# A SYSTEMATIC REVIEW ON THE INFLUENCE OF BOARD GOVERNANCE AND SUSTAINABILITY REPORTING

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**ABSTRACT**

Sustainability reporting has become the primary method used by large corporations to inform stakeholders about the sustainability practices of the companies. Even though research on sustainability has gain prominence globally, there is still limited literature specifically on board governance and sustainability reporting of listed corporations. Therefore, it is vital that existing literature is accumulated, organised and analysed to determine the extent and development of literature in this area of research, including an overview of the key findings. The review adheres to the publication standard, namely Reporting Standards for Systematic Evidence Synthesis (ROSES). It includes articles from two leading databases, Scopus and Web of Science, which generated a final total of 53 related studies. The review is mainly categorised into six themes: social reporting, environmental reporting, GRI-based reporting, ESG-based reporting, reporting based on the scoring system and a combination of sustainability and integrated reporting. These themes further explore board governance and other related corporate governance aspects. The findings from the thematic analysis reveal an overview of board governance on sustainability reporting according to four main themes: (1) board independence and diversity; (2) board size and meeting; (3) board committee; and (4) board remuneration. Based on the results, board size and women directors tend to encourage sustainability reporting, but board independence seems less effective. The findings of this review are crucial for enhancing stakeholder confidence and protecting shareholders' interests as this study systematically summarises findings from various

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countries and contexts and does not just refer to the results of a single study. This study should also be particularly useful to future researchers who plan to embark on research in the areas of governance and sustainability reporting. The gaps in this research area are identified, and recommendations for future research are proposed.

***Keywords:*** Board of directors, corporate governance, Sustainability reporting.

## INTRODUCTION

Many studies on board governance and sustainability reporting have been conducted. However, efforts to systematically review these studies are still limited. A systematic review offers a comprehensive review of the existing body of knowledge on the board's impact on sustainability reporting. The process begins with formulating key questions and objectives. The paper examines and analyses previous work on the influence of board governance on sustainability reporting and identifies potential gaps.

Sustainability reporting communicates sustainability initiatives to stakeholders. A sustainability reporting framework is used to prepare reliable and accurate information. Understanding the board’s influence on the extent of sustainability reporting is essential since boards are responsible for communicating the information to stakeholders. The origins of sustainability dates back to the 1970s; however, the concept of sustainability was popularised with the declaration of the United Nations’ Sustainability Development Goals (SDGs). Since then, the research efforts on sustainability reporting have expanded. This is because numerous countries globally support these SDGs. This includes companies and their board of directors playing an essential role in their countries attaining their SDGs. Even though there are many countries in the world initiating efforts on sustainability reporting (SR), the literature on board governance on SR remains considerably limited.

Sustainability reporting has gained increased importance since regulators mandated that listed companies disclose their sustainability activities. Support from listed companies can significantly impact the attainment of the SDGs agenda. While developed countries have integrated sustainability initiatives into their business operations in order to support the SDGs, some developing countries, such as Vietnam, Indonesia and Brunei, publish their sustainability reports voluntarily. The impact of board governance on providing non-financial information to stakeholders has drawn considerable interest from researchers globally. A substantial body of literature on sustainability reporting exists, incorporating various approaches and methodologies. However, traditional review practices face issues related to transparency and bias, as reviewers often selectively choose articles that support their research (Shaffril et al., 2020). This traditional approach presents significant challenges for future research in replicating studies, validating interpretations, and assessing the comprehensiveness of the research. Therefore, there is a need for a systematic literature review (SLR) that uses systematic techniques to identify and evaluate related research comprehensively.

The researchers aim to address the gap in the literature by conducting a systematic literature review (SLR) that specifically examines how board governance impacts the extent of sustainability reporting. This study seeks to provide empirical evidence to justify the methods used to identify the existing gaps and guide future research in this field. The review is structured around the central question: “What is the effect of board governance on sustainability reporting?”. Additionally, the paper places significant emphasis on the board structure employed by companies, highlighting their crucial role in ensuring compliance with sustainability reporting standards and maintaining the integrity of disclosures provided to stakeholders.

This paper examines and analyses previous work on the influence of boards on sustainability reporting and identifies potential research gaps. This section explains the purpose of conducting a systematic review, followed by a second section elaborating on the methodology used in the study. Then, the third section systematically reviews and synthesises the relevant research on board governance and sustainability reporting. Lastly, the paper presents a discussion on recommendations for future research.

## METHODOLOGY

Systematic Literature Review (SLR) is used to systematically identify, select, and appraise relevant studies according to clearly formulated questions. The data collected and analysed are used to identify gaps and future research. Authors can justify the selection of articles used in the results, which allows them to rely on the assessment methods and results of the studies.

This section discusses the method used to retrieve articles related to the effect of board structure on sustainability reporting. The reviewers used the method called ROSES as the review protocol. The systematic review protocol guides through the resources used to run the systematic review, eligibility and exclusion criteria, and the steps of the review process. Lastly, data extraction and analysis have been conducted.

### Review protocol - ROSES

The study conducted in this paper is guided by the robust and transparent Reporting Standard for Systematic Evidence Syntheses (ROSES). This standard, which aims to maintain a sound methodology for developing SLR, enhances the credibility of our research. The process begins with formulating the research questions and followed by a detailed explanation of the systematic search strategy, which consists of three main sub-processes: identification, screening (inclusion and exclusion criteria) and eligibility. A rigorous quality appraisal process was conducted for each selected article before being incorporated into a review. Lastly, the selected articles were processed through several stages: data extraction and data analysis. The data extraction process was guided by the primary research question, while qualitative data synthesis (thematic synthesis) was performed in the review by considering alternatives to ensure the review protocol met the aims of the review.

