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When Good Governance Isn't Enough: Government Pressure as a Moderator of Greenwashing Behavior

Andy Iranda[a,1,*], Etna Nur Afri Yuyetta[a,2]

[a] Universitas Diponegoro, Semarang, Indonesia
[1] andydwikiiranda@students.undip.ac.id *; [2] etnanurafriyuyetta@lecturer.undip.ac.id
* corresponding author

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ABSTRAK

Penelitian ini mengkaji pengaruh tata kelola perusahaan terhadap praktik greenwashing serta peran moderasi tekanan pemerintah. Menggunakan data panel dari 34 perusahaan non-keuangan di BEI periode 2017–2023, hasil menunjukkan bahwa keberagaman gender dewan komisaris menurunkan greenwashing secara signifikan, sementara ukuran dan independensi dewan tidak berpengaruh langsung. Tekanan aktivis memperkuat pengaruh negatif ukuran dewan, sedangkan tekanan pemerintah memperkuat pengaruh keberagaman gender dan independensi dewan terhadap greenwashing. Hasil ini menunjukkan bahwa tata kelola yang efektif bersama pengawasan regulatif mampu menekan pengungkapan keberlanjutan yang bersifat simbolik. Penelitian ini memperkaya teori legitimasi dan menekankan pentingnya regulasi ESG, verifikasi pihak ketiga, serta praktik tata kelola yang substantif untuk meningkatkan transparansi dan akuntabilitas perusahaan.

ABSTRACT

This study examines the effect of corporate governance on greenwashing and the moderating role of government pressure. Using panel data from 34 non-financial firms listed on the Indonesia Stock Exchange for 2017–2023, the results show that board gender diversity significantly reduces greenwashing, while board size and independence have no direct effect. Activist pressure strengthens the negative effect of board size on greenwashing, whereas government pressure enhances the impact of gender diversity and board independence. These findings indicate that effective governance combined with strong regulatory oversight can minimize symbolic sustainability disclosures. The study contributes to legitimacy theory by showing that governance effectiveness depends on external institutional forces. Practically, it suggests the importance of strengthening ESG regulations, third-party assurance, and substantive governance practices to promote corporate transparency and accountability.

1. Introduction

Global awareness of the importance of sustainability has increased substantially, making Environmental, Social, and Governance (ESG) aspects a central consideration in business and investment decision-making (X. Liu et al., 2023). ESG is no longer perceived merely as a tool for corporate image-building, but has evolved into a long-term strategic instrument that enhances competitiveness and ensures business sustainability. In Indonesia, ESG implementation is reinforced by regulations issued by the Financial Services Authority (Otoritas Jasa Keuangan/OJK) through Regulation No. 51/POJK.03/2017, which mandates listed companies and public firms to publish sustainability reports. This policy aims to enhance corporate transparency and accountability in implementing sustainable finance principles, while also supporting the achievement of the Sustainable Development Goals (SDGs).

Nevertheless, the reliability of ESG scores is frequently questioned due to their perceived inconsistency and limited credibility (Benuzzi et al., 2023; Berg et al., 2022). This inconsistency arises from differences in rating methodologies and the lack of transparency in the assessment process (Berg et al., 2021). These gaps create opportunities for firms to manipulate their sustainability image through greenwashing practices, namely symbolic efforts to appear environmentally responsible in order to obtain high ESG scores. The term greenwashing was first introduced by Jay Westerveld in 1986 and has become increasingly relevant alongside rising public concern for environmental issues. Walker & Wan (2012) define greenwashing as symbolic corporate communication regarding environmental commitment without substantive action, while Bansal & Clelland (2004) describe it as the disclosure of information that benefits firms but harms society. Based on legitimacy theory (Dowling & Pfeffer, 1975), companies engage in greenwashing to maintain public legitimacy when facing social pressure related to sustainability issues.

Greenwashing phenomena have also occurred in Indonesia. Between 2017 and 2021, nine greenwashing cases were identified in the media (ICEL, 2021). One of the most notable cases involved Adaro Energy, which claimed to diversify toward green energy through its “Green Initiatives” program, yet continued to rely heavily on coal as its core business, with 87% of group revenue derived from the coal sector (Trend Asia, 2021). This contradiction between corporate claims and actual practices reflects how greenwashing is used to preserve corporate legitimacy in the public eye. Its impacts include not only declining consumer trust in green brands and products (Kahraman & Kazançoğlu, 2019; Rausch & Kopplin, 2021), but also misleading investors in assessing firms’ environmental responsibility and long-term prospects (Gatti et al., 2021; Torelli et al., 2020).

For investors, greenwashing creates information distortions that can lead to substantial decision-making risks (P. Chen & Dagestani, 2023). Firms engaged in greenwashing tend to experience valuation declines, heightened stock price volatility, and increased litigation risk (Q. Li et al., 2024). Consequently, a growing number of investors incorporate greenwashing risk into their investment considerations and are even willing to sacrifice potential returns to avoid firms associated with such practices (Kleffel & Muck, 2023).

One of the fundamental roots of greenwashing lies in weak corporate governance. Managerial incentives that are misaligned with long-term objectives encourage manipulative behavior (Cohen et al., 2023; Galletta et al., 2023). In this context, corporate governance functions as a monitoring mechanism that can mitigate agency conflicts between managers and owners (Shleifer & Vishny, 1997). Within Indonesia’s two-tier governance system, the board of commissioners plays a crucial role in supervising the board of directors to ensure that corporate policies are implemented in an accountable and transparent manner. Effective corporate governance can restrain greenwashing practices through more transparent disclosure policies, stringent monitoring systems, and the appropriate application of incentives and sanctions (Bebchuk & Weisbach, 2010; Fama & Jensen, 1983).

However, empirical evidence regarding the impact of corporate governance on greenwashing remains mixed. Several studies find that board independence and board diversity enhance transparency and reduce greenwashing (Duarte et al., 2024; Liu et al., 2015; Yu et al., 2020), while other studies report contrasting results (Ghitti et al., 2024; Taglialatela et al., 2024). These inconsistencies indicate that the effectiveness of corporate governance in curbing greenwashing is contingent upon the context of implementation and the external pressures faced by firms.

