THE IMPACT OF CORPORATE GOVERNANCE ON THE INTEGRATED REPORTING QUALITY OF INDONESIAN LISTED FIRMS: MODERATING ROLE OF CSR DISCLOSURE AND CORPORATE SUSTAINABILITY

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—Abstract—

The primary objective of this study is to investigate the direct effect of corporate governance on the integrated reporting quality of Indonesian companies. In addition, the current study seeks to determine how CSR disclosure and corporate sustainability can
mitigate the effect of corporate governance on the integrated reporting quality of Indonesian listed enterprises. From 2018 to 2022, the IIRC framework is utilized to analyze 142 Indonesian listed corporations, and a composite index based on the Indonesian Corporate Governance Perception Index is employed to assess corporate governance. Environmental, social, and governance (ESG) scores are used to evaluate corporate social responsibility (CSR) reports and the long-term survival of businesses. The study's findings are consistent with the anticipated outcomes, and the results indicate that publicly traded Indonesian companies can significantly enhance their integrated reporting by focusing on corporate governance. In addition, the study found that CSR disclosure and corporate sustainability mitigate the favorable association between corporate governance and integrated reporting quality. When organizations have high levels of CSR disclosure and corporate sustainability, the favorable influence of corporate governance on the quality of integrated reporting is strengthened, according to the findings. These findings suggest that efforts to improve corporate governance practices in Indonesian companies, particularly in the areas of transparency, accountability, and responsibility, all of which contribute to the quality of integrated reporting, and companies that invest in CSR initiatives by making corporate sustainability a top priority are more likely to produce high-quality integrated reports, which may inspire greater confidence among stakeholder groups. Our research contributes to IR, CG, CSR disclosure, and CS literature. It gives light on how policymakers, practitioners, and academics might improve the quality of IR in Indonesian-listed enterprises.

**Keywords**: integrated reporting, corporate governance, CSR disclosure, corporate sustainability, Indonesia.

1. **BACKGROUND**

Due to restrictions such as the absence of non-financial information, short-termism, lack of coherence, and complexity, traditional corporate financial reporting struggles to keep up with the reporting requirements of the postmodern business environment. The business landscape is changing, and many previously unknown or unimportant things have begun to play a critical role. They have taken the form of crucial pieces of information for stakeholders. To overcome the limits of traditional reporting methodologies, academics have seen a paradigm shift in corporate reporting. As a result, integrated reporting (IR) has arisen and gained popularity as a fresh approach to corporate communication (Soriya & Rastogi, 2022). IR, one of the many statutory and discretionary types of corporate reporting, has rapidly grown as a new accounting technique to aid firms in comprehending how they create value and communicating with external stakeholders (de Villiers & Dimes, 2022). IR necessitates disclosing information and data regarding the environment, society, and government, all within the context of a single document (Lakshan et al., 2022). IR stresses the links between the financial and non-financial factors of a company's performance based on a broad concept.
of integration, which goes beyond merely integrating sustainability reporting. These linkages are founded on the notion that financial and non-financial elements influence a company's performance. Thus, IR has evolved into a new kind of corporate reporting due to its promotion of integrated thinking within organizations and strong cross-departmental collaboration to boost the firm's value output. Even though IR has grown in popularity, authors have no agreement over its definition. There is a common belief that the IRQ is a competence of IR that considers and describes in depth all strategic components.

Corporate governance refers to the framework of rules and regulations by which businesses are governed and managed to strike a fair and equitable balance between the interests of the company's various constituencies, such as its shareholders, managers, clients, vendors, creditors, regulators, and citizens (CG). This phrase is used to describe the set of rules and regulations that govern and manage businesses. The CG structure shows how the organization's objectives are realized and how authority is distributed among the group's many components. As previously said, the IRQ often refers to the ability of IR to convey strategic factors that reflect a firm's performance and the value it generates. Therefore, it is of the utmost importance to have a thorough awareness of the structures and practices of CG, as they illuminate how organizations are led and managed (Casonato et al., 2019). When a company's governance is structured correctly, the company's strategy may be produced with a more holistic perspective. This enables the seamless absorption of several aspects contributing to the company's value, thereby enhancing its productivity and efficiency.