### Formulation of the research question

The formulation of the research questions uses the PICo method: ‘P’ for Problem or Population, ‘I’ for Interest, and ‘Co’ for Context. These three main aspects included the aspects of the review, the sustainability reporting (Population), board of directors (Interest) and corporate governance (context). This enabled the authors to formulate the main research question of this study: “What is the influence of board governance on sustainability reporting?”.

**Systematic searching strategies**

The strategy for document searching was planned and conducted according to three main sub-processes: identification, screening, and eligibility (Mohamed Shaffril et al., 2019).

***Identification***

Based on the formulated research questions, three main keywords were identified: board, influence, and sustainability reporting. Identification is the first phase of the systematic search strategy.

Table 1: Keywords and Searching Information Strategy

| Databases | Keywords used |
|---|---|
| Scopus | TITLE-ABS-KEY (("Sustainability reporting" OR "Sustainability disclosure" OR "Corporate Sustainability reporting" OR "Corporate Sustainability disclosure”) AND ("Board of Directors attributes" OR "Board Characteristic*" OR "Director* structure" OR "director*" OR "Board")) |
| Web of Science | TS= (("Sustainability reporting" OR "Sustainability disclosure" OR "Corporate Sustainability reporting" OR "Corporate Sustainability disclosure") AND ("Board of Directors attributes" OR "Board Characteristic*" OR "Director* structure" OR "director*" OR "Board")) |

The present study addresses the board's influence on sustainability reporting. Two main databases are the leading databases, namely Scopus and Web of Science. These two databases lead in conducting systematic literature reviews due to their comprehensive access to qualified and multidisciplinary journals. Based on the search strategies, 515 potential articles were identified from two main databases using the sorting function.

***Screening***

The second phase of the systematic search strategy is the screening process. The screening process was carried out to either be included or excluded from the study based on a specific set of criteria (see Table 2). The authors decided to review empirical research papers since they offer primary data. Only articles written in English were considered.

Table 2: Inclusion and exclusion criteria

| Criterion | Inclusion | Exclusion |
|---|---|---|
| Document Type | Articles (with empirical data) | Articles published in the form of review, chapters in book, book series, book, conference |
| Language | English | Non-English |
| Subject area | Business, Economics | Other subject area |

This process excluded 202 articles as they did not fit the inclusion criteria and removed 26 duplicate articles. The remaining 287 articles were used for the next process – eligibility.

### *Eligibility*

The third phase of the systematic search strategy is the eligibility process. The authors manually checked the remaining papers to identify (either by reading the title, abstract, or the entire paper) whether the papers matched the established inclusion criteria. After the authors had read the content of the selected articles, another 231 articles were excluded because these articles focus on contexts other than corporate governance, such as auditing, capital market, and performance. In addition, some articles are categorised as review and conceptual papers. Therefore, the total number of articles eligible for review is 56.

### *Quality appraisal*

A quality appraisal process was conducted for each selected article before it was incorporated into a review. The authors assessed each article's methodology section and the analysis undertaken. For example, the authors scrutinised the articles by searching for consistency in the sampling and analysis. Therefore, all 56 articles were appraised and met the quality standards for review. The total number of articles is 53, excluding three focusing on the firm's Sustainable Development Goals (SDG) disclosure. The sustainability report analysed in these studies provides specific information based on SDG frameworks.

### *Data extraction and analyses*

The selected articles were processed through several stages: data extraction and data analysis. The data extraction process was guided by the primary research question. In the review, qualitative data synthesis (thematic synthesis) was performed by considering alternatives to ensure the review protocol met the aims of the review. Thematic analysis attempts to identify and notify the pattern of existing studies by detecting any similarities or relationships that could exist in available data (Braun & Clarke, 2019).

## RESULTS AND DISCUSSION

The review's results are divided into two main findings. The first findings relate to the sustainability reporting approaches used in the selected studies, and the second finding is on the effects of board governance on sustainability reporting. The section begins by describing the background of the selected studies. Then, developed themes from both categories are presented and discussed.

### Background of the selected studies

A category of studies focuses on multiple countries (Cicchiello et al., 2021; Amran et al., 2013; Githaiga & Kosgei, 2022), which group into Asia, Africa, the Baltic region, and countries worldwide. These studies aim to provide empirical evidence from global perspectives. Another category is studies conducted in a single country that are interested in examining the board's influence in the local governance context, such as reporting requirements and corporate governance recommendations. These studies can be categorised into Africa, the Middle East, Asia, and Western countries. For example, a study from Germany reported that the board influence was based on a two-tier board structure, compared to another study, which operates based on a one-tier board structure. Most of the recent studies are conducted in African countries. There are 16 single-country studies conducted in the Asian region, which aim to present different insights from Western countries due to cultural differences.

