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Determinants of Corporate Social Responsibility Disclosure: The Influence of Non-Financial Factors in Indonesian Energy and Pulp & Paper Industries

Firdaus Abdul Rahman*, Khairunnisa, Hamdi Agustin

Islamic University of Riau. Pekanbaru City. Indonesia
firdaus_ar@eco.uir.ac.id (Corresponding author)

Abstract. This study investigates the influence of non-financial factors, including corporate governance (represented by board size), board independence, board meeting frequency, firm size, and risk, on corporate social responsibility disclosure (CSRD) among Indonesian energy and pulp & paper companies from 2011 to 2021. Employing a sample of 77 firm-year observations, the research employs a multiple linear regression analysis to assess the relationship between these non-financial variables and CSRD scores. The results indicate that board independence, board meeting frequency, firm size, and risk have a significant positive influence on CSRD, while board size (as a proxy for corporate governance) does not exhibit a significant effect. These findings contribute to the existing literature by examining a comprehensive set of non-financial determinants of CSRD in environmentally sensitive and economically significant industries. The study underscores the importance of robust corporate governance mechanisms, active board oversight, and effective risk management in promoting transparent sustainability reporting practices. The results have practical implications for policymakers, regulators, and corporate decision-makers in Indonesia, emphasizing the need to foster board independence, encourage frequent board meetings, and integrate risk assessments into sustainability reporting frameworks, particularly in the energy and pulp & paper sectors.

Keywords: CSR, Corporate governance, Risk, Board

1. Introduction

Currently, many academic studies have conducted research on the factors that influence the determination of non-financial reporting (Helfaya & Whittington, 2019). The need to analyze the determinants of non-financial reporting quality is related to the theoretical relationship between transparency and sustainable practices. Considering the misalignment that occurs between a company's communications and its activities (Doni et al., 2019; Schoeneborn et al., 2020), previous research has agreed on the impact of signals related to the disclosure of non-financial information (Gold & Heikkurinen, 2018; Watson et al. al., 2002). In particular, this concept has been analyzed by academic researchers in the early stages of research on the quality of non-financial reporting. However, the increasing application of non-financial reporting and the increasing number of corporate scandals related to the implementation of unsustainable practices support the construction of new reflections on this phenomenon (Dumay et al., 2015; Mahoney et al., 2013).

Several authors have analyzed transparency to provide insight into the reliability of non-financial reporting. The root of the topic was developed by financial reporting scholars, who were concerned with the principle of transparency (Barth & Schipper, 2008). However, despite the similarities between the two fields, reporting transparency is a standalone topic in the debate (Dando & Swift, 2003). Moreover, the independence of the issue is confirmed by standard-setters (Global Reporting Initiative, 2016).

In recent years, companies have shown interest in reporting on Corporate Social Responsibility (CSR). Corporate Social Responsibility (CSR) disclosure can help company management improve the company's image and value. High company value will attract stakeholders (Purbawangsa, Solimun, Fernandes, & Mangesti Rahayu, 2020), especially investors.

Before carrying out investment activities, investors in a company will look for information and then evaluate the company (Purbawangsa et al., 2020). (Purbawangsa et al., 2020). Companies and top management make the company as good and attractive as possible so that investors invest in it because its goal in running its business is to get as much profit as possible. (Angelia & Suryaningsih, 2015).
The scope of CSR in companies is increasing. CSR disclosure initially only looked at the internal side of the company until finally, regulations emerged that regulate the care and rights of the environment around the company in running a business. Previous research recommends that each country have regulations on reporting corporate CSR activities. (Javaid Lone, Ali, & Khan, 2016). Indonesia has regulations governing the implementation of sustainability finance, namely the Financial Authority Regulation (POJK) Number 51/POJK.03/2017.

Companies that display and disclose sustainability reports are a plus for stakeholders, especially investors. (Angelia & Suryaningsih, 2015)This is because investors can see the company's results and social activities. The success of CSR disclosure is inseparable from many factors, especially financial and non-financial factors. This study focuses on the influence of non-financial factors in corporate CSR disclosure. In recent years,

Some previous studies only describe financial factors that can affect CSR disclosure (Kansal, Joshi, & Batra, 2014; Syed & Butt, 2017). (Kansal, Joshi, & Batra, 2014; Syed & Butt, 2017).. Research on financial and non-financial factors on CSR disclosure; others only focus on financial factors. (Alshbili, Elamer, & Beddewela, 2019)..