Similarly, it requires a company to demonstrate the interdependence of the value drivers inside its operations and provides vital monitoring for the value generation process. So, we can argue that a robust CG framework will improve value creation in organizations and pave the way for IR to deliver valuable data. We would prepare IR to provide high-quality content (Cooray et al., 2020).

Sustainability in an ecosystem negatively impacted by variables is currently one of the most significant and pressing concerns (Ruiz-Lozan et al., 2022). Due to its expanding significance, it has become a research subject garnering a significant amount of interest. Sustainability is an organization's capacity to provide for current and future generations without jeopardizing its operations (Dzhengiz & Niesten, 2020; Hakimah et al., 2019; Pratama et al., 2020). It consists of three distinct components; therefore, every company implementing a sustainability plan must examine all three elements (Gazzola et al., 2020). SR is committed to giving details regarding a company's environmental and social activities, as well as its objectives and public image (Lubis et al., 2019; Pratama et al., 2019; Romero et al., 2019). It allows entities to match their beliefs, performance, and operations with sustainability's mission. It accomplishes this by enabling entities to match their beliefs, performance, and processes with sustainable development (Zimon et al., 2020). While some companies publish a separate report on their CSR operations,
others include a small section on their sustainability initiatives within their annual report (Barauskaite & Streimikiene, 2021).

Sustainability reporting is becoming increasingly vital to business transparency and responsibility in Indonesia. Recent research indicates that around sixty percent of Indonesian publicly traded corporations issue sustainability reports, showing a rising commitment to ESG performance. According to the survey, the bulk of sustainability reports published by Indonesian corporations focuses on environmental concerns, such as energy efficiency and greenhouse gas emissions. According to the study, most sustainability reports issued by Indonesian corporations focus on environmental concerns, such as energy efficiency and greenhouse gas emissions. In addition, the Indonesian government has promoted sustainability reporting by mandating the publication of sustainability reports as part of annual financial reporting by publicly traded corporations. Also, the Indonesia Stock Exchange offers information and assistance to companies seeking to enhance their sustainability reporting processes.

IR is a reporting strategy that strives to provide a more comprehensive picture of a company's performance, governance, and sustainability. As listed companies in Indonesia see the benefits of giving stakeholders a more comprehensive perspective of their activities, IR is gaining popularity. The Indonesia Stock Exchange has made IR mandatory for listed businesses, highlighting the significance of this reporting in the nation. Typical IR themes in Indonesia include financial performance, corporate governance, social and environmental impact, and strategy. The objective is to offer stakeholders more information about a company's performance and future prospects, taking financial indicators and non-financial elements such as sustainability, reputation, and risk management into account.

In the literature, CG and its effect on the quality of IR have garnered considerable attention. Despite increased studies, the moderating influence of CSR (CSR) disclosure and firm sustainability on the relationship between CG and IR quality remains unclear. Further research is required to examine the effect of CSR disclosure, and corporate sustainability on the influence of CG on the quality of IR in Indonesian publicly traded companies. This study intends to fill a gap in the literature by analyzing the moderating effect of CSR disclosure and corporate sustainability on the link between corporate governance (CG) and investor relations (IR) quality in Indonesian listed businesses.