**Table 3.** Previous Literature based on Countries

| **Multiple Country Studies** | **Frequency** | **Details** |
|---|---|---|
| Asia & Africa (366 countries) | 1 | Cicchiello et al. (2021) |
| Asia-Pacific (12 countries) | 1 | Amran et al. (2013) |
| East Africa (3 countries – Rwanda, Nairobi, Uganda) | 1 | Githaiga and Kosgei (2022) |
| Baltic region (3 countries – Lithuanian, Estonian & Latvian) | 1 | Zumente (2023) |
| Europe (16 countries) | 4 | Adel et al. (2019), Cosma et al. (2022) – European Banks, Girella et al. (2021) – Eurostoxx600, Gurol and Lagasio (2022) – 35 European Banks listed at the Eurostoxx600 |
| Gulf Cooperation Council (GCC) | 1 | Buallay and Al-Ajmi (2019) |
| Southeast Asia | 1 | Tran et al. (2021) |
| US & Europe | 1 | Michelon and Parbonetti (2010) |
| 12 countries | 1 | García-Sánchez et al. (2019) |
| 22 countries | 1 | Fernandez-Feijoo et al. (2014) |
| 28 countries | 1 | García-Sánchez and Martínez-Ferrero (2018) |
| 150 countries | 1 | Kılıç et al. (2021) |
| Listed banks headquarters (73 countries) | 1 | Buallay et al. (2020) |
| TOTAL | 16 | |
| **Single Country: Africa & the Middle East** | **Frequency** | **Details** |
| Egypt | 1 | Elafify (2021) |
| Jordan | 3 | Al Maani et al. (2023), Alodat et al. (2023), Alodat et al. (2022) |
| Kenya | 1 | Injeni et al. (2021) |
| Nigeria | 4 | Adamu and Tyasari (2022), Anazonwu et al. (2018), Bello et al. (2022), Erin et al. (2021) |
| Uganda | 3 | Bananuka et al. (2022), Tumwebaze et al. (2021), Tumwebaze et al. (2022) |

| TOTAL | 12 | |
|---|---|---|
| **Single Country: Asia** | **Frequency** | **Details** |
| China | 2 | Pasko et al. (2021), Ting and Lee (2023) |
| India | 2 | Choudhury et al. (2022), Yadav and Jain (2023) |
| Indonesia | 2 | Hernawati (2020), Trireksani and Djajadikerta (2016) |
| Kazakhstan | 1 | Mahmood and Orazalin (2017) |
| Malaysia | 2 | Jamil et al. (2020), Zahid et al. (2020) |
| Pakistan | 2 | Hasan et al. (2021), Rahman et al. (2023) |
| Sri Lanka | 2 | M. Shamil et al. (2014), Rathnayaka Mudiyanselage (2018) |
| Thailand | 1 | Malee et al. (2021) |
| Turkey | 1 | Önder and Baimurzin (2020) |
| Vietnam | 1 | Le et al. (2021) |
| TOTAL | 16 | |
| **Single Country: The West** | **Frequency** | **Details** |
| Australia | 1 | Ong and Djajadikerta (2018) |
| The Netherlands | 1 | Manning et al. (2018) |
| Germany | 2 | Gerwing et al. (2022), Thun and Zülch (2022) |
| Spain | 1 | Bravo and Reguera-Alvarado (2018) |
| The United Kingdom (UK) | 3 | Al-Shaer and Zaman (2016), Al-Shaer and Zaman (2018), Arayssi et al. (2016) |
| The United States of America (US) | 1 | Stone (2021) |
| TOTAL | 9 | |
| **Grand Total** | **53** | |

Regarding the year of publication, six were published in 2023, compared to 14 in 2022. There have been sharp decreases in publications in recent years, followed by steady increases in 2020 and 2021. Before 2020, there was a decreasing trend in 2018, with seven publications recorded, decreasing to four in 2019, then decreasing further in 2020 to only three. Overall, the number of publications is increasing, and more researchers are interested in understanding the effect of board governance and sustainability reporting. Figure 1 depicts the number of selected articles published according to the year of publication.

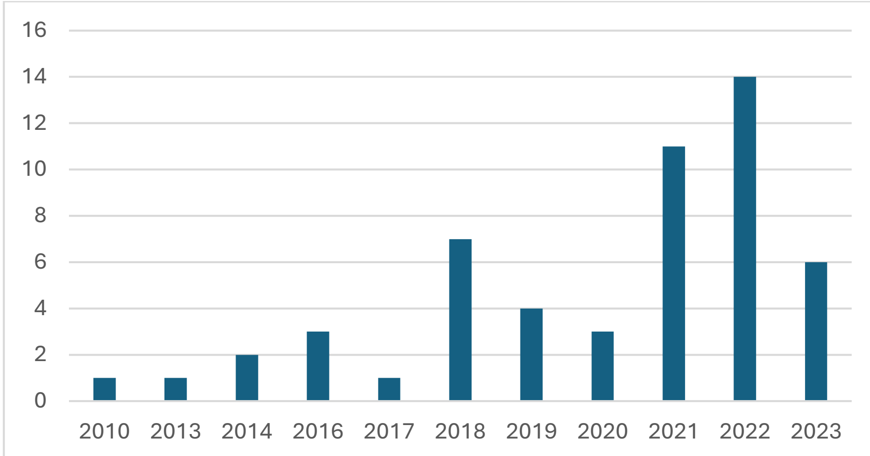


**Figure 1.** Previous Literature based on Year

**The developed themes for sustainability reporting**

The thematic analysis was undertaken, resulting in six main themes: (1) Corporate social reporting, (2) Corporate environmental reporting, (3) Sustainability reporting based on GRI Index, (4) Sustainability reporting – ESG Index, (5) Scoring System (6) Sustainability reporting and Integrated reporting (see Table 4). Based on the results, the themes provided answers to the main research question of this SLR on the extent of sustainability reporting. The background of the selected studies is explained in the table below.

