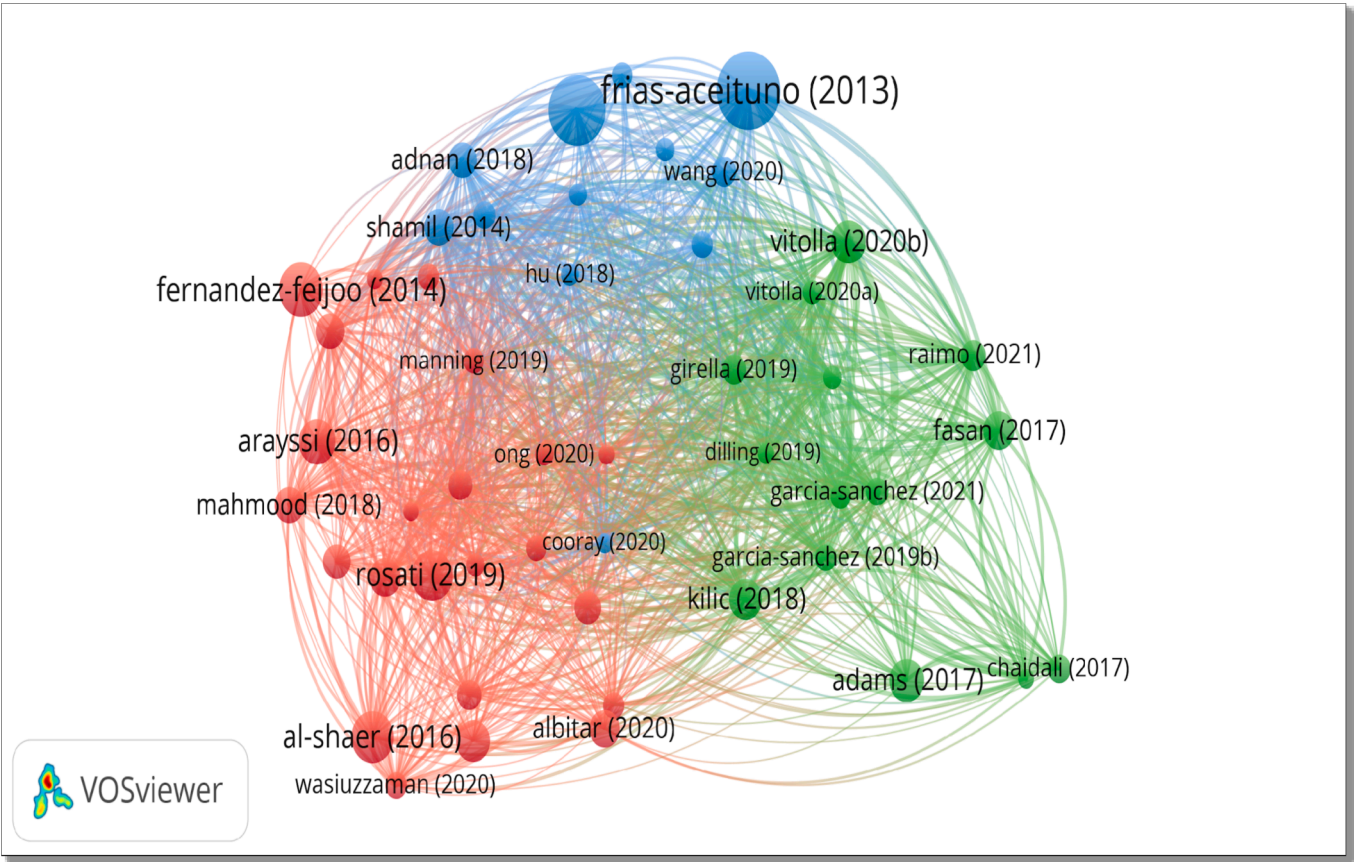


Fig. 3. Bibliographic Coupling Network. Source: Generated using VosViewer on data.

signals to the market about their commitment to sustainability and responsible business practices. Diverse boards can enhance the credibility of these signals by showing that the company values inclusivity and is capable of robust governance practices (Kılıç & Kuzey, 2018; Buitendag et al., 2017). In this context, gender and ethnic diversity on boards are seen as positive signals to investors and stakeholders that the company is forward-thinking and committed to meeting evolving societal expectations regarding sustainability.

4.1.6. Application of theories to board diversity and ESG reporting

**Agency Theory and Signaling Theory:** The integration of these theories helps explain how diverse boards can address agency conflicts by ensuring that management prioritizes long-term sustainability over short-term profits. In addition, the presence of diverse directors sends a strong signal to stakeholders that the company is committed to responsible governance and transparency (Bae et al., 2018; Kılıç & Kuzey, 2018) [https://doi.org/10.1002/pa.2832;source] .

**Stakeholder Theory and Legitimacy Theory:** These two theories are often combined to examine how diverse boards help companies maintain legitimacy by aligning their activities with stakeholder expectations for ethical governance and sustainability. The inclusion of women and minority directors ensures that the firm’s ESG disclosures reflect a broader range of stakeholder concerns, thereby enhancing the firm’s social legitimacy (Gavana et al., 2016; Busco et al., 2019).

The convergence of board diversity with ESG reporting involves exploring different theoretical frameworks. Although there is no universally accepted theoretical framework to fully explain the association, many theories provide valuable insights into the factors and motivations that drive ESG reporting. Theoretical frameworks such as stakeholder theory, legitimacy theory, institutional theory, resource dependency theory, agency theory, signaling theory, and the social theory of trust are

commonly used by scholars to analyze ESG reporting. These theories that help explain and facilitate the studies on ESG reporting are listed in Table 5. To acknowledge the constraints of individual theories in offering a complete perspective, researchers integrate theories to supplement each other and provide a comprehension of the complex correlation between board diversity and ESG reporting (Abbas et al., 2022).

Table 5  
Summary of theoretical frameworks on board diversity & ESG reporting.

| Theoretical Frameworks     | Authors   |
|----------------------------|---|
| Agency Theory              | Shamil et al. (2014); Hu and Loh (2018); Cooray et al. (2020); Buitendag et al. (2017); Vitolla et al. (2020); Vitolla et al. (2019); Raimo et al. (2021); Pavlopoulos et al. (2017); Kılıç and Kuzey (2018); García and Herrero (2021); Mudiyanse (2018); Bae et al. (2018); Arayssi et al. (2020); Arayssi et al. (2016); Al-Shaer & Zaman (2018) |
| Stakeholder Theory         | Wang (2017); Giannarakis (2020); Frias-aceituno (2013); Dilling (2019); Busco (2019); Wasiuzzaman & Mohammad (2020); Ong & Djajadikerta (2020); Mahmood & Orazalin (2017); Gavana et al. (2017); Arayssi et al. (2016); Albitar et al. (2020); Al-Shaer & Zaman (2018)  |
| Legitimacy Theory          | Shamil (2014); Dilling (2019); Busco (2019); Adams (2017); Rosati & Faria (2019); Manning et al. (2018); Gavana et al. (2016);  |
| Signaling Theory           | Buitendag (2017); Kılıç and Kuzey (2018); Manning et al. (2018); Bae et al. (2018);   |
| Resource Dependence Theory | Al-Shaer & Zaman (2018); Albitar et al. (2020); Mahmood & Orazalin (2017); Mudiyanse (2018)   |
| Institutional Theory       | Adnan et al. (2018); Argento et al. (2019);   |
| Social Theory of Trust     | Chaidali and Jones (2017)   |
| Social Identity Theory     | García-Sánchez et al. (2018)  |

Extant literature indicates that agency theory, stakeholder theory, and legitimacy theory are consistently referenced as predominant theoretical frameworks in recent literature. Agency theory is one of the most prominent frameworks used to analyze corporate governance, particularly the relationship between shareholders (principals) and management (agents). In the context of board diversity and ESG reporting, agency theory emphasizes the importance of reducing information asymmetry and aligning the interests of managers with those of shareholders. Diverse boards, especially those with independent directors, are seen as more effective in monitoring management and ensuring that firms disclose ESG information that reflects long-term sustainability goals rather than short-term financial gains (Tajuddin et al., 2023; Abbas et al., 2023b; Cooray et al., 2020; Vitolla et al., 2019; Vitolla et al., 2020; Raimo et al., 2021; Pavlopoulos, et al., 2017; Kılıç and Kuzey, 2018; García & Herrero, 2021; Bae et al., 2018; Arayssi et al., 2020; Arayssi et al., 2016; Al-Shaer & Zaman, 2018). Agency theory also supports the notion that gender-diverse boards can mitigate agency conflicts by providing a broader range of perspectives, enhancing the quality of governance, and promoting transparent ESG reporting.

Both stakeholder theory and institutional theory share a common emphasis on meeting stakeholders' needs (Arayssi et al., 2016; Al-Shaer & Zaman, 2018; Adnan, et al., 2018; Argento et al., 2019). These theories emphasize the importance of organizations addressing the concerns and interests of various stakeholders to ensure sustainable and ethical practices. Diverse boards are better equipped to understand and address these varied needs, leading to more comprehensive ESG disclosures that reflect social and environmental concerns (Wang, 2017; Giannarakis, et al., 2020, Abbas et al., 2023a). This enhances the firm's ethical responsibility and aligns corporate activities with stakeholder interests (Frias-Aceituno, 2013; Arayssi et al., 2016). Legitimacy theory focuses on the perceived acceptability of an organization's actions in the eyes of the public and stakeholders. Shamilet al. (2014), Adam (2017), and Rosati & Faria (2019) discuss how organizations strive to maintain legitimacy by addressing issues related to transparency, accountability, and social responsibility. Board diversity, particularly the inclusion of women and minorities, signals to stakeholders that the company values transparency and is responsive to societal demands (Dilling & Caykoylu, 2019; Rosati & Faria, 2019).