2. UNDERPINNING THEORIES

2.1 Stakeholder Theory

According to the stakeholder hypothesis, organizations may enhance their reputation and performance by catering to their stakeholders’ requirements (Shah & Guild, 2022). The thesis suggests that a company’s legitimacy and long-term success depend on its ability to meet shareholder expectations (Ashrafi et al., 2020). As a result of the global financial
crisis of 2008, shareholders assessed firms' long-term profitability and sustainability (Marbun et al., 2020; Pratami et al., 2022; Sivaprasad & Mathew, 2021). Annual reports must therefore contain a higher quantity of non-financial information, like as governance, social concerns, environmental issues, and sustainability (Santamaria et al., 2021). Disclosure of sustainability facilitates the achievement of IR’s goal of providing comprehensive and understandable information (Amar et al., 2020; Kamotho et al., 2022; Nu'man et al., 2020). Investors and other stakeholders rely on integrated reports because they honestly depict a company's social, environmental, and ethical activities. According to the IR framework, the integrated account benefits financial capital providers, customers, suppliers, workers, business partners, legislators, and politicians. To satisfy firm stakeholders, IR must explain and reveal value-added distribution; this additional value may be used for practical and efficient reporting, hence improving stakeholder participation in IR (Saragih et al., 2020; Hamad et al., 2014; Utami et al., 2019). The company is an example of rational value maximization for IR stakeholder engagement (Parrot & Tierney, 2020). Several companies across the globe have implemented IR to meet their stakeholders' needs and create long-term value. They issued a new integrated report or included IR framework content parts in their previous annual reports to accomplish this.

2.2 Agency Theory

Agency theory claims that misalignment between the owner (principal) and management (agent) results in a cost known as agency cost. Much prior research (Dong et al., 2021; Zhang et al., 2020) have found that despite enterprises' constant efforts to give more performance data, a large information gap exists between the principal and agent. Increasing corporate transparency so investors may conduct unbiased, in-depth reviews of the company's activity is one of the essential tools for tackling this problem (Pratama et al., 2019; Silitonga et al., 2020; Zhang & Yang, 2021). Corporate reporting transparency refers to the degree to which third parties can access sufficient information to evaluate an organization's operations and performance (Raimo et al., 2021). Voluntary disclosure of a company's data is helpful because it reduces information asymmetry and the agency problem and suggests higher operational quality, all of which contribute to greater economic efficiency (Tran, 2022). By capitalizing on these developments, a company's value creation process may be able to assist it in overcoming a lack of openness, minimize information asymmetries, and fulfill its commitments to its shareholders (Ruiz-Lozano et al., 2022).

3. LITERATURE REVIEW

3.1 Corporate Governance (CG)

According to Marzouqi et al. (2021), corporate governance (CG) is the system of principles, procedures, and laws that control and supervise a corporation, aiming to strike a balance between the interests of the company's various stakeholders. The
structure of the CG describes the processes that must be followed to achieve the organization's goals, as well as the distribution of rights and responsibilities among the many stakeholders. The following is a list of significant components of the CG code:

**Board Composition:** The board of directors plays a significant role at CG because they are responsible for evaluating the company's management and ensuring that it protects the interests of all its stakeholders (Furlotti & Mazza, 2020). The board of directors should include independent directors, who are not part of the company's management, and executive directors, who are part of the management (PeiZhi, & Ramzan, 2020). Independent directors can contribute to ensuring that the company's activities are consistent with the needs of all of its stakeholders by bringing a fresh viewpoint to the board.

**Board Size:** Some experts argue that smaller boards are more effective, but others argue that larger boards with greater diversity are preferable (PeiZhi, & Ramzan, 2020). Businesses with smaller boards are typically more agile, as decisions can be made swiftly and effectively, whereas larger boards offer a broader range of skills and experience. Yet, larger boards can be more challenging to manage due to the possibility of clashing ideas and perspectives.

**Audit Committee:** The board of directors plays a significant role at CG because they are responsible for evaluating the company's management and ensuring that it protects the interests of all its stakeholders (Furlotti & Mazza, 2020). The board of directors should include independent directors, who are not part of the company's management, and executive directors, who are part of the management (PeiZhi, & Ramzan, 2020). Independent directors can contribute to ensuring that the company's activities are consistent with the needs of all of its stakeholders by bringing a fresh viewpoint to the board.

**Ownership Structure:** The company's ownership structure is crucial to CG. A firm may be owned by an individual, a small group, or the public at large. Closed or private corporations have one or a small number of stockholders (Khan et al., 2020). Typically, the proprietors of such companies have considerable power over all elements of corporate policy and management.