**Table 4.** Previous Literature on Sustainability Reporting

| Author/Theme | CSR | ENV | GRI | ESG | Score | SR & IR |
|---|---|---|---|---|---|---|
| Adamu and Tyasari (2022) | / | | | | | |
| Adel et al. (2019) | / | | | | | |
| Al Maani et al. (2023) | | | / | | | |
| Al-Shaer and Zaman (2016) | | | | | / | |
| Al-Shaer and Zaman (2018) | | | | | / | |
| Alodat et al. (2023) | | | / | | | |
| Alodat et al. (2022) | | | / | | | |
| Amran et al. (2013) | | | | | / | |
| Anazonwu et al. (2018) | | | | / | | |
| Arayssi et al. (2016) | | | | / | | |
| Bananuka et al. (2022) | | | / | | | |
| Bello et al. (2022) | | | | | / | |
| Bravo and Reguera-Alvarado (2018) | | | | / | | |
| Buallay and Al-Ajmi (2019) | | | | / | | |
| Buallay et al. (2020) | | | | / | | |
| Choudhury et al. (2022) | | | / | | / | |
| Cicchiello et al. (2021) | | | / | | | |
| Cosma et al. (2022) | | / | | | | |
| Elafify (2021) | | | | / | | |
| Erin et al. (2021) | | | | | / | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Fernandez-Feijoo et al. (2014) | / | | | | | |
| García-Sánchez and Martínez-Ferrero (2018) | | | / | | / | |
| García-Sánchez et al. (2019) | | | / | | / | |
| Gerwing et al. (2022) | | | | | / | |
| Girella et al. (2021) | | | | | | / |
| Githaiga and Kosgei (2022) | | | | | / | |
| Gurol and Lagasio (2022) | | | | / | | |
| Hasan et al. (2021) | | | | | / | |
| Hernawati (2020) | | | / | | | |
| Injeni et al. (2021) | | | | | | / |
| Jamil et al. (2020) | | | / | | | |
| Kılıç et al. (2021) | | | / | | / | |
| Le et al. (2021) | | / | | | | |
| M. Shamil et al. (2014) | | | | | / | |
| Mahmood and Orazalin (2017) | | | / | | | |
| Malee et al. (2021) | | | / | | | |
| Manning et al. (2018) | | | / | | / | |
| Michelon and Parbonetti (2010) | | | / | | | |
| Önder and Baimurzin (2020) | | | | | / | |
| Ong & Djajadikerta (2018) | | | / | | | |
| Pasko et al. (2021) | | | / | | | |
| Rahman et al. (2023) | | | | | / | |
| Rathnayaka Mudiyanselage (2018) | | | | | / | |
| Stone (2021) | / | | | | | |
| Thun and Zülch (2022) | | | / | / | / | |
| Ting and Lee (2023) | | | / | | | |
| Tran et al. (2021) | | | / | | | |
| Trireksani and Djajadikerta (2016) | | / | | | | |
| Tumwebaze et al. (2021) | | | / | | | |
| Tumwebaze et al. (2022) | | | / | | | |
| Yadav and Jain (2023) | | | | / | | |
| Zahid et al. (2020) | | | | | / | |
| Zumente (2023) | | | | / | | |
| Author/Theme | CSR | ENV | GRI | ESG | Score | SR & IR |

The previous studies mainly used the GRI Index and ESG Index to evaluate the extent of sustainability reporting. The GRI Index identifies items based on three elements, namely economic, environmental, and social aspects. Similarly, the Environmental and Social elements also appear in the ESG Index. However, the difference in ESG is the recognition of elements of governance and not Economic elements. The governance elements are also recognised in companies that use the GRI Index as a foundation for the implementation of sustainability initiatives. This is the approach adopted by regulators to be imposed by Malaysian companies. For sustainability reporting, the thematic analysis was undertaken, resulting in six main themes: (1) Corporate social reporting, (2) Corporate environmental reporting, (3) Sustainability reporting based on GRI Index, (4) Sustainability reporting – ESG Index, (5) Scoring System (6) Sustainability reporting and Integrated reporting.

Gerwing et al. (2022) uses the Disclosure index (DI) to measure sustainability reporting. Disclosure index (DI) is based on the EU CSR Directive (2014/95/EU), “Guidelines on nonfinancial reporting" of the European Commission, German GAAP, GAS 20, and GRI Standards. The DI comprises both formal and content items for capturing Mandatory sustainability reporting quality (MSRQ)

In a study by Rahman et al. (2023), the index also measures Corporate Sustainability (CS). The index, composed of 50 items, covers all three core aspects of CS, namely, environmental, social, and economic sustainability. The selection was preferred over other indices, especially the index of Pucheta-Martinez et al. (2021), composed of 122 items but covered only two CS dimensions: social and environmental sustainability. Furthermore, the employed index is more relevant and appropriate due to its compatibility with the GRI, the SECP's recommended framework for CS reporting in Pakistan. The index used in this study has already been tested and validated in Pakistan and Malaysia (Rahman et al., 2023).

Zahid et al. (2019) adapted the index of corporate sustainability disclosure developed by the authors (Zahid and Ghazali, 2015). The study separates the social dimension of the subject index into social and workplace dimensions. CSD's four dimensions frameworks cover social, environmental, workplace and economic aspects of the subject.