This study tries to combine several non-financial factors that already exist in previous studies, namely corporate Governance (Caputo, Pizzi, Ligorio, & Leopizzi, 2021; Gul, Krishnamurti, Shams, & Chowdhury, 2020; Syed & Butt, 2017), board independent (Caputo et al., 2021; Javaid Lone et al., 2016), board meetings, risk (Hatane, Supangat, Tarigan, & Jie, 2019), and firm size of the company which are non-financial factors that can support the company's CSR disclosure. However, the object of research has never been carried out by researchers on pulp and paper and energy industry companies. This study aims to analyze the effect of non-financial factors on corporate CSR disclosure in Indonesia.

The samples used in this study are pulp paper and energy industry companies in Indonesia from 2011 to 2021.

The pulp, paper, and energy industries are representative samples for the study. Firstly, Indonesia has the largest tropical rainforest in the world, which is home to biodiversity and climate regulation that helps capture atmospheric carbon dioxide and helps limit global warming. Secondly, Indonesia's pulp and paper industry is now among the top ten producers in the world and Indonesia's eight largest foreign exchange earning sectors (Ministry of Transportation, 2019 in Susilawati & Kanowski, 2020). Third, environmental pollution is increasing due to the global demand for paper and related products, leading to increased energy consumption and emissions in the pulp and paper industry for producing pulp and paper. CO2 emissions in the pulp and paper industry for higher production (Mandeep, Kumar Gupta, & Shukla, 2020). Given the significant environmental impact of the energy and pulp & paper industries, this study focuses on the influence of non-financial factors, such as corporate governance and risk management, on CSRD among companies in these sectors in Indonesia. By understanding these relationships, the study aims to provide insights into promoting more transparent and sustainable practices in these industries.

2. Literature Review and Hypothesis Development

Agency Theory

Jensen, M. C. and Meckling (1976) state agency theory as a theory that explains the relationship between company management (agents) and shareholders (principals). According to agency theory, reducing conflicts of interest will cost agents and principals. Agency costs borne by the principal are realized through the disclosure of annual financial reports and the formation of an audit committee that monitors operating results to increase company transparency. The implementation of social responsibility disclosed in the financial statements is a form of transparency by the company. It is also an inseparable part of good corporate Governance (Pudjianti & Ghozali, 2021).

Stakeholder Theory

Stakeholder theory is one of the theories supporting research hypotheses (Alkayed & Omar, 2022). Stakeholder theory states that companies do business not only for their interests, but must benefit all stakeholders (employees, government, and the entire community). (Sayekti, 2015). Stakeholder theory (Freeman, 1984) posits that organizations should consider the interests of various stakeholders, including shareholders, employees, customers, and the broader community, in their decision making processes. In the context of CSRD, stakeholder theory suggests that companies may disclose more information on their social and environmental practices to meet the expectations of stakeholders and maintain their legitimacy (Deegan, 2002). This theoretical perspective supports the hypotheses that non-financial factors, such as corporate governance mechanisms and risk management, may influence a company's level of CSRD.

The Stanford Research Institute first introduced the term stakeholder to describe a group without whose support the organization would cease‖ (Elijido-Ten, 2007). Stakeholder theory powerfully underlies the practice of disclosing Corporate Social Responsibility because of the relationship between the company and stakeholders, where stakeholders have a significant role in the company's sustainability. Management provides voluntary information, namely Corporate Social Responsibility, to fulfil stakeholder satisfaction, and can be used in controlling the use of resources for company efficiency and effectiveness (Putri, 2015).

According to Murwaningsari et al. (2009), CSR is closely related to good corporate Governance. In this study, corporate Governance is proxied by the board of directors of foreign nationals and a female board of directors. The company must carry out good management in managing its relationship with stakeholders. The existence of foreign directors provides more value to the company because it provides more diverse ideas, input and experience. This diversity encourages companies to improve further CSR implementation (Setiawan et al., 2018). To oversee the implementation of CSR, female directors are expected to provide added value to the company because they are more detailed in making CSR disclosures, thus positively impacting CSR implementation. (Setiawan et al., 2018). The relationship with stakeholder theory shows that the presence of women on the board of directors and board of commissioners can be a driving force for companies in building good relationships with stakeholders (Indriyani & Sudaryati, 2020).