As stakeholders play a vital part in preparing the report, IR also requires good stakeholder engagement. It is essential for businesses to engage in dialogue with key stakeholders, such as customers, suppliers, and communities, to gain a deeper understanding of the requirements and expectations that these groups have of the company and to ensure that the information contained in the integrated report is relevant and helpful to these stakeholders.
3.2 Integrated Reporting (IR)

IR is a form of corporate reporting that provides a holistic perspective of a company's performance and its impact on the economy, society, and environment (Almagtome et al., 2022). It combines many data types, such as information on sustainability, CSR, and governance, to create a complete view of the company's operations and their effect on stakeholders. Critical to the effectiveness of IR is its quality, which defines the level of trust and confidence stakeholders have in the information provided by the organization (Chouaibi & Hichri, 2021). A comprehensive report should include easy-to-understand, reliable information pertinent to stakeholders. The materiality of the presented information is a crucial component of an integrated account. Material information is data pertinent to stakeholders and influences their decision-making (Dyczkowska & Fijakowska, 2022; Cooray et al., 2020). The amount of consistency and comparability of the delivered information is an additional significant aspect of IR quality. So that stakeholders can watch the company's performance and evaluate its development, businesses should give consistent and comparable information throughout time. This can aid in establishing trust and credibility with stakeholders, as they can observe the company's performance over time and how it responds to setbacks.

3.3 CG and IR Quality

The objective of the integrated report is to present a more comprehensive perspective of the company and the variables that contribute to the organization's performance to the various stakeholders (Manes-Rossi et al., 2021). The conventional view is that CG is concerned with the several ways in which shareholders of a corporation might be safeguarded against financial loss. As a result of the separation between ownership and management in contemporary firms, the SEC's founding mission was to protect shareholder interests. In exercising oversight over the company's top management, the board of directors is essential to maintain proper CG levels (Aladwey et al., 2022). Formal talks on CG have focussed on shareholder interests, while a more current perspective considers the interests of employees, suppliers, and other firm stakeholders. Recent improvements in corporate accountability have resulted in the assumption that CG covers characteristics formerly attributed to CSR (Zaman et al., 2021). This perception is based on the fact that these developments result from recent improvements in corporate accountability.

Much empirical research (Khuong & Anh, 2022; Cooray et al., 2020) has investigated the relationship between CG and the quality of corporate reporting. In most of these studies, an index based on qualitative features or rules and regulations, such as the Global Reporting Initiative (GRI), was usually employed to evaluate the quality of the reports (Elsiddig Ahmed, 2020). Regarding the CG variables and the numerous elements of reporting quality, the research mentioned above reached several distinct conclusions. Guping et al. (2020) concluded that the involvement of non-executive directors increased CSR reporting. And while several studies have found no association between
board size and sustainability reporting (Ong & Djajadikerta, 2020), the board of directors is accountable for ensuring that the firm is conducted in a way that benefits all stakeholders. Several studies (Khuong & Anh, 2022; Cooray et al., 2020) have concluded that the board of directors involved in the reporting process has a positive link with the quality of the integrated reports produced. When the board of directors actively supervises the integrated report's development, it helps ensure that the supplied information is correct, appropriate, and of high quality. The quantity of information made available by the company is yet another crucial component of CG. According to several studies, companies with more information in their integrated reports tend to provide higher-quality reports (Pondrina et al., 2022; Tang & Hastuty, 2022; Vitolla et al., 2020). This is because disclosure increases the transparency of the organization's activities and provides stakeholders with the information they need to make decisions based on factual information. Companies that are more transparent with data are more likely to be held accountable for their actions.

The absence of a globally accepted definition of what constitutes high-quality IR is one of the most significant barriers that must be surmounted when seeking to analyze the impact of CG on the quality of IR. There have been numerous attempts by research to define and quantify the quality of IR. However, these definitions and measures are highly inconsistent. Due to this, it is impossible to compare the results of different studies and draw definitive conclusions regarding the effect of CG on the quality of IR.