Another study uses a different approach to understand sustainability reporting practices; this study is concerned with the choice of the firm between sustainability and integrated reporting. Agency and institutional-related factors and the heterogeneity of sustainability and integrated report information disclosure are evaluated in this study conducted in Kenya (Injeni et al., 2021). The study shows that the level of SR and IR disclosures is influenced by both agency-related factors (board gender diversity, audit committee independence, block ownership, and the presence of foreign ownership) and institutional-related factors (regulatory pressure and promotional efforts of regulatory and professional bodies [reporting excellence award]).

**The developed themes for board governance**

This section focuses on the effect of board governance in sustainability reporting that includes four main themes: (1) Board independence and diversity, (2) Board size and meeting, (3) Board committee, and (4) Board remuneration. These four themes further produced ten sub-themes (see Table 5). Based on the results, four themes and ten sub-themes provided answers to the main research question of this SLR: what is the influence of board governance on sustainability reporting? The background of the selected studies is explained in the following section.

**Table 5.** Findings (see appendices)

***Board independence and diversity***

The first theme comprises 24 studies conducted on board independence and its influence on sustainability reporting, 11 of which (46%) found that it improves sustainability reporting. Three studies also found that board duality improves sustainability reporting. However, six studies on board duality do not find any influence on sustainability reporting. Board duality aims to enhance the independence of board members since there is separation of power between chairman and CEO. However, this is not achieved in sustainability reporting.

The level of board diversity could also enhance independence by having many board members with diverse backgrounds, including age, gender, nationality, and others. Of the selected articles related to diversity, studies on gender diversity became the area many researchers conducted on board governance, with 31 articles. From these articles, 25 (80%) articles found that the presence of female directors enhances sustainability reporting. Only five articles show no relationship between gender diversity and sustainability reporting. However, Bananuka et al. (2022) found a negative relationship between female diversity and sustainability reporting.

Another diversity element examined is the board's experience with various types of measurements. Nine studies show that board experience ensures improved sustainability reporting. However, Al Maani et al. (2023) found a negative relationship: board experience has reduced sustainability reporting.

Limited studies examine the influence of board nationality (Anazonwu et al., 2018) and age (Cicchiello et al., 2021; Elafify, 2021; Malee et al., 2021) on sustainability reporting. Board nationality does not influence sustainability reporting. For board age, two studies (Cicchiello et al., 2021; Malee et al., 2021) found a positive influence on sustainability reporting, and Elafify (2021) did not see an influence of board age on sustainability reporting.

***Board size and meeting***

The second theme of board governance is board size and meetings. From the selected articles, 23 studies have examined the influence of board size. These articles show that there is a relationship between board size and sustainability reporting. Large board members indicate there are enough members to represent the stakeholders, which could influence sustainability reporting. From the studies under this theme, 17 (73%) articles found that a bigger size can improve sustainability reporting since some board members are represented by stakeholders. However, there are limited studies on board meetings; only four selected studies were conducted on board meetings. As indicated by the number of meetings, board meetings are unable to capture the activity in the boardroom.

The themes also revealed that one study examined board monitoring effectiveness, one study on role performance, and two examined multiple directorships. Multiple directorships can also affect the board's activity in terms of monitoring effectiveness and time commitment. Apart from that, multiple directorships could also affect the independence of the board members since they are involved in different board committees and, at the same time, board members interact with executive members. The purpose of the establishment of a board committee is to strengthen the board members. However, multiple directorships could end up with the same board members involved in the decision-making. The recent good governance recommendation is to have separate meetings between board meetings and board committee meetings, where board members simultaneously serve as board committee members.

***Board committee***

The third theme revealed 16 studies on the board committee, particularly on the audit committee and sustainability committee or CSR committee. Six studies focus on the influence of audit committees on sustainability reporting (Al-Shaer & Zaman, 2018; Buallay et al., 2020; Erin et al., 2021; Hasan et al., 2021; Injeni et al., 2021). Ten studies have been conducted to examine the sustainability or CSR committee (Adel et al.,2019; Al-Shaer & Zaman, 2018; Amran et al., 2013;

Cosma et al., 2022; Gerwing et al., 2022; Kılıç et al., 2021; Tran et al., 2021; Michelon & Parbonetti, 2010; Önder & Baimurzin, 2020; Yadav & Jain, 2023).

Michelon and Parbonetti (2010) found that the positive influence of CSR committees is moderately significant in the influence of sustainability reporting. In contrast, Önder and Baimurzin (2020) state that the sustainability committee has a negative relationship, which indicates that the sustainability committees reduce sustainability disclosure of the companies. This study was conducted on companies on the Istanbul Stock Exchange and recommends that the board of directors consist of influential community leaders to increase sustainability disclosures.

A study by Yadav and Jain (2023) states that establishing CSR committees is required by company law in India. The studies show that CSR committees enhance sustainability reporting. However, the study does not examine based on the regulatory requirements which could affect the influence of sustainability reporting. Business Responsibility Reporting and Sustainability Report (BRSR) was introduced in 2021 and has ESG reporting standards. With this, reporting is mandatory for India's top 1,000 publicly listed companies. In addition, the Companies Act of 2013 and the Ministry of Corporate Affairs (MCA) require publicly traded companies to establish a CSR committee and include detailed BRSR in their annual reports. The authors also highlighted that the CSR committee tends to focus more on the social and governance pillar of ESG rather than be more concerned with the environmental pillar of ESG.