Referring to the moderation framework proposed by Baron & Kenny (1986), this study introduces government pressure as a moderating variable to explain the inconsistent relationship between corporate governance and greenwashing. Government pressure is defined as regulatory and institutional influence that compels firms to align their business practices with sustainability principles (Eesley & Lenox, 2006; Freeman, 2007). In the context of developing countries such as Indonesia, government pressure serves as a coercive and normative force that strengthens corporate commitment to sustainability. When government oversight is strong, corporate boards tend to be more cautious in their disclosures and more committed to substantive rather than symbolic practices (Bhandari et al., 2022).

This study addresses four main research gaps in the greenwashing literature. First, empirical studies on greenwashing in the Indonesian context remain limited, even though Indonesia has a unique institutional setting marked by increasing sustainability reporting demands and regulatory attention. Second, this study responds to the measurement gap by using the discrepancy between the Green Communication Index (GCI) and Green Practice Index (GPI) to capture greenwashing, since greenwashing is commonly understood as the gap between environmental claims and actual environmental practices (Bernini et al., 2023; Testa, Miroshnychenko, et al., 2018).

Third, this study extends prior research by examining board-level governance mechanisms, namely board diversity, board size, and board independence, as determinants of greenwashing. Previous studies suggest that board characteristics may influence corporate monitoring and environmental disclosure behavior (Ma & Ahmad, 2024). However, the effectiveness of corporate governance may depend on external institutional conditions. Therefore, fourth, this study examines government pressure as a moderating variable to determine whether regulatory pressure strengthens or weakens the role of corporate governance in reducing greenwashing. In this regard, this study contributes by integrating internal governance mechanisms and external government pressure to provide a more comprehensive understanding of greenwashing control in Indonesia.

2. Literature Review

2.1. Legitimacy Theory

Legitimacy theory posits that the survival of an organization depends on societal acceptance of its existence and activities. Legitimacy is achieved when organizational values align with the values of the social system in which the organization operates (Dowling & Pfeffer, 1975). This relationship is understood as a “social contract,” whereby society provides resources while companies are expected to generate economic value and fulfill socio-environmental responsibilities. Because legitimacy is context-dependent across time and space (Suchman, 1995), changes in public expectations may lead to a legitimacy gap, a discrepancy between corporate behavior and societal expectations. To obtain, maintain, or restore legitimacy, companies often increase their social and environmental disclosures, particularly when facing threats such as disasters, lawsuits, or media scrutiny (Deephouse, 1996). The media plays a major role in shaping public perceptions (Brown et al., 2006), while internal organizational factors also influence legitimacy strategies (Cho et al., 2015).

2.2. Greenwashing

Greenwashing refers to exaggerated or misleading sustainability claims intended to construct an environmentally friendly image without corresponding substantive actions (Delmas & Burbano, 2011). As market preferences for “green” products continue to increase (Zhang et al., 2024), firms are incentivized to make aggressive environmental claims which, when unsupported by genuine practices, undermine stakeholder trust (Marquis et al., 2016). The consequences include reputational damage, consumer boycotts, and declines in market value (Netto et al., 2020). To mitigate greenwashing, reporting standards such as the Global Reporting Initiative (GRI) promote transparency and third-party verification (Gatti et al., 2019). Internal drivers of greenwashing include short-term financial performance targets and weak accountability, while external drivers include market pressure and competitive intensity (Radu et al., 2023; Torelli et al., 2020).

Methodologically, greenwashing measurement varies across studies, ranging from Likert-scale assessments based on managerial perceptions (Feng et al., 2022), index-based measures capturing mismatches between corporate communication and actual practices (Testa, Boiral, et al., 2018), to consumer-based perspectives (Y. S. Chen et al., 2020; Ha et al., 2022). This study adopts the approach proposed by Testa et al. (2018), employing Refinitiv-based calculations, which are considered more credible and less prone to source bias than the Bloomberg–Refinitiv score discrepancy method (Bernini et al., 2023; Yu et al., 2020; Zhang, 2022).

2.3. Corporate Governance

Corporate governance (CG) refers to the system by which companies are directed and controlled to ensure transparency, accountability, and the protection of stakeholder interests. CG mitigates agency conflicts through mechanisms such as managerial ownership, performance-based incentives, and board monitoring (Edmans et al., 2017). Indonesia adopts a two-tier governance system (Law No. 40/2007), in which the board of directors manages the company while the board of commissioners performs supervisory and advisory functions.

The effectiveness of board oversight is shaped by board composition and structure. Board diversity, particularly gender diversity, enhances decision quality by introducing diverse perspectives (García-Meca et al., 2015), board independence improves objectivity and constrains managerial opportunism (Fich & Shivdasani, 2012), and optimal board size depends on firm complexity (Coles, 2008). Strong corporate governance enhances both financial and non-financial transparency (Y. S. Chen et al., 2020; Khlifi & Zouari, 2022; Wu et al., 2023) and influences environmental performance (Enciso-Alfaro & García-Sánchez, 2022). Four governance mechanisms are frequently identified as central: board size, board independence, gender diversity, and CEO duality (Aguilera et al., 2021; Chams & García-Blandon, 2019). This study focuses on the supervisory role of the board of commissioners in mitigating greenwashing risk.

2.4. Government Pressure

Government pressure refers to external pressure arising from regulations, supervision, policy enforcement, and public sector expectations that encourage firms to align their business activities with social and environmental responsibilities (Freeman, 1984). In the context of sustainability, government pressure plays an important role in shaping corporate disclosure practices because firms are required to comply with environmental regulations, sustainability reporting standards, and governance requirements. Such pressure encourages firms to improve transparency and accountability in order to maintain legitimacy in the eyes of regulators and the public.

Previous studies show that regulatory pressure and government supervision can influence corporate sustainability behavior and disclosure quality. Regulations and public policy expectations encourage firms to comply with sustainability standards and improve transparency (Eccles et al., 2021; Kumar et al., 2023; W. Li et al., 2022). In addition, stronger government pressure may push boards to adopt more proactive sustainability policies and reduce symbolic environmental disclosure (Bhandari et al., 2022). Thus, government pressure is expected to function as an external mechanism that strengthens corporate accountability and limits greenwashing practices.