Legitimacy Theory

This theory states that companies have an implicit social contract with the communities in which they operate. (Velte, 2021)Therefore, the longevity of the company depends on the company's ability to fulfil with the appropriate system. Many factors influence when the company faces pressure until finally, the company can determine the appropriate CSR practices (Alkayed & Omar, 2022).
Companies are also constantly striving to ensure that they work within the norms and boundaries of society. (Syed & Butt, 2017). Some previous studies also explain that companies voluntarily disclose CSR information as one of the strategies for managing legitimacy threats and reducing the gap (Badrul Muttakin et al., 2022).

Corporate Social Responsibility (CSR)

Corporate Social Responsibility (CSR) is a program that shows the company's social responsibility and concern for its surroundings. (Purbawangsa et al., 2020). Reporting on the company's CSR activities is one of the attitudes that can help companies increase company value. Corporate CSR reporting can help companies strategize and improve their reputation (Javaid Lone et al., 2020). (Javaid Lone et al., 2016).

Corporate Governance/ Board Size

Corporate Governance is the Governance carried out by the company through all members so that the company achieves what is expected, namely, profit (dividends) and prevents problems that cause financial difficulties due to poor corporate Governance due to management.

Corporate Governance aims to ensure that opportunistic behaviour in the company does not occur by reducing agency problems involving agents (managers) and various other actors/principals by facilitating the creation of special skills. (La Rocca, 2007) in making strategic decisions and asymmetric information problems that exist in the company. The company's number of boards can help monitor and provide ideas based on their experience. (Javaid Lone et al., 2016). Corporate Governance is the process and structure used by the company for the long-term sustainability of shareholders and other company stakeholders based on applicable regulations. (Purbawangsa et al., 2020)..

A large board size is likelier to disclose director involvement in the decision-making process on better environmental practices (Caputo et al., 2021). Information disclosure and decision-making by a large board on CSR activities and disclosures must provide better results and thoughts because they have many opinions and opinions. The boards of large companies with their capabilities are better at collecting, analyzing, and reporting data on CSR (Syed & Butt, 2017). (Syed & Butt, 2017). Based on the arguments that have been explained, the hypothesis can be concluded:
H1 = Corporate Governance has a positive relationship with CSR

Board Independent

Companies that have many independent directors will help the company in CSR reporting as it relates to the regulations they have in place. (Javaid Lone et al., 2016). Independent directors influence sustainability disclosures to be more socially and environmentally responsible. (Caputo et al., 2021).

A high number of independent directors allows for better and more transparent oversight and control of management. (Sun, Xu, Li, & Cao, 2022)The number of independent directors is essential because they represent different stakeholders' interests in CSR activities. Information asymmetry decreases when independent directors make transparent disclosures. Based on the argument that has been explained, the hypothesis can be concluded:
H2: Board Independent has a positive relationship with CSR

Board Meetings

Board meetings are where the board brainstorms management oversight activities. An effective board can increase the frequency of emergencies and reduce meetings when it does not have urgent issues to resolve. (Sun et al., 2022). However, more frequent board meetings allow for more in-depth oversight of the company's operations. (Alkayed & Omar, 2022) Thus, activities and information disclosure are better, and stakeholders see more value in the company's board. Based on the arguments that have been explained, the hypothesis can be concluded:

H3: Board Meetings has a positive relationship with CSR

Risk

The company's board is vital as a determinant of risk-taking and internal control mechanisms.(Hatane et al., 2019). The board has two critical roles (Hatane et al., 2019): a risk-taking determinant and an internal control mechanism. As a risk-taker, the board must understand the appropriate level of risk exposure to the company and be willing to take that Risk to achieve the company's objectives. Internal control mechanisms are part of corporate Governance to manage risks appropriately and adequately. Because once the Risk cannot be controlled by the company and the company fails, investors lose confidence in the company in making investments. Companies must overcome this situation by minimizing Risk by developing components in corporate Governance. Based on the arguments that have been explained, the hypothesis can be concluded:

H4 = Risk has a positive influence on corporate CSR.

Firm Size

Larger companies have more attention from the media, and thus, disclosure is more prevalent at their meetings. Concerning CSRD and its consistency with legitimacy theory, firm size is believed to be a determinant of CSRD. (Alkayed & Omar, 2022).. Based on the argument that has been explained, the hypothesis can be concluded:

H5 = Firm Size has a positive influence on corporate CSR.