Two frequently seen combinations of theories in literature include the integration of stakeholder's theory with legitimacy theory, and the coupling of agency theory with signaling theory. The integration of stakeholder theory and legitimacy theory enables researchers to examine the interaction between board diversity, ESG reporting, stakeholder interests, (Gavana et al., 2017; Busco et al., 2019) and organizational legitimacy, offering a comprehensive perspective on the factors that impact organizational behavior and decision-making in these domains (Dilling & Caykoylu, 2019; Ofoegbu et al., 2018). Integrating agency theory with signaling theory allows researchers to obtain a more comprehensive understanding of how board diversity and ESG reporting can effectively resolve agency conflicts (Buitendag et al., 2017) and offer reliable signals to external stakeholders regarding the firm's dedication to sustainability and responsible governance (Kılıç and Kuzey, 2018; Bae et al., 2018; Abbas et al., 2022). By adopting this integrated approach, a more sophisticated examination of the incentives and consequences of board diversity and ESG reporting in organizations becomes possible (Manning et al., 2018).

## 4.2. Thematic analysis

### 4.2.1. Theme 1: Board gender diversity and sustainability reporting

There has been significant research conducted on the impact of board and gender diversity on sustainability reporting, indicating a strong emphasis on this area. However, theme 1 will focus on publications that explore the relationship between gender diversity and ESG reporting. The quality of sustainability reports is positively impacted by gender-diverse boards, especially those with independent female directors

(Buallay & Al-Ajmi, 2020; Rosati & Faria, 2019; Al-Shaer & Zaman, 2016; Arayssi et al., 2016; Anazonwu et al., 2018; Fernandez-Feijoo et al., 2014). According to Buallay and Al-Ajmi (2020), bank ESG disclosures are linked to the percentage of female board members. Female board members between 22 % and 50 % have a positive impact on environmental, social, and governance (ESG) disclosure. The benefit diminishes when the ratio of female board members approaches 50 %, suggesting that ESG disclosure has negative returns. The research suggests that regulatory action, in the form of establishing quotas for female participation, could be an effective means of addressing the issue. The paper argues that such measures could maximize the positive impact that female board members have on environmental, social, and governance reporting in the banking industry. A study conducted by Fernandez-Feijoo et al. (2014) supports these findings, highlighting the positive correlation between the presence of at least three women on corporate boards and increased levels of Corporate Social Responsibility (CSR) reporting in countries. Rosati and Faria (2019) add to this discussion by demonstrating a link between gender-diverse boards and improved sustainability reporting quality; specifically, the effect is stronger when there are independent female directors.

Al-Shaer and Zaman (2016) support the findings, emphasizing the crucial role of independence in driving superior standards of sustainability reporting. Female independent directors exercise a more pronounced impact compared to their counterparts, thus promoting board gender diversity to enhance the quality of sustainability reporting requires a 'comply or explain' strategy rather than solely relying on quota-based measures. This has implications for the formulation of policies in this regard. Anazonwu et al. (2018) adds to the narrative, suggesting that a higher proportion of women directors foster heterogeneous board composition, and can leverage a diverse set of skills for optimal organizational performance. Garcia-Sanchez, et al., (2018) further establishes these findings by demonstrating that women-dominated boards deliver fair, reliable, and comprehensive sustainability information, reducing the perception of management risk associated with sustainability disclosure. Similarly, Wasiuzzaman and Mohammad (2019) and Carini et al., (2018) found that women directors significantly increase environmental, social, and governance (ESG) disclosure ratings, signifying a stronger commitment to sustainability. Female representation on audit committees (ACs) also has an impact on ESG reporting (Bravo & Reguera-Alvarado, 2018; Yadav & Prashar, 2022). The authors demonstrated that audit committees and women's representation in these committees contribute to sustainability reporting by adding credibility and experience, thereby enhancing the overall quality of reporting.

In summary, the collective findings from theme 1 advocate for strategic gender diversity initiatives, regulatory interventions, and recognition of the influence of independent female directors on sustainable corporate practices. Inclusion of women directors brings unique perspectives and improves social interactions and reporting, leading to enhanced risk-adjusted returns and reduced corporate hazards (Arayssi et al., 2016). The presence of women directors, especially independent female directors, contribute to the quality, transparency, and credibility of sustainability reporting. Their presence fosters a more holistic and socially responsible approach, reflecting a commitment to stakeholder concerns and reinforcing the importance of diversity in corporate decision-making. This not only aligns with ethical considerations but also enhances the overall sustainability and long-term success of organizations. The impact of board gender diversity also extends beyond mere compliance, emphasizing its pivotal role in shaping corporate sustainability practices and reinforcing the business case for diversity and inclusion. Studies such as those by Buallay and Al-Ajmi (2020) on the optimal range for female board representation enhances understanding but prompts scrutiny of dynamics beyond 50 %, raising concerns about the potential implications of exceeding this threshold. While consistent support from Fernandez-Feijoo et al. (2014) and Rosati and Faria (2019) aligns with expectations, the emphasis on independent

female directors by Al-Shaer and Zaman (2016) adds complexity to the role of diversity in board dynamics. The advocacy for a 'comply or explain' approach recognizes the need for flexibility in addressing the intricacies of gender diversity. The collective affirmation of the positive influence of women-dominated boards on sustainability reporting by Garcia-Sanchez et al. (2018), Wasiuzzaman and Wan Mohammad (2019), Carini et al. (2018), and Bravo et al. (2019) is noteworthy, yet the potential variations across industries and regions need further examination. In essence, while the findings stress the importance of strategic gender diversity initiatives, a critical perspective is needed for context-specific approaches, considering the optimal range for representation, the role of independence, and potential diversities across organizational contexts in shaping sustainable corporate practices.

Based on the extant studies on board gender diversity and ESG reporting, there are several areas of future research. Research could investigate the geographical and cultural variations that will deepen the understanding of how board-gender diversity impacts sustainability practices across different regions. It has the potential to uncover region-specific distinctions and cultural complexities that shape the impact of board gender diversity on sustainable reporting. Comparative analyses across developed and emerging markets will provide valuable insights into the contextual variations in the relationship between board gender diversity and sustainability reporting, contributing to a more detailed understanding of these dynamics within different economic settings. By scrutinizing how cultural and geographical factors interact with board gender diversity in influencing ESG reporting, it could offer actionable insights for organizations, policymakers, and governance frameworks which could foster more tailored, effective approaches to corporate governance worldwide. In a similar context, a comparative analysis across industry sectors is imperative for discerning sector-specific implications, facilitating tailored strategies for fostering sustainable practices based on the unique environmental and social impact profiles of different sectors. Additionally, research on varied regulatory frameworks across regions can inform policy discussions and corporate governance reforms, contributing to the ongoing dialogue on effective regulatory interventions to promote board gender diversity and sustainable reporting. Finally, in the contemporary era characterized by technological advancements, research into the roles and implications of artificial intelligence, blockchain technology, global supply chains, and their alignment with sustainability reporting and the realization of Sustainable Development Goals presents a promising avenue. This research has the potential to provide corporations with strategic guidance, fostering more efficacious and transparent practices in ESG reporting.

#### 4.2.2. Theme 2: Importance of governance structures and board diversity in shaping reporting practices

Theme 2 offers valuable insights on the relationship among national culture, corporate governance, and corporate social responsibility (CSR) reporting across diverse regions. Adnan et al., (2018) emphasizes the substantial influence of national culture and corporate governance on CSR reporting, revealing that it is more widespread in individualistic and low power distance societies, and demonstrates the pivotal role of social responsibility board committees and governance practices in augmenting CSR reporting while mitigating cultural influences. These committees, within the framework of sound governance, play a pivotal role by overseeing and guiding CSR initiatives, ensuring alignment with organizational values, and fostering a culture of social responsibility. Their involvement is instrumental in reinforcing ethical conduct, stakeholder engagement, and sustainable business practices, thereby augmenting the overall impact and effectiveness of CSR efforts. Cooray et al., (2020) also explores governance mechanisms and integrated reporting quality in Sri Lanka, indicating that mandatory reporting requirements overshadow voluntary disclosure practices. Mandatory reporting requirements take precedence over voluntary disclosure due to legal obligations, making compliance a necessity to avoid

repercussions. The standardized framework of mandatory reporting ensures consistency and credibility, overshadowing the perceived reliability of voluntary disclosures. Stricter enforcement and penalties further drive companies to prioritize mandatory requirements over voluntary practices. This is further supported by Shamil et al.'s (2014) study on Sri Lanka, whereby the study documented that board size and dual leadership positively impact sustainability reporting, while boards with female directors show a negative association. The dominant organizational culture may play a role in this association, i.e., if the corporate culture is not favorable to inclusivity or if there are biases against diverse perspectives, female directors might face challenges in advocating for robust sustainability reporting.