2.5. The Effect of Corporate Governance on Greenwashing

Corporate governance reflects the system through which firms are directed and controlled to ensure that corporate activities are conducted in a transparent, accountable, responsible, independent, and fair manner (OECD, 2015, 2021). In the context of sustainability, corporate governance is not only relevant as an internal control mechanism, but also as a means through which firms respond to social expectations regarding environmental responsibility. Based on legitimacy theory, firms seek to ensure that their actions and disclosures are perceived as consistent with the values, norms, and expectations of society (Dowling & Pfeffer, 1975). When firms face pressure to appear environmentally responsible, they may engage in greenwashing by communicating environmental commitments that are not fully supported by substantive environmental practices. Therefore, effective corporate governance is expected to reduce greenwashing by encouraging greater alignment between environmental communication and actual environmental conduct.

In this study, corporate governance is represented by three board-level attributes, namely board gender diversity, board size, and board independence. These attributes are considered important because the board plays a central role in shaping corporate responses to social and environmental expectations. From the perspective of legitimacy theory, board characteristics may influence whether firms pursue legitimacy through substantive environmental practices or merely through symbolic environmental disclosure. Stronger governance structures are expected to encourage firms to maintain legitimacy by improving the credibility of environmental disclosure rather than relying on symbolic claims.

Board gender diversity is particularly relevant in explaining greenwashing because a more diverse board may improve the firm's sensitivity to broader social and environmental expectations. Female board members are often associated with greater concern for ethical conduct, social responsibility, and sustainability-related issues (Eliwa et al., 2023; Haque & Jones, 2020). In the perspective of legitimacy theory, the presence of women on the board may help firms better understand societal expectations and encourage more credible environmental disclosure. As a result, firms with higher board gender diversity are less likely to rely on symbolic environmental communication to maintain legitimacy. Instead, they are expected to align their sustainability communication with substantive environmental practices. Prior studies also indicate that female board representation can reduce misleading sustainability disclosure (García-Sánchez et al., 2021). Therefore, board gender diversity is expected to reduce corporate greenwashing.

H1: Board gender diversity negatively affects corporate greenwashing.

Board size reflects the collective capacity of the board to respond to complex social and environmental expectations. From the perspective of legitimacy theory, firms seek to maintain public acceptance by aligning their activities and disclosures with prevailing societal norms and expectations (Coles, 2008; Dowling & Pfeffer, 1975). A larger board may provide broader knowledge, experience, and perspectives in interpreting environmental expectations from stakeholders, thereby helping firms ensure that their environmental communication is consistent with actual environmental practices. In this regard, larger boards are expected to reduce the tendency of firms to rely on symbolic environmental disclosure as a means of maintaining legitimacy.

Prior studies support the argument that board size can influence corporate sustainability behavior. Lu & Wang (2021) show that larger boards are associated with stronger governance capacity in improving the credibility of sustainability-related reporting. Similarly, Ghitti et al. (2024) find that firms with larger boards are better able to constrain manipulative sustainability reporting practices. These findings indicate that a larger board may help firms avoid legitimacy risks arising from misleading or exaggerated environmental claims. Therefore, larger board size is expected to reduce greenwashing because firms are more likely to maintain legitimacy through substantive environmental practices rather than symbolic disclosure.

H2: Board size negatively affects corporate greenwashing.

Board independence refers to the presence of independent commissioners who are expected to provide objective judgment in corporate decision-making, including decisions related to environmental responsibility and sustainability disclosure. From the perspective of legitimacy theory, firms seek to maintain legitimacy by ensuring that their activities and disclosures are consistent with societal values and expectations (Dowling & Pfeffer, 1975). In this context, independent boards may help firms reduce legitimacy risks by encouraging more credible and transparent environmental disclosure. When sustainability disclosure is used only to create a positive environmental image without being supported by actual environmental practices, firms may face legitimacy threats in the form of public distrust and accusations of greenwashing.

Independent commissioners are more likely to assess corporate environmental policies and sustainability disclosures objectively because they have no material ties to management (Lopez-Arceiz et al., 2021). Therefore, a higher proportion of independent commissioners can encourage firms to maintain legitimacy through substantive environmental practices rather than symbolic environmental claims. Prior research also supports this argument. Zhou et al. (2022) document a negative association between board independence and greenwashing tendencies, indicating that independent boards can enhance the credibility of sustainability reporting and reduce misleading environmental disclosure. Thus, higher board independence is expected to reduce corporate greenwashing.

H3: Board independence negatively affects corporate greenwashing.

2.6. The Moderating Role of Government Pressure on the Effect of Corporate Governance on Greenwashing

Beyond internal governance mechanisms, government pressure may influence how firms maintain and protect their legitimacy in relation to environmental responsibility. From the perspective of legitimacy theory, firms seek to align their activities and disclosures with social expectations in order to gain and maintain public acceptance (Dowling & Pfeffer, 1975). Government pressure represents an important source of legitimacy expectation because regulations, supervision, and policy demands define the standards of acceptable corporate environmental behavior. When government pressure is strong, firms face greater legitimacy risks if their environmental communication is not supported by substantive environmental practices. Therefore, government pressure may encourage firms to reduce symbolic environmental disclosure and improve the consistency between environmental claims and actual practices.

Board gender diversity is expected to be more effective in reducing greenwashing when firms operate under stronger government pressure. Diverse boards are generally more sensitive to ethical, social, and sustainability issues, and prior studies show that female board representation can reduce misleading sustainability disclosure (García-Sánchez et al., 2021). In the context of legitimacy theory, the presence of women on the board may help firms better understand social and regulatory expectations related to environmental responsibility. When government pressure increases, this sensitivity becomes more important because firms are required to demonstrate more credible environmental conduct. As a result, board gender diversity is expected to strengthen the firm’s ability to maintain legitimacy through substantive environmental practices rather than symbolic greenwashing. Previous studies also suggest that external pressure can influence whether firms respond to environmental expectations substantively or symbolically (Testa, Miroshnychenko, et al., 2018). Therefore, government pressure is expected to strengthen the negative effect of board gender diversity on greenwashing.