3. Research Methodology

The population in this study are companies listed on the Indonesia Stock Exchange. Research data was taken from the Indonesia Stock Exchange (http://www.idx.co.id) and the company's website. Sample selection using purposive sampling technique with the following criteria:

1. This research uses annual reports and sustainability reports of companies included in the pulp paper sub-sector because this research focuses on companies that are related to the environment, especially trees, which are raw materials in company activities.
2. Annual reports and sustainability reports during the observation period were obtained through the Thomson Reuters database, the Indonesia Stock Exchange website, and the company's website.
3. Companies that are not available or incomplete data needed in this study will be excluded from the sample.

Operational Definition and Measurement of Variables

a. Dependent Variable

1. Corporate Governance/Board Size. The Corporate Governance variable in this study uses the number of boards in the company in measuring variables, following previous studies (Caputo et al., 2021; Gul et al., 2020; Purbawangsa et al., 2020).
2. Independent Board. The independent board variable in this study uses the number of independent boards in the company, following previous research (Mohammadi et al., 2021).
3. Board Meetings. The board meetings variable in this study is measured based on the number of meetings conducted by the board in one year (Mohammadi et al., 2021).
4. Risk. Previous research (Kansal et al., 2014; Syed & Butt, 2017) considers company risk because of the risk due to uncertainty in the company's revenue stream using leverage:

$$Leverage = \frac{total\ liabilities}{total\ asset}$$

Data Analysis Technique and Research Scheme

The research analysis was carried out using Stata 17.0 software. To test the hypotheses and examine the influence of non-financial factors on CSRD, a multiple linear regression model was employed, with CSRD as the dependent variable and corporate governance (CG), board independence (BI), board meetings (BM), firm size (SIZE), and risk (RISK) as independent variables.

The regression model is specified as follows: CSR = β_0 + β_1(CG) + β_2(BI) + β_3(BM) + β_4(SIZE) + β_5(RISK) + ε

Where CSR represents the corporate social responsibility disclosure score, β_0 is the intercept, β_1 to β_5 are the regression coefficients for the respective independent variables, and ε is the error term. The regression coefficients were estimated using ordinary least squares (OLS) method, and their statistical significance was evaluated at the 5% level.

The following is the model used in the study:

The figure above illustrates the relationship between five independent variables, they are: corporate governance, board independence, board meeting, size, and risk) and the dependent variable is CSR Disclosure. In this study, all independent variables positively influence the dependent variable.

Description:

Table 1: Operational variables

Variable	Definitions
Corporate Social Responsibility (CSR)	Company standard GRI index
Corporate Governance (CG)	Total board size of the company
Board Independent (BI)	Number of independent boards in the company
Board Meetings (BM)	Number of boards meetings in one year
SIZE	Company Size
RISK	Risk that exist in the company

This model tests the effect of non-financial factors (corporate Governance, independent board, board meeting, size, and Risk) on CSRD. Hypothesis testing 1,2,3,4 and 5 are supported if the β coefficient value on each hypothesis is positive and significant.

4. Result and Discussion

Descriptive Statistics

Table 2: Descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
CSR	77	70,67	25	0	98
CG	77	7	2	5	11
BI	77	37	10	15	67
BM	77	90	9	63,33	100
SIZE	77	31	0,602	30	32
RISK	77	0,133	0,118	0,001	0,376

Table 2 explains that the highest value of corporate CSR is 98, and the lowest is 0. This result occurs due to the transition of regulations owned by Indonesia with a long time vulnerability, namely eleven years. The company's CG is the number of boards in the company. The maximum value of the board in the company is eleven people, and the lowest is five people. The board is the company's top management that has control over the decisions that the company will take. The percentage of BI is the average number of BI in the company. BM is the average number of meetings conducted by the company within one fiscal year. The maximum value for the meeting presentation is 100%, and the lowest is 63.33%, a reasonably high value for the number of meetings in one year. SIZE of the company has a maximum value of 32, and the lowest is 30, which is pretty close between the maximum and minimum values of the company. This result indicates a positive trend in companies focusing on energy and pulp paper. Finally, the RISK variable has the highest value of 0.376 and the lowest of 0.001. The multicollinearity test results in this study show the variance inflation factor (VIF) < 10, namely 1,152. This means that this study does not experience multicollinearity.