***Board remuneration***

The final theme shows limited studies conducted for board remuneration. Only two studies examine the influence of board remuneration on sustainability reporting (Gerwing et al., 2022; Malee et al., 2021). According to Gerwing et al. (2022), mandatory sustainability reporting quality (MSRQ) in Germany is positively associated with the sustainability remuneration of the executive board. The researcher used sustainability remuneration to explain the variable related to the remuneration reward linked with CSR. The study found that firms can improve sustainability reporting by integrating sustainability components in the executive board remuneration system. The researcher believes that the reason for this improvement is that the managers attempt to show, through the quality of mandatory sustainability reporting, that they meet the expectations to further enhance the firm’s sustainability performance and lead to an increase in their remuneration.

Another study from Thailand found that compensation motivation affects sustainability disclosure. The study employs the sum of the board of directors’ compensation divided by the total number of board members. Therefore, the study maintains that an increase in compensation could motivate people to improve their financial performance. Based on this, the researcher concluded that it impacts corporate sustainability, particularly in improving economic stability. This study takes a simplistic approach, which differs from the study by Gerwing et al. (2022), which investigates an executive board remuneration system that integrates sustainability components within the system.

## IMPLICATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

Several implications resulted from this study. Companies need to ensure that true information about sustainability initiatives reaches their stakeholders with standardised, balanced, sustainable reporting. Therefore, good board governance practices ensure the integrity of information through disclosure transparency and regulation. Board governance needs to be enhanced and requires further investigation by researchers in this field. However, the review concluded that the influence of board governance is not addressed holistically; many studies considered board diversity, which focuses on specific areas only, especially gender diversity. Difference countries approach female leadership differently; therefore, cultural aspects need to be considered since there are differences in understanding the role of women. There are views that women should be appointed based on their merit and qualifications so that they can carry out their responsibilities accordingly. The company can take an approach that advocates justice in the selection process of the board of directors and does not discriminate and compromise performance based on gender. Most of the studies on gender diversity that were conducted evolved from single variables, i.e., the number of female directors, into the qualifications and expertise of female directors. This could identify the effect of other aspects and determine the effects on sustainability reporting. This is important because of the dynamic of the board in influencing the sustainability reporting.

Many studies show the presence of women directors could improve sustainability reporting, given the implications of the changes in regulation to include women as members of the board. In order to achieve this requirement, many companies emphasise the need for women to be trained and prepared to fit in the position. Therefore, the board succession planning process should take into account the firm commitment to gender diversity. This is because the selected female directors should meet the standards and expectations associated with the duties and responsibilities of directors. They should be recruited based on merit, rewarded for performance, and compensated based on results; the bar of expectation remains constant and similar to their male counterparts. If the female director is unable to meet the expectations, then they are not supposed to be selected. In meeting the requirement for female directors, companies still need to seek out women of the highest calibre rather than those who have benefited from special treatment. Shareholders may choose individuals with merit and experience that are suitable for the firm's needs and anticipate profitable results from this appointment, not solely depending on gender. In addition, the review concluded that strengthening board independence provides significant benefits and eventually enhances corporate sustainability reporting practices. Therefore, it is crucial to ensure board independence in the selection and appointment process of board members. In addition, the board evaluation should be embedded with an effective assessment process of the board's ability to remain independent.

The review also found that larger boards typically include members with expertise and experience in sustainability reporting, as well as representatives of the firm’s stakeholders. This composition contributes to the promotion of enhanced sustainability reporting. The board evaluation should also be based on the conduct of board meetings and board committee meetings. The smaller size may indicate it is difficult to have enough numbers of a combination of executive and non-executive board members. This is true for larger corporations since the complexity of the business requires a diverse background and experience. Since larger corporations need to deal with the complexity of business, the establishment of board committees could enhance the quality of decision-making in terms of providing independent judgement. In relation to this, the review found that two board committees, the audit committee and the sustainability committee, were established mainly to oversee issues relating to sustainability reporting. Based on these findings, the company must ensure that the board committee is able to maintain its independent elements. This includes strengthening the percentage of independent board members in the sustainability committee and observing the requirements for board tenure.

Past studies focus on the influence of board remuneration on financial reporting and earnings management. However, new and emerging research trends also link executive remuneration with sustainable performance and the existing arrangement of remuneration linked to financial performance. The regulators began to realise the importance of embedding sustainability performance in the reward system. The implication of these studies can be seen in the changes in the policy that determine the board remuneration package. Sustainability elements to be included as part of the board remuneration is relatively new and voluntary; therefore, studies are needed to see the influence of these elements in improving sustainability reporting.

The review revealed that the themes related to board ownership have been less evaluated than other themes. Since limited research has been conducted to review and examine the elements related to ownership and remuneration, researchers should explore further the influence of these elements on the extent of sustainability reporting. Likewise, for place attachment, scholars should examine how culture and local regulatory frameworks relate to strengthening the board governance practices and sustainability approaches adopted by these countries. Furthermore, government agencies, the private sector and other interested parties must examine how the companies can ensure the quality of sustainability reporting. The stakeholders need to have sufficient information since they need to respond to the impacts of the sustainability action taken by companies.

Based on SLR, several research gaps were identified. First, there is a need to understand the culture that shapes the board governance practices in an organisation since one size does not fit all. Second, there is a need to understand the effective governance set-up that could influence the extent of sustainability reporting. Furthermore, the regulatory context must be addressed since it dictates every company's voluntary or compulsory act. Some compulsory practices do not reflect the effectiveness since the intended outcome from the regulation is not properly understood and internalised. For example, the exemplary governance practices in South Africa portray different governance perspectives that suit the culture and traditions of their countries; German countries and Japanese countries have adopted their own concept and belief systems for centuries. Studies should celebrate diversity in approach and not be confined only to Anglo-Saxon-based theories when evaluating governance practices.