H4: Government pressure strengthens the negative effect of board gender diversity on greenwashing.

Board size may also determine how effectively firms respond to legitimacy pressures arising from government regulations and supervision. From the perspective of legitimacy theory, firms are required to align their environmental practices and disclosures with social and regulatory expectations to maintain public acceptance (Dowling & Pfeffer, 1975). A larger board may provide broader perspectives, expertise, and experience in interpreting these expectations, allowing firms to better assess whether their sustainability disclosures are consistent with actual environmental practices. Therefore, larger boards are expected to reduce the use of symbolic environmental claims as a strategy to maintain legitimacy.

The negative effect of board size on greenwashing is expected to become stronger when government pressure is high. Strong government pressure increases the legitimacy risk faced by firms because environmental claims are more likely to be evaluated against regulatory standards and public expectations. In this condition, larger boards are more capable of responding to such legitimacy demands by encouraging more credible and accountable sustainability disclosure. García-Sánchez et al. (2021) show that the interaction between governance mechanisms and regulatory pressure can improve corporate transparency. Thus, government pressure is expected to amplify the role of larger boards in reducing greenwashing because firms are encouraged to maintain legitimacy through substantive environmental practices rather than symbolic disclosure.

H5: Government pressure strengthens the negative effect of board size on greenwashing.

Board independence is expected to become more effective in reducing greenwashing when firms face strong government pressure. From the perspective of legitimacy theory, firms seek to maintain legitimacy by aligning their environmental actions and disclosures with social values, public expectations, and regulatory demands (Dowling & Pfeffer, 1975). Government pressure increases the need for firms to demonstrate credible environmental responsibility because non-compliance or misleading sustainability disclosure may create legitimacy risks. In this context, independent commissioners play an important role in ensuring that environmental disclosure is not merely symbolic, but reflects actual environmental practices.

Independent boards are more likely to encourage transparent and credible sustainability reporting because they can assess corporate policies more objectively and are less influenced by managerial interests (Lopez-Arceiz et al., 2021). When government pressure is strong, the role of independent commissioners becomes more relevant because firms are under greater scrutiny to ensure that their environmental claims are consistent with regulatory expectations. Zhou et al. (2022) also show that board independence is negatively associated with greenwashing tendencies, indicating that independent boards can reduce misleading environmental disclosure. Therefore, government pressure is expected to strengthen the negative effect of board independence on greenwashing by encouraging firms to maintain legitimacy through substantive environmental practices rather than symbolic disclosure.

H6: Government pressure strengthens the negative effect of board independence on greenwashing.

3. Research Methods

This study employs a quantitative causal approach to examine the effect of corporate governance on greenwashing practices and the moderating role of government pressure. This design aims to obtain empirical evidence on causal relationships among variables that are measured numerically and analyzed using statistical techniques. The population consists of all non-financial firms listed on the Indonesia Stock Exchange (IDX) over the period 2017–2023. The sample is selected using purposive sampling based on the following criteria: (1) the firm publishes a sustainability report on its official website or on the IDX website, (2) sustainability data are available in the Refinitiv ESG database, and (3) the firm is not a financial institution, in order to maintain homogeneity in reporting structures. Based on these criteria, the final sample consists of 34 firms, yielding a total of 160 firm-year observations.

The dependent variable in this study is greenwashing (GW), measured using the approach of Testa et al. (2018) through the difference between the Green Communication Index (GCI) and the Green Practice Index (GPI). GCI represents the extent of corporate sustainability communication, whereas GPI captures actual environmental practices. Both indices are constructed from environmental indicators available in LSEG. The standardized difference between GCI and GPI yields a Discrepancy Index (DI), where positive values indicate a higher tendency toward greenwashing. The independent variables consist of three corporate governance indicators: board gender diversity (Bdiv), board size (Bsize), and board independence (Bind). Board gender diversity is measured by the proportion of female commissioners to total board members; board size is measured by the total number of incumbent commissioners; and board independence is measured by the percentage of independent commissioners relative to total board members. The moderating variable, government pressure (Sgov), is measured using a dummy variable based on ownership status. State-owned enterprises (SOEs) are assigned a value of 1, while privately owned firms are assigned a value of 0 (Lulu, 2021). This approach reflects the higher level of regulatory pressure on SOEs to maintain public accountability and comply with sustainability policies.To control for potential bias, the study includes several control variables: firm size (natural logarithm of total assets), leverage (ratio of total debt to total assets), profitability (return on assets/ROA), and sales growth. The empirical models of this study are specified as follows.

The baseline regression model without the moderating variable (Model 1) is:

$$\mathbf{GW = \alpha + \beta_1 Bdiv_{it} + \beta_2 Bsize_{it} + \beta_3 Bind_{it} + \beta_4 Size_{it} + \beta_5 Lev_{it} + \beta_6 Roa_{it} + \epsilon}$$

The second model incorporates the moderating effect of government pressure (Model 2):

$$\mathbf{GW = \alpha + \beta_1 Bdiv_{it} + \beta_2 Bsize_{it} + \beta_3 Bind_{it} + \beta_4 Sgov_{it} + \beta_5 Bdiv{*}Sgov_{it} + \beta_6 Bsize{*}Sgov_{it} + \beta_7 Bind{*}Sgov_{it} + \beta_8 Size_{it} + \beta_9 Lev_{it} + \beta_{10} Roa_{it} + \epsilon}$$

where:

GW = Greenwashing

α = Constant term

β = Coefficients of the independent variables

Bdiv = Board gender diversity

Bsize = Board size

Bind = Board independence

Sgov = Government pressure

Bdiv*Sgov = Interaction between board gender diversity and government pressure

Bsize*Sgov = Interaction between board size and government pressure

Bind*Sgov = Interaction between board independence and government pressure

Size = Firm size

Lev = Leverage

Roa = Return on assets

Growth = Sales growth

ε = Error term

i = Firm

t = Year

The analysis is conducted using panel data regression with either a fixed effects model (FEM), random effects model (REM), or ordinary least squares (OLS), depending on the results of the Chow test, Hausman test, and Breusch–Pagan test (Baltagi, 2021). A fixed effects model is selected when there is evidence that individual effects are correlated with the independent variables, while a random effects model is used when individual effects are assumed to be uncorrelated with the regressors. Statistical significance is assessed at the 5% level ($\alpha = 0.05$). The t-statistics are used to examine the partial effect of each variable, whereas the F-statistic is employed to evaluate the overall significance of the model. The adjusted coefficient of determination (Adjusted R^2) is used to assess the explanatory power of the model in capturing variations in greenwashing (Ghozali, 2018).