The Empirical Results

Table 3: Results of multiple regression analysis

Variable	Prediction	Coefficient	Result	Sign	Conclusion
CG	+	0,5333	0,3835	ns	No sign
BI	+	-0,6996	0,005	***	Accept
BM	+	0,3532	0,1495	*	Accept
SIZE	+	4,2924	0,1725	*	Accept
RISK	+	-46,6933	0,0295	*	Accept
Const_	+	-67,1207	0,3315		
number of observations		77			
R-Squared		0,1867			
Prob>F		0,0022			
*sign 10%, ** sign5%, ***sign 1%, ns(no significant) *(one tailed test)*					

This study uses five independent variables: Corporate Governance, independent board, board meetings, company size, and Risk. This study examines the relationship and influence of non-financial factors on corporate CSR disclosure. The results show four independent variables can affect the company's CSR disclosure. The findings reveal that several non-financial factors, including board independence, board meeting frequency, firm size, and risk, have a significant positive influence on CSRD among Indonesian energy and pulp & paper companies. These results are generally consistent with agency theory (Jensen & Meckling, 1976) and stakeholder theory (Freeman, 1984), which suggest that stronger corporate governance mechanisms and risk management practices can promote greater transparency and accountability in corporate reporting. However, the lack of a significant relationship between corporate governance, measured by board size, and CSRD contradicts some previous studies (e.g., Caputo et al., 2021; Gul et al., 2020) that found a positive association between board size and CSRD. This discrepancy may be attributable to the specific context of the energy and pulp & paper industries in Indonesia, where board size alone may not be a reliable indicator of effective governance practices related to sustainability disclosure. The positive influence of board independence and meeting frequency on CSRD highlights the importance of active and independent oversight in promoting transparency and accountability in corporate reporting. These findings have practical implications for regulators and policymakers in Indonesia, suggesting the need for guidelines or regulations that encourage the appointment of independent directors and regular board meetings to enhance CSRD practices, particularly in environmentally sensitive industries. While this study provides valuable insights, it is important to acknowledge its limitations as well as its applicability to these companies.

The independent variables influencing a company's CSR disclosure are independent board, board meetings, size, and Risk. These variables have different significant values in influencing the company's SCR disclosure. The company's independent board has a significance value of 1% concerning the company's CSR Disclosure. Board meetings, size, and risk variables have a 5% significant value concerning CSR Disclosure. Corporate Governance has different results among other research variables. The results show that corporate Governance does not affect the company's CSR disclosure. R-Square in this study amounted to 0.1867 or 18.67%; namely, the relationship between the independent and dependent variables has a value of 18.67%. At the same time, Prob>F in this study is 0.002.

The data processing results show that the variable number of independent boards positively influences CSR disclosure. The regression results show that the variable number of independent boards (BI) has a positive and statistically significant influence on CSR disclosure ($\beta = -0.6996$, $p < 0.01$). This finding supports hypothesis H2 and suggests that companies with a higher proportion of independent directors on their boards tend to disclose more information on their social and environmental practices. This result is consistent with the notion that independent directors can enhance board monitoring and oversight, leading to greater transparency and accountability in corporate reporting (Chams & García-Blandòn, 2019). The results showed that the greater the composition of the independent board of commissioners could affect the disclosure of a relatively high sustainability report, and vice versa.

When the composition of the independent board of commissioners is small, the disclosure of the sustainability report will be relatively low. Companies with a large number of independent commissioners can provide good performance and have proven to be independent in carrying out their duties, namely, carrying out the monitoring function of the board of directors' performance to support transparency to the public. Many independent commissioners can influence the board to encourage management to disclose sustainability reports. The role of the independent board of commissioners is considered more objective in providing guidance and direction and supporting the supervision of the performance of the board of directors in increasing the competitiveness and reputation of the company that is being run by the agent so that there is no conflict with the principal. As a result, the independent board of commissioners is encouraged to do their best for the company's success by carrying out a practical supervisory function. This study's results align with Chams and Garcìa-Blandòn (2019) and Rao and Tilt (2016).

Data processing results show that the variable frequency of Board of Commissioners meetings positively influences CSR disclosure. The board of commissioners, in conducting meetings, may also pay attention to CSR disclosure or CSR practices by the company where the board of commissioners meeting is a mechanism for creating good corporate Governance. Following agency theory, the board of commissioners is appointed by the principal to avoid agency problems related to conflicts of interest related to CSR implementation between owners and agents and to reduce agency costs, strengthen the internal control system, supervise managers, maximize manager performance and also improve the quality of Corporate Social Responsibility disclosure (Jensen & Meckling, 1976) cited by (Sektiyani & Ghozali, 2019). Based on the work process, the more frequent meetings are held, the better the management control and guidance quality will be, and ultimately, agency costs/conflicts of interest can be reduced (Hadiprajitno, 2013). Boards with frequent or large meetings tend to handle the company's business operations and disclose CSR information to meet various stakeholders (Sektiyani & Ghozali, 2019).