Many studies use Anglo-Saxon theories as a basis of explanation and discussion, which were originally derived from a Western context. The concept introduced in these existing theories may need to be refined further, especially for studies conducted in Eastern Countries. The reason is that in other cultures, mostly in Asia, rich traditions create collective virtues and values where society voluntarily submits to the tradition without feeling oppressed and forced towards certain beliefs. It is celebrated and accepted by the society. The concept belongs to this tradition, which acknowledges diversity and differences among multicultural societies. From this diverse cultural diversity, the board creates a group culture of its own and may give different identifications and identities to board governance practices in a corporation.

This study revealed that the methodological approach used was mainly quantitative. The gap can be narrowed if future scholars focus on conducting qualitative and mixed-method approaches. The empirical data illustrated by a quantitative research design can be extended into qualitative research, demonstrating the benefits of qualitative and mixed-method research design.

Future research on board governance influence on sustainability reporting should focus on the sustainability reporting approach that acknowledges the diverse backgrounds and histories of Eastern countries. Since sustainability is a global agenda, the cultural aspect cannot be ignored since it involves many countries with different histories and traditions. It is important to mention that some board governance practices in one firm were unsuitable for another firm. Firms that operate in a culturally diverse environment may require further investigation since board governance varies in different cultural settings. In addition, many companies that produce sustainability reports may have different interpretations of what constitutes environmental, social, and economic development based on their cultural setting and traditions. The implication is that studies on board governance and sustainability reporting must include studies on the elements unique to its values, culture, and traditions.

## CONCLUSION

The selected studies provide evidence that board governance could influence the quality of sustainability reporting. The present study has systematically reviewed previous studies related to the influence of board governance on the extent of sustainability reporting. By adopting this approach, any claims of rigour in some of these studies can be challenged, allowing for the identification of gaps and providing opportunities for future study. In this study, 53 articles were appraised for their quality. The review depends on the key search based on the research question. The thematic analysis was conducted on the 53 articles, resulting in four themes: (1) Board independence and diversity, (2) Board size and meeting, (3) Board committee, and (4) Board remuneration. Sound corporate governance indicates that the company's information is well maintained, managers are properly monitored, and the stakeholders' interests are prioritised (Michelon & Parbonetti, 2010). One of the main governance mechanisms that ensures these are achieved is a board of directors that oversees disclosure strategies and policies in corporate reports.

The conclusion of the review shows the importance of board attributes and characteristics that could influence sustainability reporting. However, further investigation is needed as board governance practices vary significantly across different cultural contexts. Especially, future study that examine gender diversity, where some countries still assume the traditional values of women in workforce. The review also concludes that the extent of sustainability reporting depends on the legal requirements imposed on the companies. It is interesting to conduct further studies based on legal perspectives. Particularly in South Africa, they have advanced approaches to promoting integrated reporting and have made it compulsory for companies to prepare it. Whereas in other countries, integrated reporting is voluntary. When it come to sustainability reporting, companies not obliged to adhere to any standardised reporting practices, leading to varying interpretations of environmental, social, and economic development. Companies may adopt their own interpretations of environmental, social, and economic development. It could be based on their values and traditions.

Nevertheless, this study has several limitations; due to the limited access to these databases, only two databases were used, namely Scopus and Web of Science. Secondly, the quality appraisal process relies on the authors' examining the quality. It was anticipated that the articles would highlight more articles reviewed that emphasised quality assessment tools. The review suggests a standard systematic review method that could guide research synthesis in the context of sustainability reporting. Lastly, a complementary searching technique such as bibliometric analysis, scoping review, and expert review should be conducted.

Future studies focusing on a systematic review of sustainability reporting should incorporate additional factors that could enhance the reliability and credibility of the review process. The articles reviewed in this study are limited to two main databases, i.e. Scopus and Web of Science; future research should consider extending to other related databases to broaden the literature search. Despite this limitation, the articles selected from these leading databases can offer valuable insights and align with the purpose of the review regarding the influence of board governance on sustainability reporting.