To examine the moderating effect, this study applies Moderated Regression Analysis (MRA) by incorporating interaction terms between corporate governance variables and regulatory pressure (Baron & Kenny, 1986). The interaction terms are used to determine whether regulatory pressure strengthens or weakens the relationship between corporate governance mechanisms and greenwashing (Ghozali, 2018). A moderating effect is indicated when the coefficient of the interaction term is statistically significant. The direction of moderation is interpreted based on the sign and significance of the interaction coefficient (Wooldridge, 2010). If the interaction coefficient has the same direction as the main effect and is statistically significant, the moderating variable is interpreted as strengthening the relationship. Conversely, if the interaction coefficient has the opposite direction from the main effect and is statistically significant, the moderating variable is interpreted as weakening the relationship. In the context of this study, a negative and significant interaction coefficient indicates that regulatory pressure strengthens the role of corporate governance in reducing greenwashing, whereas a positive and significant interaction coefficient indicates that regulatory pressure weakens the ability of corporate governance to reduce greenwashing. To ensure the validity of the results, this study applies robust standard errors clustered at the firm level to address potential heteroskedasticity and autocorrelation (Wooldridge, 2010).

4. Results and Discussion

The study initially identified 966 firms listed on the Indonesia Stock Exchange during the 2017–2023 period, equivalent to 6,762 potential firm-year observations. After excluding 106 financial firms, 815 non-financial firms with incomplete greenwashing measurement data, and 11 firms without sustainability reports, the final sample consisted of 34 firms with 160 firm-year observations. The number of observations is lower than the maximum possible observations because not all sample firms had complete data for each year during the observation period. Therefore, the final dataset forms an unbalanced panel. The majority of the sample firms operate in the infrastructure, basic materials, energy, and consumer staples sectors. Overall, the sample firms are characterized by relatively large asset sizes, low leverage levels, and substantial variability in profitability. The greenwashing (GW) indicator is constructed from the standardized difference between sustainability communication and sustainability practices, resulting in a mean value of zero with a relatively wide dispersion of observations.

Table 1 Descriptive Statistics of the Research Sample

Variable	Obs.	Min	Max	Mean	Std. Dev.
GW	160	-2.55	2.37	0	1.02
Bdiv	160	0	0.43	0.09	0.12
Bsize	160	3	15	6.33	2.39
Bind	160	0.29	0.83	0.41	0.11
Size	160	20.13	24.10	21.93	0.76
Lev	160	0.00	0.74	0.07	0.09
Roa	160	-0.10	0.55	0.25	0.20

Source: Data processed in 2025

The panel data model selection results indicate that the Fixed Effects Model (FEM) is the most appropriate specification for the baseline analysis without moderation, whereas the model incorporating government pressure (Sgov) as a moderating variable is better estimated using the Random Effects Model (REM). This selection was based on standard diagnostic tests (e.g., Chow test, Hausman test), ensuring that the most efficient and consistent estimator was applied for each model specification. All estimated models pass the F-test with probability values below 0.05, indicating that the models are statistically valid and jointly significant. To ensure the reliability of the estimated coefficients in the presence of potential heteroskedasticity and autocorrelation, the analysis applies robust standard errors clustered at the firm level. The coefficients of determination (R^2) range from 0.10 to 0.11, which, although relatively modest in magnitude, is considered acceptable for cross-industry studies in the fields of corporate governance and sustainability, where firm behavior is influenced by a wide array of unobserved and industry-specific factors.

Table 2 Model 1 Testing

Variable	Coef.	Std. Error	P-value
Bdiv	-1.585	0.757	0.044
Bsize	-0.035	0.054	0.525
Bind	-0.789	0.656	0.238
Size	0.397	0.133	0.005
Lev	-0.502	0.838	0.553
Roa	1.677	1.003	0.105
Konstanta	-8.006	2.931	0.010

Source: Data processed in 2025

The regression results reveal that board gender diversity (Bdiv) exerts a negative and statistically significant effect on greenwashing ($\beta = -1.585$, $p = 0.044$). This finding suggests that a higher proportion of female commissioners is associated with lower levels of corporate greenwashing, consistent with the argument that gender-diverse boards tend to exercise stronger ethical oversight and more rigorous monitoring of sustainability disclosures, thereby reducing the gap between reported and actual environmental practices. Firm size (Size), by contrast, shows a positive and significant effect on greenwashing, indicating that larger firms are more prone to discrepancies between their sustainability communication and actual practices.

This pattern likely reflects the greater visibility and stakeholder scrutiny faced by larger firms, which may create incentives to overstate environmental performance in order to manage reputational risk and meet external expectations. Meanwhile, the other control variables in the baseline model board size (Bsize), board independence (Bind), leverage, and profitability (ROA) do not exhibit statistically significant effects on greenwashing. This suggests that, within the context of this study, structural board characteristics beyond gender composition, as well as firm-level financial attributes such as leverage and profitability, play a relatively limited role in explaining variations in greenwashing behavior, at least in the baseline specification.