Giannarakiset al. (2020) further examines the impact of corporate governance on sustainability reporting in S&P 500 firms, highlighting the positive influence of independent directors and a lead independent director on environmental disclosures. This could be attributed to the independent directors' autonomy from the management, fostering a more objective and impartial perspective. The presence of a lead independent director might further enhance governance oversight, promoting a strategic focus on environmental disclosures. Hu and Loh's (2018) study on Singapore also establishes correlations between board governance factors and sustainability disclosure, emphasizing the positive impact of larger board sizes, increased board meetings, higher percentages of independent directors, and long-term incentives on sustainability reporting. Ofoegbu et al. (2018) undertook a study in South Africa and Nigeria and the findings also indicate a positive relationship between board independence and environmental disclosure in Nigeria, while environmental sensitivity in industries influences disclosure in South Africa. Likewise, Wang et al.'s (2019) study on the Johannesburg Stock Exchange reveals that traditional and sustainability-oriented governance mechanisms positively impact the quality of integrated reports and associated credibility-enhancing mechanisms. Wang et al.'s (2017) study on Taiwan also identifies various corporate governance and business characteristics positively impacting the sustainability reporting disclosure, supporting the stakeholder theory.

Several other studies on board diversity have also indicated that sustainability disclosure has a positive and significant relationship with foreign shareholding, institutional shareholding, board independence, and board size (Tajuddin et al., 2023; Albitar et al., 2020; Bae et al., 2018; Mahmood & Orazalin, 2017; Mudiyansele, 2018), ownership concentration (Albitar et al., 2020), number of independent directors, multiple directorships, and female directors on the board (Ong & Djajadikerta, 2018), family controls (Gavana et al., 2016), stakeholders' involvement (Manning et al., 2019) and Audit & CSR committee (Mahmood et al., 2018; Al-Shaer and Zaman, 2018). These research underlines the fundamental link between corporate governance elements and sustainability reporting, positing that robust governance structures closely oversee and regulate management decisions pertaining to economic, environmental, and social sustainability. This oversight fosters improved sustainability disclosures, serving as a potent mechanism to transmit positive signals to the market and minimize information asymmetry among stakeholders. These studies also emphasize the influential role of corporate governance in encouraging firms to institute effective internal mechanisms, motivating policymakers towards sustainability commitments and corresponding disclosure reforms.

While most research emphasizes the positive correlation between governance and sustainability reporting, it's essential to recognize that these findings may not apply universally to all regions. Amran et al. (2014) investigated sustainability reporting in the Asia-Pacific region, highlighting the limited role of boards in supporting sustainable development; analyzing 113 companies across 12 countries, the study underscores the need for improved sustainability reporting quality in the region, emphasizing the positive impact of institutionalizing corporate social responsibility values on sustainability reporting quality. Similarly, in certain developing countries, notably Pakistan, familial dominance poses challenges to the efficacy of independent directors, limiting their



ability to dissent from prevailing board perspectives. Furthermore, board diversity, particularly in terms of gender, exhibits a constrained impact on sustainability disclosures, reflecting the underrepresentation of women in decision-making roles and their limited influence on male-dominated boards regarding sustainability considerations (similar to [Shamil et al. 2014](#)). These governance dynamics bring forth the difficulties in shaping sustainability practices in diverse corporate contexts. There is a need for additional investigation on the relationship between governance and sustainability reporting, considering the potential variations and unique factors that may influence this association across different regions.

In conclusion, the synthesis of research findings in theme 2 highlights the elaborate relationship between national culture, corporate governance, CSR and other reporting across diverse regions. Insights from studies highlight the pivotal role of governance structures, such as social responsibility board committees and effective governance practices, in shaping CSR and integrated reporting quality. While most studies reveal positive associations, others, like [Amran et al. \(2014\)](#), emphasize challenges and the limited role of boards in certain contexts, which opens the door for further research in the Asia Pacific region. Furthermore, the observation regarding familial dominance in countries like Pakistan poses a significant obstacle to the autonomy of independent directors. This limitation questions the true independence and effectiveness of boards in challenging prevailing perspectives and ensuring unbiased reporting. The findings, while informative, also reveal gaps and disparities in governance dynamics globally, indicating a need for a more critical comparative examination of the role boards play in shaping sustainability reporting. It also calls for a more extensive and detailed comparative study between developing and developed countries, emphasizing the critical role of culture in shaping governance dynamics for CSR reporting. In essence, this analysis not only contributes to our understanding of governance dynamics in sustainability reporting but also highlights the need for a more critical lens in evaluating the efficacy of current governance structures, particularly in diverse cultural and corporate settings.

Based on the extant literature discussed above, future research could investigate how governance structures interact with and are influenced by national cultures in shaping CSR and integrated reporting practices. The findings could provide valuable insights for practitioners and policymakers, guiding the development of culturally sensitive governance frameworks. Unveiling the cross-cultural dimensions of CSR and integrated reporting, the study is anticipated to contribute to sustainable and responsible business practices, promoting corporate transparency and accountability in diverse global settings. In the similar context, research could be undertaken on the dynamic nature of 'social responsibility board committees' in different cultural and governance contexts. Assess how these committees adapt to changing societal expectations, regulatory environments, and corporate priorities, offering insights into the dynamic nature of governance structures in response to external forces. A comparative analysis could be undertaken on the impact of governance practices on CSR reporting across various industries and regions. Examine whether certain governance practices are more effective in specific contexts or industries, contributing to tailored recommendations for enhancing reporting practices in diverse organizational settings and regions. A longitudinal study analyzing the impact of changes in governance structures on CSR or ESG reporting could be value adding. Furthermore, exploring how alterations in board composition, committee structures, or leadership impact reporting practices could offer insights into the sustainability and longevity of governance-driven improvements in reporting. Investigating how stakeholders perceive the influence of governance structures on CSR and integrated reporting and its impact on value-investing could be also explored as it is pivotal to understand how stakeholders interpret the effectiveness of governance mechanisms in ensuring transparency, accountability, and the alignment of corporate practices with societal and environmental expectations. Lastly, research could explore the integration of

technology in governance structures and its impact on reporting practices. Investigate how technologies such as blockchain or data analytics enhance the effectiveness of governance mechanisms in overseeing and improving CSR reporting, contributing to the technological dimension of governance dynamics. Understanding these dynamics is crucial for stakeholders, including boards, executives, investors, and regulators, as it can inform the development of governance structures that effectively shape transparent, accountable, and culturally responsive CSR and integrated reporting practices. Moreover, this research contributes to the ongoing dialogue on corporate governance and sustainability, fostering practices that align with societal expectations and promote responsible corporate behavior.

#### 4.2.3. Theme 3: Factors shaping integrated reporting

Theme 3 mainly gives a comprehensive view of integrated reporting (IR), in terms of value creation ([Adams et al., 2017](#)), customized approach ([Busco et al., 2019](#); [Chaidali & Jones, 2017](#)), and factors affecting IR ([Fasan & Mio, 2017](#); [Garcia-Sanchez, 2018, 2021](#); [Girella et al., 2019](#); [Kılıç & Kuzey, 2018](#); [Pavlopoulos et al., 2017](#); [Raimo et al., 2021](#); [Vesty et al., 2018](#); [Vitolla et al., 2019](#); [Vitolla et al., 2020](#)). The theme predominantly emphasizes the complex relationship between environmental, organizational, and individual factors shaping the landscape of integrated reporting (hereafter, IR). [Adams et al., \(2017\)](#) highlights the evolving recognition of ESG issues and their integration into company strategy, emphasizing the broader perspective on value creation. Similarly, [Amran et al., \(2014\)](#) examined the sustainability reporting in the Asia-Pacific region and emphasizes the role of organizational vision, mission statements, and strategic alliances with NGOs as positively influencing sustainability reporting quality. [Busco et al's., \(2019\)](#) empirical findings emphasize the imperative for tailored approaches in integrated thinking and reporting (ITR) development, accounting for the impact of firm-specific (also see, [Fasan et al., 2019](#)), and country-level factors. Additionally, [Chaidali et al., \(2019\)](#) highlighted the critical role of trust in the International Integrated Reporting Council's (IIRC) interaction with preparers, highlighting concerns regarding motives, credibility, and costs in the IR initiative. These insights collectively highlight the challenges and considerations inherent in the development and engagement processes of integrated reporting ([Busco, 2019](#); [Chaidali & Jones, 2017](#)). [Dilling and Caykoylu \(2019\)](#) and [Buitendag et al., \(2017\)](#) document that larger companies with diverse boards exhibiting higher-quality reporting. Similarly, [Vitolla et al. \(2019\)](#) and [Vitolla et al. \(2020\)](#) focused on board characteristics, revealing positive associations with intellectual capital disclosure and overall IR quality. [Garcia-Sanchez's \(2018\)](#) examines managerial discretion, environmental factors, and CEO influence on integrated reporting, revealing complex dynamics while, [Kılıç and Kuzey \(2018\)](#) unveils the prevalence of qualitative disclosures, influenced by gender diversity and firm size. On the other hand, [Raimo et al., \(2021\)](#) examined the audit committee's impact on IR processes and suggested a positive association with committee size, independence, and meeting frequency. The findings are further supported by [Buallay and Al-Ajmi \(2020\)](#); the authors' explored the impact of audit committee attributes on sustainability reporting in banks in the Gulf Cooperation Council. Surprisingly, financial expertise exhibits a negative association, while the independence and meeting frequency of audit committee members positively influence disclosure. Moreover, bank size, age, and auditor type are identified as positive contributors to corporate sustainability reporting. Further to that, [Vesty et al., \(2018\)](#) provides practical insights into senior manager engagement with IR, emphasizing challenges in operationalizing and justifying IR. [Pavlopoulos et al., \(2017\)](#) establishes a positive link between IR disclosure quality and corporate governance mechanisms, contributing insights into reduced earnings management and lower agency costs. Other factors impacting IR include roles of corruption perception, cultural values, and firm characteristics influencing voluntary adoption ([Girella et al., 2019](#)).