In conclusion, the research reveals that CG positively impacts the quality of IR, leading us to the following conclusion: Companies with efficient CG procedures can frequently generate higher-quality integrated reports. Key variables that contribute to the quality of IR include the function of the board of directors, the extent to which the company provides relevant information to the public, and the extent to which the organization engages with its numerous stakeholder groups. On the other hand, additional research is necessary to establish a more thorough understanding of CG's impact on the quality of IR. This would entail the creation of more standard definitions and measures of the quality of IR, as well as the investigation the mechanisms behind the relationship between CG and the quality of IR. In addition, this would necessitate the creation of more uniform definitions and metrics for IR quality. A growing body of literature has investigated the relationship between CG and the quality of IR; hence, the present study intends to summarize the existing information on the impact of CG on the quality of IR and disclose fresh findings on an Indonesian sample. Recent research has demonstrated that businesses with excellent CG practices are more likely to create high-quality integrated reports. For instance, companies with independent board members and a high level of disclosure tend to have higher-quality combined reports. This is because independent directors provide a new viewpoint to the organization and ensure that the company's operations align with all stakeholders' interests.
3.4 The Moderating Role of CSR

Both CSR and CG have received widespread recognition as essential components that influence the precision of financial reporting and the lifespan of businesses (Popescu et al., 2019). CSR disclosure is the voluntary sharing of information about a company's social and environmental performance and effects. In contrast, CG refers to the rules, procedures, and processes used to manage and regulate a business (Monteiro et al., 2021). It has been discovered that both CSR disclosure and CG have a positive impact on the quality of financial reporting; furthermore, it is thought that combining the two will enhance the quality of IR. Hence, it provides a more comprehensive view of the present and future of an organization. Integrated reporting is an alternative term for IR (Dumay et al., 2019). Others contend that firms with better IR would be more open and accountable, and stakeholders would have a clearer understanding of the company's present and future possibilities. Research on the subject indicates that CG and IR quality are strongly associated.

In contrast, most of these studies have focused on the relationship between CG and IR quality, ignoring the potential that CSR disclosure moderates this relationship (Aray et al., 2021). Thus, no research examining how CSR disclosure may undermine the relationship between CG and IR quality. It has been demonstrated that CSR disclosure moderates the relationship between CG and IR quality. Even though CSR disclosure may increase the credibility of IR and the quality of financial reporting, it is believed to moderate the relationship between CG and IR quality. CSR disclosure may communicate a corporation's social and environmental performance and implications, enhancing stakeholder confidence in the company's reporting. Moreover, CSR disclosure may augment IR by supplying additional information regarding a company's long-term health and prospects.

In addition, CSR disclosure can help better align the firm's interests with its stakeholders. By revealing a company's social and environmental performance and consequences, CSR disclosure can help guarantee that its actions align with its stakeholders' interests. This can boost the quality of IR and the firm's transparency and responsibility.

3.5 The Moderating Role of Corporate Sustainability (CS)

Corporate sustainability (CS) and corporate governance (CG) are two fundamental concepts that have a significant impact on the quality of financial reporting and the sustainability of enterprises (Madaleno & Vieira, 2020). Corporate sustainability refers to an organization's balancing economic, social, and environmental factors. In contrast, CG refers to the rules, policies, and procedures by which an organization is led and managed. The combination of CS and CG is believed to increase the quality of IR.

The moderating function of CS refers to the impact of CS on the relationship between CG and IR quality (Chouaibi et al., 2022). It is believed that CS moderates the
relationship between CG and IR quality since it can enhance the credibility of both IR and financial reporting. CS can provide stakeholders with crucial information about a company's social and environmental performance and effects, enhancing their trust in the company and its reporting. CS may also provide additional information on a company's sustainability and prospects, so expanding the scope of IR. GRI is the most widely recognized SR standard reporting on Sustainable Principles and Practices (Aladwey et al., 2022).

The GSSB, a GRI-affiliated independent organization, is producing these suggestions. GRI is a non-profit organization in charge of the G4 Guidelines and GRI SR Standards. These criteria are meant to encourage organizations to report both positive and negative impacts on sustainable development more transparently and honestly. These guidelines may assist organizations in seeing threats and opportunities, making better strategic decisions, mitigating risks, and developing solid relationships with their stakeholders (Popescu et al., 2019). It applies to businesses of any size, sector, or country. Before they can be implemented, all global standards must meet a set of prerequisites, including a solid foundation, broad disclosures, and a systematic approach to management. Second, the most significant aspects are monetary, ecological, and social. Companies may apply all of these criteria for reporting, or they may select specific ones to disclose specific categories of data. According to research by Rajic et al. in 2022, GRI is the preferred reporting standard for corporate responsibility among big firms in over one hundred countries.