Table 3 Model 2 Testing

Variable	Coef.	Std. Error	P-value
Bdiv	-0.816	0.563	0.147
Bsize	-0.033	0.058	0.567
Bind	0.551	0.863	0.523
Sgov	1.325	0.853	0.120
Bdiv*Sgov	-2.348	1.190	0.049
Bsize*Sgov	-0.115	0.091	0.205
Bind*Sgov	-2.303	0.965	0.017
Size	0.151	0.153	0.324
Lev	-0.073	0.633	0.908
Roa	3.006	0.886	0.001
Konstanta	-3.359	3.221	0.297

Source: Data processed in 2025

When government pressure (Sgov) is introduced as a moderating variable, the results indicate that the interaction between board gender diversity and government pressure (Bdiv*Sgov) has a negative and statistically significant effect on greenwashing (coefficient = −2.348, p = 0.049). This finding suggests that government pressure strengthens the role of board gender diversity in constraining greenwashing practices. Moreover, the interaction between board independence and government pressure (Bind*Sgov) is also negative and statistically significant (coefficient = −2.303, p = 0.017), indicating that regulatory pressure enhances the effectiveness of independent commissioners in mitigating greenwashing. By contrast, the interaction between board size and government pressure (Bsize*Sgov) is not statistically significant, implying that government pressure does not amplify the monitoring effect of board size on greenwashing. Overall, these results demonstrate that the impact of corporate governance on greenwashing becomes more pronounced under stronger regulatory pressure or state ownership.

Based on the regression results, board gender diversity, measured by the proportion of female commissioners, has a negative and statistically significant effect on greenwashing. This indicates that firms with a higher proportion of women on the board of commissioners tend to have a lower level of greenwashing. **Therefore, H1 is supported**. This finding is relevant to legitimacy theory because greenwashing can be understood as a symbolic strategy used by firms to obtain or maintain legitimacy when their environmental communication is not fully supported by substantive environmental practices. According to Dowling & Pfeffer (1975), firms seek to align their actions and disclosures with societal values and expectations in order to secure social acceptance. In this context, the negative effect of board gender diversity suggests that female representation on the board may help firms maintain legitimacy through more credible sustainability practices and disclosures, rather than through symbolic environmental claims.

The presence of women on the board of commissioners may strengthen the firm’s sensitivity to social, ethical, and environmental expectations. Gender-diverse boards are more likely to consider the broader social consequences of corporate decisions and to encourage more transparent sustainability reporting. As a result, firms with greater board gender diversity may be less likely to use environmental disclosure merely as an image-building tool. Instead, they are more likely to ensure consistency between environmental communication and actual environmental practices. From the perspective of legitimacy theory, this condition reduces the risk of a legitimacy gap, namely the gap between how firms want to be perceived by society and how their actual environmental conduct is evaluated by stakeholders.

In the Indonesian context, although there is no explicit regulation mandating gender diversity on corporate boards, the Financial Services Authority (OJK) has encouraged the implementation of good corporate governance principles through Regulation No. 33/POJK.04/2014 concerning the Board of Directors and Board of Commissioners of Public Companies. These governance principles are relevant to sustainability because they support accountability, transparency, independence, and responsibility in corporate decision-making. Therefore, the presence of women on the board can be viewed as part of a broader governance structure that helps firms respond to increasing public and regulatory expectations regarding sustainability and ESG performance.

This result is consistent with prior empirical studies documenting a negative association between female board representation and greenwashing (Eliwa et al., 2023; Gull et al., 2023; G. Liu et al., 2024; Zahid et al., 2023). Datta et al. (2021) argue that women directors tend to bring stronger ethical perspectives and promote more transparent reporting practices. Similarly, Kuo et al. (2022) find that gender-diverse boards are more likely to critically evaluate corporate environmental claims. Majid & Jaaffar (2023) also suggest that the presence of women on corporate boards shifts greater attention toward the social consequences of business decisions. Overall, these findings indicate that board gender diversity is not merely symbolic, but may play a substantive role in reducing greenwashing by encouraging firms to maintain legitimacy through credible environmental accountability rather than misleading sustainability disclosure.

The hypothesis testing results show that board size does not have a statistically significant effect on greenwashing, as indicated by an insignificant coefficient. This implies that the number of board members does not materially influence a firm's tendency to engage in misleading sustainability reporting. **Therefore, H2 is not supported**. From the perspective of legitimacy theory, firms seek to align their actions and disclosures with societal values and stakeholder expectations in order to maintain social legitimacy (Dowling & Pfeffer, 1975). In this context, a larger board is theoretically expected to provide broader perspectives in responding to social and environmental expectations. However, the result indicates that merely increasing the number of board members is not sufficient to reduce greenwashing.

This finding suggests that board size alone does not necessarily determine whether firms pursue legitimacy through substantive environmental practices or symbolic sustainability disclosure. Although larger boards may provide more diverse knowledge and experience, their effectiveness depends on whether board members are able to translate these resources into credible environmental accountability. When sustainability issues are not treated as a strategic priority, a larger board may still fail to prevent firms from using environmental disclosure as a symbolic tool to maintain legitimacy. Therefore, the insignificant result indicates that the quantity of board members does not automatically reduce the legitimacy gap between environmental communication and actual environmental practices.

This result is consistent with Ghitti et al. (2024), who show that a larger number of board members is not necessarily effective in preventing greenwashing. Previous studies also suggest that larger boards may face coordination, communication, and decision-making difficulties, which can reduce their effectiveness in addressing complex corporate issues (Bernini et al., 2023). In the context of sustainability, board size may become merely a formal governance attribute when it is not accompanied by environmental awareness, competence, and commitment. Thus, this study indicates that reducing greenwashing requires not only a larger board structure, but also board members who are substantively capable of ensuring that sustainability disclosure reflects actual environmental practices. Overall, the finding implies that legitimacy cannot be maintained simply through formal governance structures, but must be supported by substantive environmental accountability.

The results indicate that board independence does not have a statistically significant effect on greenwashing practices. This finding suggests that the presence of independent commissioners does not necessarily reduce firms' tendency to engage in misleading sustainability disclosure. Therefore, **H3 is not supported.** From the perspective of legitimacy theory, firms seek to maintain social acceptance by aligning their actions and disclosures with societal values and expectations (Dowling & Pfeffer, 1975). However, this result indicates that the formal presence of independent commissioners has not been sufficient to ensure that sustainability disclosure reflects substantive environmental practices. In this context, board independence may function more as a formal governance attribute that helps firms appear legitimate, rather than as a mechanism that effectively reduces symbolic environmental claims.