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## *Appendices*

Table 5: Findings

| | BDM | BDZ | BIN | BDV - EX | BDV – NT | BDV - FM | BDV - AG | Duality | BRM | OCN | ODR | OFR | BME | MDIR | ACM | ACIN | ACEX | ACZ | ACFM | SC | FRZ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adamu and Tyasari (2022) | | + | no | | | no | | | | | | | | | | | | | | | |
| Adel et al. (2019) | | | - | | | + | | | | | + | | | | | | | | | + | + |
| Al Maani et al. (2023) | | + | no(%&num) | - | | | | no | | | | | | | | | | | | | + |
| Al-Shaer and Zaman (2016) | + | + | | | | + | | | | | | | | | | | | | | | |
| Al-Shaer and Zaman (2018) | + | + | | | | | | | | | | | | | + | + | + | | | +int | |
| Alodat et al. (2023) | | | | | | | | | | | | | | | | | | | | | |
| Alodat et al. (2022) | | | | | | | | | | | | | | | | | | | | | |
| Amran et al. (2013) | | No | no | | | No | | | | | | | | | | | | | | + | |
| Anazonwu et al. (2018) | | | +num | | no | + | | | | | | | | + | | | | | | | |
| Arayssi et al. (2016) | | - | | | | + | | | | | | | | | | | | | | | |
| Bananuka et al. (2022) | | | | | | - | | | | | | | | | | | | | | | |
| Bello et al. (2022) | | + | | | | + | | | | | | | | | | | | | | | |
| Bravo and Reguera-Alvarado (2018) | | | | | | | | | | | | | | | | | | | + | | |
| Buallay and Al-Ajmi (2019) | | | | | | + | | | | | | | | | | | | | | | |
| Buallay et al. (2020) | | | | | | | | | | | | | | | + | + | - | + | | | |
| Choudhury et al. (2022) | | + | no | | | + | | + | | | | | | | | | | | | | |
| Cicchiello et al. (2021) | | No | | | | + | + | + | | | | | | | | | | | | | |
| Cosma et al. (2022) | | | | | | | | | | | | | | | | | | | | + | |
| Elafify (2021) | | + | + | | | | no | | | | | | | | | | | | | | |
| Erin et al. (2021) | | + | no | + | | + | | | | | | | | | + | | + | + | | | |
| Fernandez-Feijoo et al. (2014) | | | | | | + | | | | | | | | | | | | | | | |
| García-Sánchez and Martínez-Ferrero (2018) | | | | | | + | | | | | | | | | | | | | | | |
| García-Sánchez et al. (2019) | | | + | | | | | | | | | | | | | | | | | | |
| Gerwing et al. (2022) | | | | | | +sv noex | | | + | | | | | | | | | | | + | |
| Girella et al. (2021) | no | + | + | | | | | | | | | | | | | | | | | | |
| Githaiga and Kosgei (2022) | | - | + | + | | + | | | | | | | | | | | | | | | |
| Gurol and Lagasio (2022) | | + | + | | | + | | | | | | | | | | | | | | | |
| Hasan et al. (2021) | | | | | | + | | | | - | | - | | | | - | | + | | | |
| Hernawati (2020) | | | | | | | | | | | | | + | | | | | | | | |
| Injeni et al. (2021) | | | - | | | + | | | | no | | | | | | +/noIR | | | | | |
| Jamil et al. (2020) | | | | +Tr/Ex | | | | | | | | | | | | | | | | | |
| Kılıç et al. (2021) | | + | | | | + | | | | | | | | | | | | | | + | + |
| Le et al. (2021) | | | | +osty/noowe | | | | | | | | | | | | | | | | | |
| M. Shamil et al. (2014) | | | | | | | | | | | | | | | | | | | | | |
| Mahmood and Orazalin (2017) | | + | no | | | + | | | | | | | | | | | | | | | |
| Malee et al. (2021) | | | | +eng | | | + | | +Lcom | | | | | | | | | | | | |
| Manning et al. (2018) | | | + | +csr | | + | | | | | | | | | | | | | | | |
| Michelon and Parbonetti (2010) | | | no | +coinf | | | | no | | | | | | | | | | | | +mod | |
| Önder and Baimurzin (2020) | | - | - | +coinf | | | | | | | | | | | | | | | | - | |
| Ong & Djajadikerta (2018) | | | + | | | + | | | | | | | | + | | | | | | | |
| Pasko et al. (2021) | | + | + | | | No | | no | | | | | | | | | | | | | |
| Rahman et al. (2023) | | | +fm | +fm | | +num | | | | | | | | | | | | | | | |
| Rathnayaka Mudiyanselage (2018) | | + | + | | noeth | + | | no | | | no | | | | | | | | | | |
| Stone (2021) | | | | | | | | no | | | | | | | | | | | | | + |
| Thun and Zülch (2022) | | | | | | | | +cso | | | | | | | | | | | | | |
| Ting and Lee (2023) | | | +plcon | | | | | | | | | | | | | | | | | | |
| Tran et al. (2021) | | + | | | | + | | | | + | | | | | | | | | | + | |
| Trireksani and Djajadikerta (2016) | | + | no | | | No | | | | | | | | | | | | | | | |
| Tumwebaze et al. (2021) | | | | | | | | | | | | | | | +ACE | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Tumwebaze et al. (2022) | +role | | | | | | | | | | | | | | | | | | | | | |
| Yadav and Jain (2023) | | no | no | | | No | | no | | | | | | | | | | | | | + | |
| Zahid et al. (2020) | | | | | | + | | | | | | | | | | | | | | | | |
| Zumente (2023) | | + | | | | + | | | | | | | | | | | | | | | | |
| | BDM | BDZ | BIN | BDV - EX | BDV – NT | BDV - FM | BDV - AG | Duality | BRM | OCN | ODR | OFR | BME | MDIR | AC-M | AC-IN | AC-EX | AC-Z | AC-FM | SC | FRZ |

NOTE:
BMT: Board Meeting, BDZ: Board Size, BIN: Board Independence, BDV – EX: Board Diversity (Expertise), BDV – NT: Nationality, BDV – FM: Board Diversity (Female), BDV – AG: Board Age, Duality: CEO Duality, BRM: Board Remuneration, OCN: Ownership concentration, ODR: Board ownership, OFR: Foreign ownership, BME: Board Monitoring Effectiveness, MDIR: Multiple Directorship, AC-M: Audit Committee Meeting, AC-IN: Audit Committee Independent, AC-EX: Audit Committee Expertise, AC-Z: Audit Committee Size, AC-FM: Audit Committee Female, SC: Sustainability Committee/CSR Committee, FRZ: Firm Size

<u>BOARD GOVERNANCE:</u>
(1) Board meeting, size, (2) Board diversity, (3) Board independence, tenure, duality, multi-directorship, monitoring effectiveness, (4) Board committee (AC, SC), (5) Board remuneration, (6) Owner