CS may also improve the alignment of the organization's interests with its stakeholders. By sharing information about a company's social and environmental performance and impacts, CS can ensure that its operations align with its stakeholders' interests. This may help to enhance the quality of IR and the firm's transparency and accountability. In conclusion, the research demonstrates a positive relationship between CG and IR quality. However, the potential moderating role of CS in this relationship has not been well explored. Additional investigation into the moderating effect of CS on the relationship between CG and IR quality will benefit both practitioners and academics. Such research could shed light on how CS can be used to improve the quality of IR and financial reporting and how the combination of CG and CS can result in improved firm sustainability and accountability.

4. DATA

The annual reports of Indonesian companies that traded on the IDX between 2018 and 2022 served as the data source for this study. The research was conducted in Indonesia. The data collection technique was performed methodically to maintain consistency throughout the investigation. The sample companies were selected based on data availability and their respective sizes (measured by market capitalization). The dependent variable is the quality of IR, with CG, sustainability, and CSR disclosure
serving as moderators. A composite index comprising board size, board independence, CEO duality, and ownership was utilized to evaluate the CG practices of various corporations. The International IR Council (IIRC) criteria were used to assess the quality of IR. These criteria, which include the report's breadth, depth, and integrity, were considered. A composite measure incorporating environmental, social, and governance (ESG) criteria were utilized to assess the efficacy of CSR programs. Specifically, the CSR Index (CSRI) developed by IDX was used to evaluate the contributions made by companies to society. The first equation is presented in its simplest form below:

\[ Y_{it} = \alpha_0 + \alpha_1 X_{it} + \alpha_2 X_{it} + \varepsilon_{it} \] 

(1)

Model 2 below explains the impact of CG on the IR quality of Indonesian firms

\[ IRQ_{it} = \alpha_0 + \alpha_1 BS_{it} + \alpha_2 BI_{it} + \alpha_3 BD_{it} + \alpha_4 CEOD_{it} + \alpha_5 OC_{it} + \alpha_6 BH_{it} + \alpha_7 AC_{it} + \alpha_8 Prof_{it} + \alpha_8 Lev_{it} + \alpha_9 Size_{it} + \varepsilon_{it} \] 

(2)

Model 3 below explains the moderating role of CSR impact of CG on the IR quality of Indonesian firms

\[ IRQ_{it} = \alpha_0 + \alpha_1 CSR_{it} + \alpha_2 CSR * BS_{it} + \alpha_3 CSR * BI_{it} + \alpha_4 CSR * BD_{it} + \alpha_5 CSR * CEOD_{it} + \alpha_6 CSR * OC_{it} + \alpha_7 CSR * BH_{it} + \alpha_8 CSR * AC_{it} + \alpha_9 Prof_{it} + \alpha_{10} Lev_{it} + \alpha_{11} Size_{it} + \varepsilon_{it} \] 

(3)

Model 3 below explains the moderating role of the sustainability impact of CG on the IR quality of Indonesian firms

\[ IRQ_{it} = \alpha_0 + \alpha_1 SUS_{it} + \alpha_2 SUS * BS_{it} + \alpha_3 SUS * BI_{it} + \alpha_4 SUS * BD_{it} + \alpha_5 SUS * CEOD_{it} + \alpha_6 SUS * OC_{it} + \alpha_7 SUS * BH_{it} + \alpha_8 CSR * AC_{it} + \alpha_9 Prof_{it} + \alpha_{10} Lev_{it} + \alpha_{11} Size_{it} + \varepsilon_{it} \] 

(4)

Where \(IRQ\) represents the IR quality, \(Lev\) represents leverage, \(SIZE\) means the firm's size, \(PROF\) represents the firm's profitability, \(BS\) is used as a proxy for board size, a dis-measure of the total number of board directors. \(BI\) means the total number of independent directors on the board. \(BD\) is a proxy for board diversity. \(CEOD\) is a proxy if the CEO and Chairman of the board are the same, \(BH\) represents blockholes, which in our study defined as the owners holding 10 percent or more shares, \(AC\) means the size of the audit committee, \(CSR\) discourse is proxies by \(CSR\), and sustainability reporting is proxies by \(SUS\). The descriptive statistics of the current study are shown in table 1 below.