This finding also suggests that independent commissioners have not yet been able to close the legitimacy gap between environmental communication and actual environmental conduct. Although independent commissioners are theoretically expected to encourage more credible and transparent disclosure, their presence alone does not guarantee that firms will avoid greenwashing. In Indonesia, this condition may occur because the appointment of independent commissioners is often driven by regulatory compliance rather than by a substantive commitment to strengthen environmental accountability. Under OJK Regulation No. 33/POJK.04/2014, public companies are required to ensure that at least 30% of their board of commissioners consists of independent members. However, when independence is treated merely as a formal requirement, it may provide symbolic legitimacy without necessarily improving the credibility of sustainability reporting.

This result reflects the possibility that formal governance structures are insufficient to prevent greenwashing when they are not supported by actual independence, relevant competence, and strong commitment to sustainability issues. In line with legitimacy theory, firms may adopt governance structures to demonstrate conformity with social and regulatory expectations, yet such structures may remain symbolic if they do not lead to substantive changes in environmental practices. Bebchuk & Weisbach (2010) emphasize that the effectiveness of independent commissioners depends on their actual independence and ability to influence corporate decision-making. Similarly, Naciti (2019) shows that board independence does not always improve corporate sustainability performance. Therefore, this study indicates that board independence alone is insufficient to reduce greenwashing unless it is accompanied by substantive environmental accountability and genuine governance effectiveness.

The results indicate that the interaction between board gender diversity and government pressure has a negative and statistically significant effect on greenwashing. This suggests that government pressure strengthens the negative effect of board gender diversity on greenwashing. **Accordingly, H4 is supported.** From the perspective of legitimacy theory, firms seek to maintain social acceptance by aligning their actions and disclosures with societal values, norms, and regulatory expectations (Dowling & Pfeffer, 1975). In this context, government pressure represents an external legitimacy demand that encourages firms to demonstrate credible environmental responsibility. When firms face stronger government pressure, symbolic environmental claims become riskier because they may create a legitimacy gap between what firms communicate and what they actually do.

The significant moderating effect indicates that board gender diversity becomes more effective in reducing greenwashing when firms operate under stronger government pressure. The presence of women on the board may increase sensitivity to ethical, social, and environmental expectations, thereby encouraging firms to respond to government pressure through more substantive sustainability practices rather than symbolic disclosure. This finding implies that gender-diverse boards help firms maintain legitimacy not merely by improving corporate image, but by strengthening the credibility of environmental disclosure. Therefore, the interaction between internal board diversity and external government pressure reduces the tendency of firms to use greenwashing as a symbolic legitimacy strategy.

This result is consistent with Elsheikh et al. (2024), who find that female board participation strengthens the effect of institutional pressure in improving sustainability performance and reducing greenwashing. Similarly, Wu et al. (2023) show that female directors are more responsive to environmental policies and are more likely to transform external pressure into substantive environmental actions. Overall, this finding supports the argument that board gender diversity and government pressure complement each other in reducing greenwashing. From the legitimacy theory perspective, firms with more gender-diverse boards are better able to respond to regulatory expectations by maintaining legitimacy through substantive environmental accountability rather than misleading sustainability disclosure.

The analysis further shows that the interaction between board size and government pressure is not statistically significant. This indicates that government pressure does not moderate the effect of board size on greenwashing. **Accordingly, H5 is not supported.** From the perspective of legitimacy theory, larger boards are theoretically expected to provide broader perspectives in responding to social and regulatory expectations. However, the insignificant result suggests that the number of board members alone does not determine whether firms are able to respond substantively to government pressure. In other words, larger boards do not automatically reduce the legitimacy gap between environmental communication and actual environmental practices.

This finding indicates that board size may remain a formal governance attribute rather than a substantive mechanism for addressing greenwashing. Although government pressure creates external legitimacy demands, such pressure does not necessarily make larger boards more effective in reducing symbolic sustainability disclosure. A larger board may provide more members and perspectives, but without sufficient environmental competence, commitment, and coordination, it may fail to translate regulatory pressure into credible sustainability practices. Therefore, the absence of a moderating effect suggests that formal board structure alone is insufficient to ensure that firms maintain legitimacy through substantive environmental accountability.

This result is consistent with Chen & Dagestani (2023), who argue that board size does not always function as an effective mechanism in constraining greenwashing, even when firms are exposed to external pressure. Farisyi (2023) also emphasize that regulatory pressure does not necessarily strengthen the relationship between corporate governance mechanisms and greenwashing when such pressure is unable to induce substantive behavioral change. Thus, from the legitimacy theory perspective, this finding implies that government pressure cannot strengthen the role of board size when the board's capacity to respond to sustainability issues remains limited. Reducing greenwashing therefore requires not only compliance with formal governance structures, but also substantive board capability in ensuring the credibility of environmental disclosure.

The analysis reveals that the interaction between board independence and government pressure has a negative and statistically significant effect on greenwashing. This indicates that government pressure strengthens the negative effect of board independence on greenwashing. **Accordingly, H6 is supported.** From the perspective of legitimacy theory, firms seek to maintain social acceptance by ensuring that their actions and disclosures are consistent with societal values, public expectations, and regulatory demands (Dowling & Pfeffer, 1975). In this context, government pressure represents an external legitimacy demand that increases firms' need to demonstrate credible sustainability practices. When such pressure is strong, firms face greater legitimacy risks if their environmental disclosures are perceived as misleading or inconsistent with actual environmental performance.

The significant interaction suggests that independent boards become more effective in reducing greenwashing when firms are exposed to stronger government pressure. Independent commissioners are expected to provide more objective judgment in evaluating whether sustainability disclosures reflect actual corporate practices. Under strong government pressure, this role becomes more important because firms must respond not only to internal governance expectations, but also to external regulatory demands. Therefore, board independence may help firms maintain legitimacy by reducing symbolic environmental claims and encouraging more credible sustainability reporting.