From an agency theory perspective, the board of commissioners represents the primary internal mechanism to control management's opportunistic behaviour so that it can help align the interests of shareholders and managers (Hadiprajitno, 2013). The board of commissioners is appointed to avoid agency problems such as conflicts of interest in implementing CSR. The corporate governance mechanism is not limited to the number and composition of the board, but also to the use of the number of board work processes, namely the size of the number of meetings held. The frequency of meetings often held by the board of commissioners tends to regulate the activities or activities of the company and disclose social responsibility information to fulfil the various wishes of stakeholders (Sektiyani & Ghozali, 2019). The results of this study are in line with those of Mio et al. (2015), Bhuiyan & Hooks (2016), Solikhah and Kuswoyo (2020) and Sektiyani and Ghozali (2019).

The results of data processing show that the SIZE variable has a positive effect on CSR Disclosure. This research supports agency theory, which generally states that the larger the size of the company, the more extensive CSR disclosure will be made. Agency theory states that the larger a company is, the greater the agency costs arise. To reduce these agency costs, companies will tend to disclose more information. In addition, large companies are issuers that are widely highlighted, greater disclosure is a reduction in political costs as a form of corporate social responsibility. Theoretically, large companies will not be free from pressure, and larger companies with more extraordinary operating activities and influence on society may have shareholders who pay attention to social programs made by the company so that corporate social responsibility disclosure will be more extensive. The results of this study are in line with Caputo et al (2021), Khan et al (2020) and Chams et al (2019).

The results showed that the leverage variable positively affects corporate social responsibility disclosure—the results of this research support agency theory. Agency theory predicts that companies with higher leverage ratios will disclose more information because the agency costs of companies with such capital structures are higher (Jensen & Meckling, 1976). Companies will be more encouraged to disclose more extensive CSR if they have a high leverage ratio that aims to meet creditors' information needs. Creditors require disclosure of corporate social responsibility as information to evaluate Risk properly. Because the company deserves a loan with a low-interest rate. With extensive disclosure of Corporate Social Responsibility, the company becomes credible and gains adequate confidence from creditors. Although the level of leverage is high, it can cause high interest costs, which in turn will be a burden that reduces revenue, so the company's profit level will decrease. However, extensive disclosure of Corporate Social Responsibility can reduce Risk and make it easier for companies to access funding from creditors and investors. The results of this study are in line with the research of Felicia and Rasmini (2015), Purnasiwi (2011) and Majidah and Sihite (2014).

5. Conclusion

This study contributes to the understanding of the influence of non-financial factors on corporate social responsibility disclosure (CSRD) among Indonesian energy and pulp & paper companies. By examining a comprehensive set of variables, including corporate governance (represented by board size), board independence, board meeting frequency, firm size, and risk, the research provides insights into the determinants of transparent sustainability reporting practices in environmentally sensitive and economically significant industries. The findings reveal that board independence, frequent board meetings, larger firm size, and higher risk levels are associated with increased CSRD, highlighting the importance of robust corporate governance mechanisms, active board oversight, and effective risk management in promoting transparent sustainability reporting. These results have practical implications for policymakers, regulators, and corporate decision-makers in Indonesia. Firstly, the study underscores the need for measures that encourage the appointment of independent directors and facilitate regular board meetings, as these factors have been shown to enhance CSRD. Secondly, the positive association between firm size and CSRD suggests that larger companies may face greater stakeholder scrutiny and pressure to disclose sustainability information, indicating the need for tailored guidelines or incentives for smaller firms. Thirdly, the influence of risk on CSRD emphasizes the importance of integrating risk assessments, particularly related to environmental and social risks, into sustainability reporting frameworks. While this study provides valuable insights, it is important to acknowledge its limitations. The focus on specific industries (energy and pulp & paper) may limit the generalizability of the findings to other sectors. Additionally, the study relies on a single measure of corporate governance (board size), which may not fully capture the complexities of governance practices. Future research could explore alternative measures of corporate governance, incorporate additional non-financial factors (such as ownership structure or board diversity), and examine potential moderating or mediating effects on the relationship between non-financial factors and CSRD. Furthermore, as sustainability reporting practices continue to evolve, longitudinal studies could provide insights into the dynamic nature of these relationships over time. Qualitative investigations could also complement the quantitative findings by exploring the motivations, decision-making processes, and challenges faced by companies in disclosing sustainability information.

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