In summary, theme 3 critically examines integrated reporting (IR),



shedding light on various dimensions, but some aspects warrant a more detailed analysis and consideration. While acknowledging the evolving recognition of ESG issues and the diverse factors influencing IR, including corruption perception, cultural values, and governance mechanisms, it's crucial to recognize the challenges in integrating them into company strategy for value creation and to operationalize and justify IR, as highlighted by Vesty et al. (2018). The emphasis on a customized approach, (Busco et al., 2019 and Chaidali et al., 2017), brings to light the importance of tailoring IR to specific contexts. However, it raises questions about the scalability and standardization of such approaches across diverse industries and regions. The positive associations between board characteristics, such as diversity, and IR quality, as documented by Dilling and Caykoylu (2019) and Vitolla et al. (2019) and Vitolla et al. (2020), are noteworthy. The negative association between financial expertise and sustainability reporting (Buallay et al., 2020), raises concerns about the conventional wisdom regarding financial acumen in governance structures and prompts further examination on these dynamics. The exploration of managerial discretion, CEO influence, and the role of audit committees in IR processes also provides valuable insights but the complexity of these dynamics, as demonstrated by Garcia-Sanchez's (2018) findings and Raimo et al.'s (2021) study, warrants careful consideration. The theme provides rich and valuable insights but there is a need for a critical lens when interpreting and applying these findings, considering the contextual variations in industries, regions, and corporate structures.

Given the discussion on factors influencing integrated reporting (IR), there are several potential future research avenues in this domain. First, an investigation into the real-time and long-term impacts and outcomes of IR, building upon the foundation laid by Adams et al. (2017), could offer insights into the evolving recognition of environmental, social, and governance issues, and shed light on the sustained value creation and organizational performance resulting from comprehensive integration of IR. This research could provide stakeholders with an understanding of the direct consequences and benefits associated with the integration of ESG factors into corporate strategy. A longitudinal perspective would also be invaluable for stakeholders, providing guidance on the enduring impacts of IR on corporate strategies and stakeholder relationships. Second, the development of standardized frameworks for customized integrated thinking and reporting (ITR), as suggested by Busco et al. (2019) and Chaidali et al. (2017) is another impending area of research. Investigating how changes in IR regulations impact reporting practices and the effects of regulatory interventions on the quality, consistency, and transparency of ESG disclosures, providing stakeholders with a clear understanding of the regulatory landscape and its implications. Such frameworks would be tailored to diverse organizational contexts and could offer a structured approach for companies to navigate the intricacies of IR development. This could be instrumental for preparers, standard setters, and regulators in fostering consistency and comparability in integrated reporting practices across various industries and regions. Third, exploring the role of technology, such as blockchain and artificial intelligence, in enhancing the quality and transparency of integrated reporting, builds upon the contemporary theme. Investigating how these technologies can streamline data collection, validation, and reporting processes can contribute to more efficient and reliable IR practices, benefiting not only companies but also auditors and investors seeking trustworthy and technologically advanced reporting mechanisms. Moreover, a prospective research avenue could focus on a comprehensive multi-country (developed and developing) study on the intersectionality of board diversity and IR, building upon insights from Dilling and Caykoylu (2019) and Vitolla et al. (2019) and Vitolla et al. (2020). This could involve examining how diversity in board composition influences the qualitative aspects of IR and whether it correlates with improved disclosure quality, thus providing stakeholders with a deeper understanding of the link between governance structures and integrated reporting effectiveness. An important moderating element to be examined could be the role of culture and religiosity on the

relationship between the above-mentioned factors and ESG reporting. Lastly, future study could explore strategies to enhance senior manager engagement with IR, addressing challenges highlighted by Vesty et al. (2018). Understanding the barriers and facilitators to effective engagement could lead to practical recommendations for organizations to optimize their reporting processes, ultimately contributing to more meaningful and actionable information for stakeholders. In summary, future research endeavors in the domain of integrated reporting could focus on the long-term impacts of IR, the development of standardized frameworks, the role of technology, the intersectionality of board diversity, and strategies for enhancing senior manager engagement. Each of these potential research areas has the capacity to provide valuable insights, tools, and guidance to stakeholders, including companies, investors, regulators, and the broader community, contributing to the continued evolution and effectiveness of integrated reporting practices.

The synthesis of literature across the three themes broadly reveals governance and sustainability reporting (which includes ESG reporting, CSR reporting and integrated reporting). Further thematic analysis breaks down the governance into board diversity, gender diversity and other governance structures that impact integrated reporting. Theme 1 discusses the positive impact of gender-diverse boards, especially independent and percentage of representation of female directors on sustainability reporting, urging strategic initiatives and regulatory interventions for optimal outcomes. Theme 2 highlights the significant role of board diversity in shaping reporting practices, emphasizing cultural influences and the need for tailored approaches. Meanwhile, Theme 3 explores other factors like organizational vision, ownership concentration and board composition. Over time, the three themes have evolved to reflect growing recognition of the role of diverse boards in enhancing sustainability reporting. Initially focused on gender diversity, especially independent female directors, the research has expanded to include broader governance structures, cultural influences, and additional factors like ownership concentration, organizational vision, and technology's role in sustainability reporting. Specific factors driving changes in the literature include increased regulatory pressure on ESG disclosures, growing investor and stakeholder demand for transparency, and heightened awareness of the strategic benefits of board diversity. Additionally, technological advancements and globalization have influenced how companies approach sustainability reporting, governance practices, and cultural factors in decision-making. Future research avenues include longitudinal analyses on board diversity's intersectionality with IR, cultural impact on board diversity and sustainability reporting, standardized frameworks for IR development, and exploration of technology's role in sustainability reporting. The complexity of sustainability reporting is evident from the word cloud, signifying a comprehensive interaction of governance and non-governance factors affecting sustainability reporting. This information holds valuable insights for all stakeholders involved in decision-making, including regulatory bodies tasked with setting the direction. The word cloud in Fig. 4 summarizes the characteristics of each domain discussed.

## 5. Conclusion

This scholarly discussion systematically examines board diversity and Environmental, Social, and Governance (ESG) reporting, employing a comprehensive examination of bibliometric and the content analysis methodologies. The results describe an upward trajectory in the volume of publications, highlighting prominent researchers, publishers, and research articles. Journals such as Corporate Social Responsibility and Environmental Management, Business Strategy and the Environment, Journal of Applied Accounting Research, Journal of Financial Reporting and Accounting, Meditari Accountancy Research, Corporate Governance: The International Journal of Business in Society, and Social Responsibility Journal emerge as stalwarts in citation impact. Prolific authors, represented by Jose V. Frias Acetuno et al. and Azlan Amran et al., emerge as influential researchers in the domains of board diversity

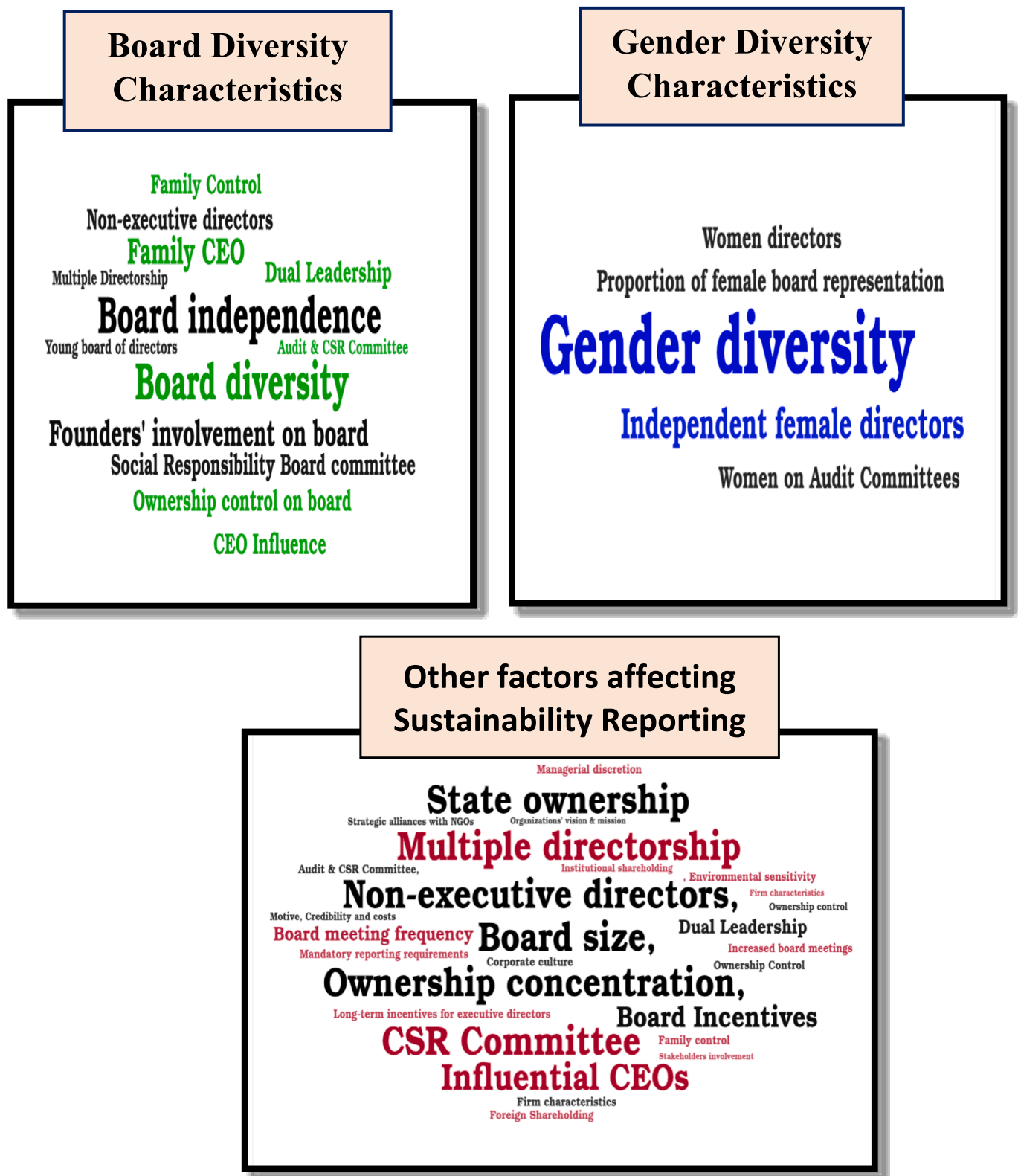


Fig. 4. Summary of thematic characteristics Source: Authors.