4.1 Analysis

Frequently, panel data models are used to analyze data that fluctuates over time and entities, such as stock exchange companies.
The random and fixed effects models are two types of panel data models. The fixed effect model assumes that unobserved firm-specific traits are time-invariant and are captured by firm-specific fixed effects. This method is proper when the objective is to estimate the influence of independent factors on dependent variables while controlling for time-invariant firm-specific characteristics.

**Table 1. Descriptive Statistics**

<table>
<thead>
<tr>
<th>Variable (Abbreviation)</th>
<th>Obs.</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>IRQ</td>
<td>710</td>
<td>0.3769211</td>
<td>0.257062</td>
<td>0.0063327</td>
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<tr>
<td>Lev</td>
<td>710</td>
<td>0.0738539</td>
<td>0.0430503</td>
<td>0.0023131</td>
<td>0.6195135</td>
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<tr>
<td>SIZE</td>
<td>710</td>
<td>20.53497</td>
<td>2.433262</td>
<td>16.504353</td>
<td>27.8464</td>
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<tr>
<td>PROF</td>
<td>710</td>
<td>0.0185505</td>
<td>0.0186968</td>
<td>-0.0413331</td>
<td>0.1121318</td>
</tr>
<tr>
<td>BS</td>
<td>710</td>
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<tr>
<td>BI</td>
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<td>0.0403301</td>
<td>0.0630648</td>
<td>0.0145434</td>
<td>0.7422154</td>
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<tr>
<td>BD</td>
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<td>0.1642445</td>
<td>0.0203359</td>
<td>0.9493360</td>
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<tr>
<td>CEOD</td>
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<td>0.1045013</td>
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<tr>
<td>OC</td>
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<td>0.4391833</td>
<td>0.0266189</td>
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<tr>
<td>BH</td>
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<tr>
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<tr>
<td>SUS</td>
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<td>0.2395495</td>
<td>0.0441243</td>
<td>-.1019304</td>
<td>0.1211254</td>
</tr>
</tbody>
</table>

The random effect model assumes that unobserved firm-specific traits are random and uncorrelated with independent variables. This method is appropriate when the focus is on estimating the overall relationship between the independent and dependent variables, and the unobserved firm-specific characteristics are regarded uncorrelated with the independent variables. Many sub-tests, including the Hausman test, the Breusch-Pagan Lagrange multiplier (LM) test, and the Likelihood Ratio (LR) test, enable researchers to choose between fixed effect and random effect models. The Hausman test determines the superior model by comparing the efficiency of models with fixed and random effects. The Breusch-Pagan LM test examines the null hypothesis that there are no random effects, whereas the LR test compares the probabilities of fixed and random effect models to see which model fits the data the best.

These subtests can assist researchers in selecting the best panel data model for their research question and data set. GMM can be used to estimate model parameters and address the issue of endogeneity within the framework of our research on the impact of CG on the quality of IR. Endogeneity occurs when unobserved factors are connected with both the independent and dependent variables, leading to estimations of parameters that are skewed and inconsistent. Instrumental variables can be utilized to circumvent this problem by controlling for endogeneity.

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In GMM, the ideal instruments are selected based on the moment criteria that minimize the gap between empirical and theoretical moments. Moment conditions are commonly formulated based on economic theory or empirical evidence, and they capture the interaction between endogenous and external factors. The GMM estimator estimates the model's parameters when circumstances are provided. Numerous subtests can be administered to examine the instruments' validity and overidentification restrictions. The Sargan test determines if the instruments are uncorrelated with the error term. The Hansen test is applied to validate the over-identifying constraints, which are additional moment conditions not required for identification but used to validate the instruments. The J-test is used to examine if the null hypothesis that the needs have been met is valid. These subtests can aid in evaluating the validity of the GMM estimator and provide further evidence to corroborate the results' validity. The findings of the diagnostic tests are shown in Table 2 below.