and ESG reporting, with their articles titled: “The Role of the Board in the Dissemination of Integrated Corporate Social Reporting” and “The Influence of Governance Structure and Strategic Corporate Social Responsibility Toward Sustainability Reporting Quality” in top journals including the Journal of Corporate Social Responsibility and Environmental Management and Journal Business Strategy and Environment.

Geographically, Europe and North America assumed preeminence in research output and citation impact within this domain. Additionally, the bibliographic coupling and content analyses acknowledge three relevant themes: Theme 1, encompassing ‘Board Gender Diversity in Sustainability Reporting’; Theme 2, explaining the ‘Importance of Governance Structures in shaping reporting practices’; Theme 3,

### 'Factors Shaping Integrated Reporting'.

The profound importance of board diversity and ESG reporting in contemporary corporate governance resonates with the ethical and social dimensions underscored by regulatory frameworks globally. Regulatory bodies, exemplified by the European Commission, advocate for the importance of gender diversity on boards, recognizing its affirmative impact on decision-making and financial performance. Concurrently, ESG reporting has emerged as a paramount mechanism to address societal and environmental concerns. Regulatory instruments like the EU Non-Financial Reporting Directive and the Task Force on Climate-related Financial Disclosures emphasize transparent ESG reporting as imperative for accountability and risk mitigation. The confluence of board diversity and ESG reporting aligns seamlessly with regulatory imperatives, fostering a paradigm of sustainable and responsible corporate practices. The significance of regulatory frameworks in Asian countries also manifests in their role as catalysts for promoting corporate governance, sustainability reporting, and gender diversity on boards, thereby cultivating an environment characterized by transparency, accountability, and responsible business practices. In essence, fostering board diversity not only aligns with ethical, social and environmental requirements but also proves integral to sustainable corporate practices, demanding thoughtful, context-specific strategies. Policymakers should focus on creating governance frameworks that acknowledge the importance of board diversity in elevating the quality of ESG reporting, driving regulatory changes that promote gender diversity and greater transparency in sustainability efforts. For businesses, diverse boards offer the advantage of improved decision-making and foster innovation, which enhances the quality of ESG disclosures and leads to more sustainable outcomes. For academic researchers, this study lays the groundwork for further exploration of the relationship between board diversity and ESG reporting, with opportunities to investigate cultural and regional differences, as well as the influence of technology on enhancing disclosure practices. With a rising global emphasis on ESG standards, fostering international collaboration in research and policy development is crucial. Together, we can advance sustainable practices and promote equitable governance across borders.

The present study, while providing valuable insights, is not without its set of limitations. One notable concern lies in the selection of publications and databases, a process susceptible to potential bias and limited journal coverage based on chosen keywords searches and a single database, like Web of Science. To address this challenge, the study aimed to maintain a broad scope in selecting keywords. Additionally, the dynamic nature of the ESG related research entails that it is subject to frequent and rapid changes driven by evolving research, emerging methodologies, and shifting paradigms. As fresh research emerges, introducing novel perspectives, methodologies, or findings, it may pose challenges to the existing bibliometric data analysis, potentially affecting a comprehensive reflection of the current state and trends within the field. This underscores the importance of considering the temporal context and potential time-sensitive nature of bibliometric analyses in this dynamic research domain. Furthermore, there is a possibility that the study may not comprehensively capture regional variations or sector-specific nuances, which could limit the broader applicability and generalizability of the findings across diverse and distinct contexts. Consequently, additional research is necessary to gain a comprehensive understanding from various viewpoints before drawing definitive conclusions.

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### Declaration of Generative AI and AI-assisted technologies in the writing process

During the preparation of this work, the author(s) used Generative AI in Grammarly and Quillbot. The aim of utilizing these AI tools is to enhance sentence structure, refine content, and improve overall writing quality, ensuring clarity and effectiveness in communication across various contexts. After using this tool/service, the author(s) reviewed and edited the content as needed and take(s) full responsibility for the content of the publication.

### CRediT authorship contribution statement

**Sheela Sundarasan:** Writing – review & editing, Writing – original draft, Validation, Supervision, Software, Resources, Project administration, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization. **Rajespari Kumar:** Writing – review & editing, Writing – original draft, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Krishna Tanaraj:** Writing – original draft, Methodology, Investigation, Conceptualization. **Ahnaf Ali Alsmady:** Writing – review & editing. **Usha Rajagopalan:** Writing – original draft.

### Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

### References

- Abbas, Y. A., Ahmad-Zaluki, N. A., & Mehmood, W. (2023a). Community and environment disclosures and IPO long-run share price performance. *Journal of Financial Reporting & Accounting*. <https://doi.org/10.1108/jfra-07-2022-0244>
- Abbas, Y. A., Mehmood, W., Ali, A., & Aman-Ullah, A. (2023b). Sustainability reporting and corporate financial performance of IPOs: Witnessing emerging market. *Environmental Science and Pollution Research*, 30(36), 85508–85519. <https://doi.org/10.1007/s11356-023-28446-4>
- Abbas, Y. A., Mehmood, W., Lazim, Y. Y., & Aman-Ullah, A. (2022). Sustainability reporting and corporate reputation of Malaysian IPO companies. *Environmental Science and Pollution Research*, 29(52), 78726–78738. <https://doi.org/10.1007/s11356-022-21320-9>
- Abdoun, H., Ellely, N. N., Elamer, A. A., Hussainey, K., & Yazdifar, H. (2020). Corporate Governance and Earnings Management Nexus: Evidence from the UK and Egypt Using Neural Networks. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3631424>
- Adams, C. A. (2017). Conceptualising the contemporary corporate value creation process. *Accounting Auditing & Accountability Journal*, 30(4), 906–931. <https://doi.org/10.1108/aaaj-04-2016-2529>
- Adeiran, A. O. (2023). Disclosing corporate diversity. *Va. L. Rev.*, 109, 307.
- Adnan, S. M., Hay, D., & Van Staden, C. J. (2018). The influence of culture and corporate governance on corporate social responsibility disclosure: A cross country analysis. *Journal of Cleaner Production*, 198, 820–832. <https://doi.org/10.1016/j.jclepro.2018.07.057>
- Agnes, P., Arduino, F. R., Cerciello, M., & Taddeo, S. (2024). Does board knowledge matter for ESG performance in the European banking industry? *Corporate Social Responsibility and Environmental Management*, 31(5), 4454–4468. <https://doi.org/10.1002/csr.2811>
- Albitar, K., Hussainey, K., Kolade, N., & Gerged, A. M. (2020). ESG disclosure and firm performance before and after IR. *International Journal of Accounting and Information Management*, 28(3), 429–444. <https://doi.org/10.1108/ijaim-09-2019-0108>
- Al-Shaer, H., & Zaman, M. (2016). Board gender diversity and sustainability reporting quality. *Journal of Contemporary Accounting & Economics*, 12(3), 210–222. <https://doi.org/10.1016/j.jcae.2016.09.001>
- Al-Shaer, H., & Zaman, M. (2018). Credibility of sustainability reports: The contribution of audit committees. *Business Strategy and the Environment*, 27(7), 973–986. <https://doi.org/10.1002/bse.2046>
- Amran, A., Lee, S. P., & Devi, S. S. (2014). The influence of governance structure and strategic corporate social responsibility toward sustainability reporting quality. *Business Strategy and the Environment*, 23(4), 217–235. <https://doi.org/10.1002/bse.1767>
- Anazonwu, H. O., Egbunike, F. C., & Gunardi, A. (2018). Corporate Board Diversity and Sustainability Reporting: A study of selected listed manufacturing firms in Nigeria. *Indonesian Journal of Sustainability Accounting and Management*, 2(1), 65. <https://doi.org/10.28992/ijSAM.v2i1.52>
- Ansari, Y., Arwab, M., Subhan, M., Alam, Md. S., Hashmi, N. I., Hisam, M. W., & Zameer, M. N. (Jul-2022). Modeling socio-economic consequences of COVID-19: An



- evidence from bibliometric analysis. *Frontiers Media S.A.*. <https://doi.org/10.3389/fenvs.2022.941187>
- Ararat, M., Aksu, M. H., & Cetin, A. T. (2010). The Impact of Board Diversity on Boards' Monitoring Intensity and Firm Performance: Evidence from the Istanbul Stock Exchange. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.1572283>
- 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. <https://doi.org/10.1108/sampj-07-2015-0055>
- Arayssi, M., Jizi, M., & Tabaja, H. H. (2020). The impact of board composition on the level of ESG disclosures in GCC countries. *Sustainability Accounting Management and Policy Journal*, 11(1), 137–161. <https://doi.org/10.1108/sampj-05-2018-0136>
- Argento, D., Grossi, G., Persson, K., & Vingren, T. (2019). Sustainability disclosures of hybrid organizations: Swedish state-owned enterprises. *Meditari Accountancy Research*, 27(4), 505–533. <https://doi.org/10.1108/medar-07-2018-0362>
- Aria, M., & Cuccurullo, C. (2017). bibliometrix : An R-tool for comprehensive science mapping analysis. *Journal of Informetrics*, 11(4), 959–975. <https://doi.org/10.1016/j.joi.2017.08.007>
- Arvidsson, S., & Dumay, J. (2021). Corporate ESG reporting quantity, quality and performance: Where to now for environmental policy and practice? *Business Strategy and the Environment*, 31(3), 1091–1110. <https://doi.org/10.1002/bse.2937>
- Bae, S., Masud, M., & Kim, J. (2018). A Cross-Country Investigation of Corporate Governance and Corporate Sustainability Disclosure: A Signaling Theory Perspective. *Sustainability*, 10(8), 2611. <https://doi.org/10.3390/su10082611>
- Baker, H. K., Kumar, S., & Pandey, N. (2020a). A bibliometric analysis of managerial finance: A retrospective. *Managerial Finance*, 46(11), 1495–1517. <https://doi.org/10.1108/mf-06-2019-0277>
- Baker, H. K., Pandey, N., Kumar, S., & Haldar, A. (2020b). A bibliometric analysis of board diversity: Current status, development, and future research directions. *Journal of Business Research*, 108, 232–246. <https://doi.org/10.1016/j.jbusres.2019.11.025>
- Baratta, A., Cimino, A., Longo, F., Solina, V., & Verteramo, S. (2023). The Impact of ESG Practices in Industry with a Focus on Carbon Emissions: Insights and Future Perspectives. *Sustainability*, 15(8), 6685. <https://doi.org/10.3390/su15086685>
- Ben-Amar, W., Francoeur, C., Hafi, T., & Labelle, R. (2011). What makes better boards? A closer look at diversity and ownership. *British Journal of Management*, 24(1), 85–101. <https://doi.org/10.1111/j.1467-8551.2011.00789.x>
- Bender, J., Sun, X., & Wang, T. (2017). Thematic Indexing, Meet Smart Beta! Merging ESG into Factor Portfolios. *SSRN Electronic Journal*. Doi: 10.2139/ssrn.3080355.
- Bose, S. (2020). Evolution of ESG reporting frameworks. In *Springer eBooks* (pp. 13–33). Doi: 10.1007/978-3-030-55613-6\_2.
- Bravo, F., & Reguera-Alvarado, N. (2018). Sustainable development disclosure: Environmental, social, and governance reporting and gender diversity in the audit committee. *Business Strategy and the Environment*, 28(2), 418–429. <https://doi.org/10.1002/bse.2258>
- Buallay, A., & Al-Ajmi, J. (2020). The role of audit committee attributes in corporate sustainability reporting. *Journal of Applied Accounting Research*, 21(2), 249–264. <https://doi.org/10.1108/jaar-06-2018-0085>
- Bufarwa, I. M., Elamer, A. A., Ntim, C. G., & AlHares, A. (2020). Gender diversity, corporate governance and financial risk disclosure in the UK. *International Journal of Law and Management*, 62(6), 521–538. <https://doi.org/10.1108/ijlma-10-2018-0245>
- Buitendag, N., Fortuin, G. S., & De Laan, A. (2017). Firm characteristics and excellence in integrated reporting. *South African Journal of Economic and Management Sciences*, 20(1). <https://doi.org/10.4102/sajems.v20i1.1307>
- Busco, C., Malafrente, I., Pereira, J., & Starita, M. G. (2019). The determinants of companies' levels of integration: Does one size fit all? *The British Accounting Review*, 51(3), 277–298. <https://doi.org/10.1016/j.bar.2019.01.002>
- Buse, K., Bernstein, R. S., & Bilimoria, D. (2014). The influence of board diversity, board diversity policies and practices, and board inclusion behaviors on nonprofit governance practices. *Journal of Business Ethics*, 133(1), 179–191. <https://doi.org/10.1007/s10551-014-2352-z>
- Carini, C., Rocca, L., Veneziani, M., & Teodori, C. (2018). Ex-Ante Impact Assessment of Sustainability Information-The Directive 2014/95. *Sustainability*, 10(2), 560. <https://doi.org/10.3390/su10020560>
- Chaidali, P., & Jones, M. J. (2017). It's a matter of trust: Exploring the perceptions of Integrated Reporting preparers. *Critical Perspectives on Accounting*, 48, 1–20. <https://doi.org/10.1016/j.cpa.2017.08.001>
- Christensen, D. M., Serafeim, G., & Sirokhi, A. (2021). Why is Corporate Virtue in the Eye of The Beholder? The Case of ESG Ratings. *The Accounting Review*, 97(1), 147–175. <https://doi.org/10.2308/tar-2019-0506>
- Cooray, T., Gunaratne, A. D. N., & Senaratne, S. (2020). Does corporate governance affect the quality of integrated reporting? *Sustainability*, 12(10), 4262. <https://doi.org/10.3390/su12104262>
- Deweerd, T., Caltabiano, K., & Dargusch, P. (2022). Original Research: How Will the TNFD Impact the Health Sector's Nature-Risks Management? *International Journal of Environmental Research and Public Health*, 19, 13345. <https://doi.org/10.3390/ijerph192013345>
- Dilling, P. F. A., & Caykoylu, S. (2019). Determinants of Companies that Disclose High-Quality Integrated Reports. *Sustainability*, 11(13), 3744. <https://doi.org/10.3390/su11133744>
- Donthu, N., Kumar, S., Pandey, N., Pandey, N., & Mishra, A. (2021). Mapping the electronic word-of-mouth (eWOM) research: A systematic review and bibliometric analysis. *Journal of Business Research*, 135, 758–773. <https://doi.org/10.1016/j.jbusres.2021.07.015>
- Duran, I., & Rodrigo, P. (2018). Why do Firms in Emerging Markets Report? A stakeholder theory approach to study the determinants of Non-Financial disclosure in Latin America. *Sustainability*, 10(9), 3111. <https://doi.org/10.3390/su10093111>
- Dutta, N. A., & Paul, N. B. (2023). Performance analysis of select ESG funds in India. *Management Journal for Advanced Research*, 3(1), 1–7. <https://doi.org/10.54741/mjar.3.1.1>
- Dwekat, A., Seguf-Mas, E., Zaid, M. A. A., & Tormo-Carbó, G. (2021). Corporate governance and corporate social responsibility: Mapping the most critical drivers in the board academic literature. *Meditari Accountancy Research*, 30(6), 1705–1739. <https://doi.org/10.1108/medar-01-2021-1155>
- Dye, J., McKinnon, M., & Van Der Byl, C. (2021). Green Gaps: Firm ESG disclosure and financial institutions' reporting requirements. *Journal of Sustainability Research*, 3(1). <https://doi.org/10.20900/jsr20210006>
- Eissa, A., Hamdy, A., & Diab, A. (2024). Governmental ownership, board gender diversity, and ESG performance: Evidence from an emerging market. *Sustainability*, 16(16), 6963. <https://doi.org/10.3390/su16166963>
- Ejaz, H., Zeeshan, H. M., Ahmad, F., Bukhari, S. N. A., Anwar, N., Alanazi, A., Sadiq, A., Junaid, K., Atif, M., Abosalif, K. O. A., Iqbal, A., Hamza, M. A., & Younas, S. (Sep-2022). Bibliometric analysis of publications on the Omicron variant from 2020 to 2022 in the scopus database using R and VOSviewer. *Frontiers Media S.A.*. <https://doi.org/10.3390/ijerph191912407>
- Ellili, N. O. D. (2023). Bibliometric analysis of sustainability papers: Evidence from environment, development and sustainability. *Environment Development and Sustainability*. <https://doi.org/10.1007/s10668-023-03067-6>
- Fasan, M., & Mio, C. (2017). Fostering stakeholder engagement: The role of materiality Disclosure in Integrated Reporting. *Business Strategy and the Environment*, 26(3), 288–305. <https://doi.org/10.1002/bse.1917>
- Fernandez-Feljo, B., Romero, S., & Ruiz-Blanco, S. (2014). Women on boards: Do they affect sustainability reporting? *Corporate Social Responsibility and Environmental Management*, 21(6), 351–364. <https://doi.org/10.1002/csr.1329>
- Fernández-Temprano, M. A., & Tejerina-Gaite, F. (2020). Types of director, board diversity and firm performance. *Corporate Governance*, 20(2), 324–342. <https://doi.org/10.1108/cg-03-2019-0096>
- Frias-Aceituno, J. V., Rodríguez-Ariza, L., & García-Sánchez, I. (2013). The role of the Board in the dissemination of integrated corporate social reporting. *Corporate Social Responsibility and Environmental Management*, 20(4), 219–233. <https://doi.org/10.1002/csr.1294>
- García, C. J., & Herrero, B. (2021). Female directors, capital structure, and financial distress. *Journal of Business Research*, 136, 592–601. <https://doi.org/10.1016/j.jbusres.2021.07.061>
- García-Sánchez, I., Suárez-Fernández, O., & Martínez-Ferrero, J. (2018). Female directors and impression management in sustainability reporting. *International Business Review*, 28(2), 359–374. <https://doi.org/10.1016/j.ibusrev.2018.10.007>
- Gavana, G., Gottardo, P., & Moisello, A. (2016). Sustainability Reporting in Family Firms: A panel data analysis. *Sustainability*, 9(1), 38. <https://doi.org/10.3390/su9010038>
- Giannarakis, G., Andronikidis, A., & Sariannidis, N. (2020). Determinants of environmental disclosure: Investigating new and conventional corporate governance characteristics. *Annals of Operations Research*, 294(1–2), 87–105. <https://doi.org/10.1007/s10479-019-03323-x>
- Girella, L., Rossi, P., & Zambon, S. (2019). Exploring the firm and country determinants of the voluntary adoption of integrated reporting. *Business Strategy and the Environment*, 28(7), 1323–1340. <https://doi.org/10.1002/bse.2318>
- Griffin, D., Li, K., & Xu, T. (2019). Board Gender Diversity and Corporate Innovation: International Evidence. *Journal of Financial and Quantitative Analysis*, 56(1), 123–154. <https://doi.org/10.1017/s002210901900098x>
- Hazen, T. L. (2020). Corporate and Securities Law impact on social responsibility and corporate purpose. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3542833>
- Helfaya, A., Morris, R., & Aboud, A. (2023). Investigating the factors that determine the ESG disclosure practices in Europe. *Sustainability*, 15(6), 5508. <https://doi.org/10.3390/su15065508>
- Ho, H., & Virginia, E. (2021). Modernizing ESG disclosure. *SSRN Electronic Journal*. [https://papers.ssrn.com/sol3/Delivery.cfm/SSRN\\_ID3865874\\_code1012149.pdf?abstractid=3845145&mirid=1](https://papers.ssrn.com/sol3/Delivery.cfm/SSRN_ID3865874_code1012149.pdf?abstractid=3845145&mirid=1)
- Hoang, T. (2018). The role of the Integrated Reporting in raising awareness of Environmental, Social and Corporate Governance (ESG) performance. In *Developments in Corporate Governance and Responsibility* (pp. 47–69). <https://doi.org/10.1108/s2043-052320180000014003>
- Hu, M., & Loh, L. (2018). Board Governance and Sustainability Disclosure: A Cross-Sectional Study of Singapore-Listed Companies. *Sustainability*, 10(7), 2578. <https://doi.org/10.3390/su10072578>
- Huse, M. (2007). *Boards. Governance and Value Creation: the Human Side of Corporate Governance*. [https://assets.cambridge.org/97805218/44604/copyright/9780521844604\\_copyright\\_info.pdf](https://assets.cambridge.org/97805218/44604/copyright/9780521844604_copyright_info.pdf)
- Jain, K., & Tripathi, P. (2023). Mapping the environmental, social and governance literature: A bibliometric and content analysis. *Journal of Strategy and Management*, 16(3), 397–428. <https://doi.org/10.1108/jsma-05-2022-0092>
- Jia, J. Y. (2020). External ESG reporting frameworks. *Springer eBooks* (pp. 237–250). [https://doi.org/10.1007/978-3-030-36838-8\\_23](https://doi.org/10.1007/978-3-030-36838-8_23)
- Kamaludin, K., Ibrahim, I., Sundarasan, S., & Faizal, O. (2022). ESG in the boardroom: Evidence from the Malaysian market. *International Journal of Corporate Social Responsibility*, 7(1). <https://doi.org/10.1186/s40991-022-00072-2>
- Kaplan, R. S., & Ramanna, K. (2021). How to fix ESG reporting. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3900146>
- Karwowski, M., & Raulinajtys-Grzybek, M. (2021). The application of corporate social responsibility (CSR) actions for mitigation of environmental, social, corporate governance (ESG) and reputational risk in integrated reports. *Corporate Social Responsibility and Environmental Management*, 28(4), 1270–1284. <https://doi.org/10.1002/csr.2137>