Table 2. Results of the Diagnostic test

<table>
<thead>
<tr>
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<th>Statistics</th>
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If our GMM model can be established, each endogenous variable will have only one instrument. Because our model is recognizable, we cannot conduct a test to evaluate whether there are over-identification restrictions in this instance. As a result, diagnostic tests are presented following the GMM estimation, which establishes the instrument's validity through autocorrelation testing (Arrelano-Bond Test). Likewise, the Arrelano-Bond Test indicated that there was no indication of autocorrelation. The most accurate estimates for the aggregate model appear to be those based on the fixed effect and the GMM.

Table 3 displays the Pearson correlation coefficients for the independent variables. There was no evidence of multicollinearity because none of the correlation coefficients exceeded the threshold value of 0.80. The correlation matrix reveals no evidence of multicollinearity among the variables.
### Table 3: Pearson Correlation

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Table 4. Regression Results

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266
Table 4 displays the study's results. According to the study's findings, CG features like board size, board independence, board diversity, and audit committee size significantly impact an organization's IR output. The quality of integrated reports has a significant negative relationship with ownership concentration, block holders, and the chief executive officer. However, this relationship is not favorable. Reporting on CSR and sustainability correlates positively with IR quality. CSR and sustainability reporting are powerful moderators between CG and IR quality.

5. DISCUSSION

Specific components of CG appear to have a favorable effect on the quality of IR. In contrast, according to the study's findings, others seem to have a detrimental effect on the quality of IR. Board size, independence, diversity, and audit committee size all benefit the quality of internal reporting. This is consistent with the agency theory, which emphasizes the necessity of independent monitoring in limiting agency conflicts between management and shareholders. This is the consequence of agency theory's emphasis on the importance of independent oversight. A more significant and varied board may provide more excellent leadership and decision-making authority, resulting in higher-quality reporting. According to agency theory, ownership concentration, block holders, and CEO duality, all negatively impact the quality of internal reporting. When ownership is concentrated, controlling shareholders may prioritize their interests over those of other shareholders, which can reduce the general rate of the produced reports.

Similarly, when the CEO of a corporation is also the chairman of its board of directors, a lack of independent scrutiny and a concentration of power is likely. Since that CSR and sustainability reporting has been demonstrated to have a positive link with the quality of integrated reports, it is plausible to hypothesize that organizations that emphasize social and environmental responsibility are more likely to create high-quality integrated reports. This finding is compatible with the stakeholder theory, highlighting the need to consider all stakeholders' interests when making healthy choices. Businesses that publish their CSR and sustainability programs are more likely to be transparent and accountable to their stakeholders, which can result in improved investor relations.

The study's findings imply that CSR and sustainability reporting are potent IR and CG quality regulators. According to this study's results, companies prioritizing reporting on sustainability and CSR may also have more robust governance systems, which may contribute to a higher level of internal reporting quality overall. Seen as a whole, the findings of this study support the significance of both the agency theory and the stakeholder theory for comprehending the relationship between high IR standards and excellent CG practices.
6. CONCLUSION

This research has shed light on the impact of several CG elements on the quality of IR and the moderating role of CSR and sustainability reporting in the link between these two variables. Panel data analysis using fixed effects and different generalized moments techniques were used to collect and analyze the data for this investigation (GMM). The quality of internal reporting was positively affected by board size, board independence, board diversity, and audit committee size but negatively affected by ownership concentration, block holders, and a shared CEO function. It is well-established that CSR and sustainability reporting improves IR as a whole. These outcomes are compatible with the precepts of both the agency theory and the stakeholder theory, which emphasize respective independent oversight and the significance of taking the interests of all stakeholders into account when making business decisions. The research demonstrates that organizations must prioritize CSR and sustainability reporting alongside corporate governance to produce effectively integrated reports.

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