- Khan, M. A., Ali, I., & Ashraf, R. (2020). A bibliometric review of the special issues of psychology & marketing: 1984–2020. *Psychology and Marketing*, 37(9), 1144–1170. <https://doi.org/10.1002/mar.21393>
- Khatib, S. F., Abdullah, D. F., Elamer, A., Yahaya, I. S., & Owusu, A. (2023). Global trends in board diversity research: A bibliometric view. *Meditari Accountancy Research*, 31(2), 441–469. <https://doi.org/10.1108/medar-02-2021-1194>
- Kılıç, M., & Kuzey, C. (2018). Determinants of forward-looking disclosures in integrated reporting. *Managerial Auditing Journal*, 33(1), 115–144. <https://doi.org/10.1108/maj-12-2016-1498>
- Kotsantonis, S., Pinney, C., & Serafeim, G. (2016). ESG integration in Investment Management: Myths and realities. *Journal of Applied Corporate Finance*, 28(2), 10–16. <https://doi.org/10.1111/jacf.12169>
- Kraus, S., Breier, M., Lim, W. M., Dabić, M., Kumar, S., Kanbach, D., Mukherjee, D., Corvello, V., Piñeiro-Chousa, J., Liguori, E., Palacios-Marqués, D., Schiavone, F., Ferraris, A., Fernandes, C., & Ferreira, J. J. (2022). Literature reviews as independent studies: Guidelines for academic practice. *Review of Managerial Science*, 16(8), 2577–2595. <https://doi.org/10.1007/s11846-022-00588-8>
- Lavin, J. F., & Montecinos-Pearce, A. A. (2021). ESG Disclosure in an Emerging Market: An Empirical analysis of the influence of board characteristics and ownership structure. *Sustainability*, 13(19), 10498. <https://doi.org/10.3390/su131910498>
- Leong, M.S.W.; Paramasivam, A., Sundarasan, S. & Rajagopalan, U. (2015). Board Composition and Companies' Performance: Does Political Affiliation Moderate the Relationship? *International Journal of Business and Management*, [e-journal] vol.10, no.10, pp.216-232, Available Online: <http://www.ijbm.org/page/2%20Yang-Chao%20Wang-1.pdf>
- Lim, W. M., & Kumar, S. (2023). Guidelines for interpreting the results of bibliometric analysis: A sensemaking approach. *Global Business and Organizational Excellence*, 43(2), 17–26. <https://doi.org/10.1002/joe.22229>
- Lokuwaduge, C., & De Silva, K. (2020). Emerging corporate disclosure of Environmental Social and Governance (ESG) risks: An Australian study. *Australasian Accounting Business and Finance Journal*, 14(2), 35–50. <https://doi.org/10.14453/aabf.v14i2.4>
- Luo, L., & Tang, Q. (2022). The real effects of ESG reporting and GRI standards on carbon mitigation: International evidence. *Business Strategy and the Environment*, 32(6), 2985–3000. <https://doi.org/10.1002/bse.3281>
- Mahadeo, J. D., Soobaroyen, T., & Hanuman, V. O. (2011). Board Composition and Financial Performance: Uncovering the Effects of Diversity in an Emerging Economy. *Journal of Business Ethics*, 105(3), 375–388. <https://doi.org/10.1007/s10551-011-0973-z>
- Mahmood, M., & Orazalin, N. (2017). Green governance and sustainability reporting in Kazakhstan's oil, gas, and mining sector: Evidence from a former USSR emerging economy. *Journal of Cleaner Production*, 164, 389–397. <https://doi.org/10.1016/j.jclepro.2017.06.203>
- Malagila, J. K., Zalata, A. M., Ntim, C. G., & Elamer, A. A. (2020). Corporate governance and performance in sports organisations: The case of UK premier leagues. *International Journal of Finance & Economics*, 26(2), 2517–2537. <https://doi.org/10.1002/ijfe.1918>
- Manita, R., Bruna, M. G., Dang, R., & Houanti, L. (2018). Board gender diversity and ESG disclosure: Evidence from the USA. *Journal of Applied Accounting Research*, 19(2), 206–224. <https://doi.org/10.1108/jaar-01-2017-0024>
- Manning, B., Braam, G., & Reimsbach, D. (2018). Corporate governance and sustainable business conduct—Effects of board monitoring effectiveness and stakeholder engagement on corporate sustainability performance and disclosure choices. *Corporate Social Responsibility and Environmental Management*, 26(2), 351–366. <https://doi.org/10.1002/csr.1687>
- Meng-Tao, C., Da-Peng, Y., Wei-Qi, Z., & Qi-Jun, W. (2022). How does ESG disclosure improve stock liquidity for enterprises — Empirical evidence from China. *Environmental Impact Assessment Review*, 98, Article 106926. <https://doi.org/10.1016/j.eiar.2022.106926>
- Morris, T., Sodjahn, A., & Boubacar, H. (2021). Ownership structure and women on boards of directors of Canadian listed companies. *Corporate Ownership and Control*, 18(3), 120–135. <https://doi.org/10.22495/cocv18i3art10>
- Mudiyanse, N. C. S. R. (2018). Board involvement in corporate sustainability reporting: Evidence from Sri Lanka. *Corporate Governance*, 18(6), 1042–1056. <https://doi.org/10.1108/cg-10-2017-0252>
- Mukherjee, D., Lim, W. M., Kumar, S., & Donthu, N. (2022). Guidelines for advancing theory and practice through bibliometric research. *Journal of Business Research*, 148, 101–115. <https://doi.org/10.1016/j.jbusres.2022.04.042>
- Mumu, J. R., Saona, P., Russell, H. I., & Azad, M. A. K. (2021). Corporate governance and remuneration: A bibliometric analysis. *Journal of Asian Business and Economic Studies*, 28(4), 242–262. <https://doi.org/10.1108/jabes-03-2021-0025>
- Naciti, V. (2019). Corporate governance and board of directors: The effect of a board composition on firm sustainability performance. *Journal of Cleaner Production*, 237, Article 117727. <https://doi.org/10.1016/j.jclepro.2019.117727>
- Nugroho, B. Y., & Eko, U. (2011). Board Characteristics and Earning Management. *Journal of Administrative Science & Organization*, 18(1), 1. <https://doi.org/10.20476/jbb.v18i1.969>
- Ofoegbu, G. N., Odoemelam, N., & Okafor, R. G. (2018). Corporate board characteristics and environmental disclosure quantity: Evidence from South Africa (integrated reporting) and Nigeria (traditional reporting). *Cogent Business & Management*, 5(1), 1551510. <https://doi.org/10.1080/23311975.2018.1551510>
- Ong, T., & Djajadikerta, H. G. (2018). Corporate governance and sustainability reporting in the Australian resources industry: An empirical analysis. *Social Responsibility Journal*, 16(1), 1–14. <https://doi.org/10.1108/srj-06-2018-0135>
- Papoutsis, A., & Sodhi, M. S. (2020). A Sustainability Disclosure Index using corporate sustainability reports. *Journal of Sustainability Research*, 2(2). <https://doi.org/10.20900/jsr20200020>
- Pavlopoulos, A., Magnis, C., & Iatridis, G. E. (2017). Integrated reporting: Is it the last piece of the accounting disclosure puzzle? *Journal of Multinational Financial Management*, 41, 23–46. <https://doi.org/10.1016/j.mulfin.2017.05.001>
- Raimo, N., Caragnano, A., Zito, M., Vitolla, F., & Mariani, M. (2021). Extending the benefits of ESG disclosure: The effect on the cost of debt financing. *Corporate Social Responsibility and Environmental Management*, 28(4), 1412–1421. <https://doi.org/10.1002/csr.2134>
- Rao, K., & Tilt, C. (2015). Board Composition and Corporate Social Responsibility: The role of diversity, gender, strategy and decision making. *Journal of Business Ethics*, 138(2), 327–347. <https://doi.org/10.1007/s10551-015-2613-5>
- Review of TCFD-aligned disclosures by premium listed commercial companies. (2022, August 5). FCA. <https://www.fca.org.uk/publications/multi-firm-reviews/tcfd-aligned-disclosures-premium-listed-commercial-companies>
- Rhode, D., & Packel, A. K. (2010). Diversity on corporate boards: How much difference does difference make? *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.1685615>
- Rosati, F., & Faria, L. G. D. (2019). Business contribution to the Sustainable Development Agenda: Organizational factors related to early adoption of SDG reporting. *Corporate Social Responsibility and Environmental Management*, 26(3), 588–597. <https://doi.org/10.1002/csr.1705>
- Saini, S., Burman, R. R., Padaria, R. N., Mahra, G. S., Bishnoi, S., Aditya, K., Nithyashree, M. L., Mallick, S., Mukherjee, S., & Padhan, S. R. (2023). Mapping the research trends of migration behavior in agricultural households: A bibliometric analysis. *Frontiers in Sustainable Food Systems*, 7. <https://doi.org/10.3389/fsufs.2023.1241716>
- Seow, R. Y. C. (2023). Determinants of environmental, social, and governance disclosure: A systematic literature review. *Business Strategy and the Environment*, 33(3), 2314–2330. <https://doi.org/10.1002/bse.3604>
- Shahbaz, M., Karaman, A. S., Kilic, M., & Uyar, A. (2020). Board attributes, CSR engagement, and corporate performance: What is the nexus in the energy sector? *Energy Policy*, 143, Article 111582. <https://doi.org/10.1016/j.enpol.2020.111582>
- Shamil, M. M., Shaikh, J. M., Ho, P., & Krishnan, A. (2014). The influence of board characteristics on sustainability reporting. *Asian Review of Accounting*, 22(2), 78–97. <https://doi.org/10.1108/ara-09-2013-0060>
- Sharma, P., Panday, P., & Dangwal, R. C. (2020). Determinants of environmental, social and corporate governance (ESG) disclosure: A study of Indian companies. *International Journal of Disclosure and Governance*, 17(4), 208–217. <https://doi.org/10.1057/s41310-020-00085-y>
- Shehata, N., Salhin, A., & El-Helaly, M. (2017). Board diversity and firm performance: Evidence from the UK SMEs. *Applied Economics*, 49(48), 4817–4832. <https://doi.org/10.1080/00036846.2017.1293796>
- Singhania, M., & Chadha, G. (2023). Thirty years of sustainability reporting research: A scientometric analysis. *Environmental Science and Pollution Research*, 30(46), 102047–102082. <https://doi.org/10.1007/s11356-023-29452-2>
- Singhania, M., & Saini, N. (2021). Systems approach to environment, social and governance (ESG): Case of Reliance industries. *Sustainable Operations and Computers*, 3, 103–117. <https://doi.org/10.1016/j.susoc.2021.11.003>
- Sundarasan, S., Zyznarska-Dworczak, B., & Goel, S. (2024). Sustainability reporting and greenwashing: A bibliometrics assessment in G7 and non-G7 nations. *Cogent Business & Management*, 11(1). <https://doi.org/10.1080/23311975.2024.2320812>
- Sustainability-related disclosures in the financial services sector. *Regulation - 2019/2088 - EN - sfdr - EUR-Lex*. (n.d.-c). <http://data.europa.eu/eli/reg/2019/2088/oj>
- Tajuddin, A. H., Akter, S., Mohd-Rashid, R., & Mehmood, W. (2023). The influence of board size and board independence on triple bottom line reporting. *Arab Gulf Journal of Scientific Research*. <https://doi.org/10.1108/agjsr-02-2023-0061>
- Temiz, H., & Acar, M. (2023). Board gender diversity and corporate social responsibility (CSR) disclosure in different disclosure environments. *Corporate Social Responsibility and Environmental Management*, 30(5), 2247–2264. <https://doi.org/10.1002/csr.2481>
- Tsang, A., Frost, T., & Cao, H. (2023). Environmental, Social, and Governance (ESG) disclosure: A literature review. *The British Accounting Review*, 55(1), Article 101149. <https://doi.org/10.1016/j.bar.2022.101149>
- Ülker, P., Ülker, M., & Karamustafa, K. (2023). Bibliometric analysis of bibliometric studies in the field of tourism and hospitality. *Journal of Hospitality and Tourism Insights*, 6(2), 797–818. <https://doi.org/10.1108/jhti-10-2021-0291>
- Van Eck, N. J., & Waltman, L. (2009). Software survey: VOSviewer, a computer program for bibliometric mapping. *Scientometrics*, 84(2), 523–538. <https://doi.org/10.1007/s11192-009-0146-3>
- Vesty, G. M., Ren, C., & Ji, S. (2018). Integrated reporting as a test of worth. *Accounting Auditing & Accountability Journal*, 31(5), 1406–1434. <https://doi.org/10.1108/aaaj-08-2016-2684>
- Vitolla, F., Raimo, N., & Rubino, M. (2019). Board characteristics and integrated reporting quality: An agency theory perspective. *Corporate Social Responsibility and Environmental Management*, 27(2), 1152–1163. <https://doi.org/10.1002/csr.1879>
- Vitolla, F., Raimo, N., Marrone, A., & Rubino, M. (2020). The role of board of directors in intellectual capital disclosure after the advent of integrated reporting. *Corporate Social Responsibility and Environmental Management*, 27(5), 2188–2200. <https://doi.org/10.1002/csr.1957>
- Wang, M. (2017). The Relationship between Firm Characteristics and the Disclosure of Sustainability Reporting. *Sustainability*, 9(4), 624. <https://doi.org/10.3390/su9040624>
- Wang, R., Zhou, S., & Wang, T. (2019). Corporate governance, integrated reporting and the use of credibility-enhancing mechanisms on integrated reports. *European Accounting Review*, 29(4), 631–663. <https://doi.org/10.1080/09638180.2019.1668281>

- Wasiuzzaman, S., & Mohammad, W. M. W. (2019). Board gender diversity and transparency of environmental, social and governance disclosure: Evidence from Malaysia. *Managerial and Decision Economics*, 41(1), 145–156. <https://doi.org/10.1002/mde.3099>
- Yadav, P., & Prashar, A. (2022). Board gender diversity: Implications for environment, social, and governance (ESG) performance of Indian firms. *International Journal of Productivity and Performance Management*, 72(9), 2654–2673. <https://doi.org/10.1108/ijppm-12-2021-0689>
- Yilmaz, A. A., & Tuzlukaya, S. E. (2023). The relation between intellectual capital and digital transformation: A bibliometric analysis. *International Journal of Innovation Science*. <https://doi.org/10.1108/ijis-08-2022-0145>