This finding indicates that government pressure strengthens the ability of independent boards to close the legitimacy gap between environmental communication and actual environmental practices. When regulatory scrutiny increases, independent commissioners are more likely to challenge sustainability disclosures that are merely symbolic or potentially misleading. As a result, firms with stronger board independence are less likely to use greenwashing as a strategy to gain or maintain legitimacy. Chauhan & Kumar (2018) explain that the role of boards in reducing manipulation in sustainability disclosure becomes more significant under strong regulatory pressure. Similarly, Sebrina et al. (2023) show that external pressures, such as government regulation, can strengthen the influence of independent boards in enforcing good corporate governance principles.

Overall, this finding suggests that board independence and government pressure complement each other in reducing greenwashing. From the legitimacy theory perspective, independent commissioners help firms respond to government pressure through more transparent and accountable sustainability disclosure. Thus, the combination of substantive board independence and strong regulatory pressure encourages firms to maintain legitimacy through actual environmental accountability rather than symbolic disclosure.

5. Conclusion

This study aims to examine the effect of corporate governance on greenwashing and the moderating role of government pressure. The results indicate that among the three governance indicators tested only board gender diversity has a significant negative effect on greenwashing. This implies that a higher proportion of female commissioners is associated with a lower likelihood of misleading sustainability reporting. By contrast, board size and board independence do not exhibit significant direct effects on greenwashing.

With regard to external pressure, government pressure strengthens the negative effects of both board gender diversity and board independence on greenwashing, suggesting that regulation and governmental oversight enhance the effectiveness of board monitoring in constraining manipulative sustainability reporting practices. These findings indicate that the influence of corporate governance on greenwashing becomes more pronounced when firms operate under stronger regulatory pressure or state ownership.

From a theoretical perspective, these findings enrich the application of legitimacy theory by demonstrating that the effectiveness of corporate governance depends not only on internal structural mechanisms but also on the strength of external institutional pressure shaping corporate behavior. Practically, the results imply that regulators should strengthen sustainability policies, ESG audits, and sanctioning mechanisms to enhance the monitoring function of corporate boards. For firms, the findings underscore the importance of building inclusive and independent governance structures beyond mere formal compliance. For civil society, NGOs, and the media, active engagement in monitoring corporate disclosure practices remains crucial for fostering a transparent and sustainable business environment.

This study has several limitations. It relies on only three governance indicators and one main form of external pressure, and the measurement of greenwashing remains based on narrative content analysis. Future studies are encouraged to incorporate additional governance variables, such as managerial ownership and the presence of sustainability committees, as well as other sources of pressure, including investor or media pressure. The use of text mining or semantic analysis is also recommended to improve the objectivity of greenwashing measurement. Furthermore, the integration of institutional theory and agency theory in future research is expected to provide a more comprehensive understanding of how governance mechanisms and external pressures jointly shape corporate greenwashing behavior.

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References

Aguilera, R. V., Aragon-Correa, J. A., Marano, V., & Tashman, P. A. (2021). The corporate governance of environmental sustainability: A review and proposal for more integrated research. *Journal of Management*, *47*(6), 1486–1497. https://doi.org/https://doi.org/10.1177/0149206321991212

Baltagi, B. H. (2021). *Econometric Analysis of Panel Data* (6th ed.). Cham: Springer International Publishing.

Bansal, P., & Clelland, I. (2004). Talking trash: Legitimacy, impression management, and unsystematic risk in the context of the natural environment. *Academy of Management Journal*, *47*(1), 93–103. https://doi.org/https://doi.org/10.5465/20159562

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, *51*(6), 1173. https://doi.org/https://psycnet.apa.org/doi/10.1037/0022-3514.51.6.1173

Bebchuk, L. A., & Weisbach, M. S. (2010). The State of Corporate Governance Research. *The Review of Financial Studies*, *23*(3), 939–961. https://doi.org/https://doi.org/10.1093/rfs/hhp121

Benuzzi, M., Bax, K., Paterlini, S., & Taufer, E. (2023). *Chasing ESG performance: How methodologies shape outcomes* (SSRN Working Paper). https://doi.org/http://dx.doi.org/10.2139/ssrn.4662257

Berg, F., Fabisik, K., & Sautner, Z. (2021). *Is history repeating itself? The (un)predictable past of ESG ratings* (Finance Working Paper 708/2020). https://doi.org/http://dx.doi.org/10.2139/ssrn.3722087

Berg, F., Kölbel, J. F., & Rigobon, R. (2022). Aggregate confusion: The divergence of ESG ratings.

Rev. Finance, *26*(6), 1315–1344. https://doi.org/http://dx.doi.org/10.1093/rof/ rfac033

Bernini, F., Giuliani, M., & La Rosa, F. (2023). Measuring greenwashing: A systematic methodological literature review. *Business Ethics, the Environment and Responsibility*, *November 2023*, 649–667. https://doi.org/10.1111/beer.12631

Bhandari, A., Mammadov, B., Thevenot, M., & Vakilzadeh, H. (2022). Corporate Culture and Financial Reporting Quality. *Accounting Horizons*, *36*(1), 1–24. https://doi.org/https://doi.org/10.2308/HORIZONS-19-003

Brown, W. O., Helland, E., & Smith, J. K. (2006). Corporate philanthropic practices. *Journal of Corporate Finance*, *12*(5), 855–877. https://doi.org/. https://doi.org/10.1016/j.jcorpfin.2006.02.001

Chams, N., & García-Blandon, J. (2019). Sustainable or not sustainable? The role of the board of directors. *Journal of Cleaner Production*, *226*, 1067–1081. https://doi.org/https://doi.org/10.1016/j.jclepro.2019.04.118

Chauhan, Y., & Kumar, S. B. (2018). Do investors value the non fi nancial disclosure in emerging markets ? *Emerging Markets Review*, *37*(April), 32–46. https://doi.org/10.1016/j.ememar.2018.05.001

Chen, P., & Dagestani, A. A. (2023). Greenwashing behavior and firm value – From the perspective of board characteristics. *Corporate Social Responsibility and Environmental Management*, *30*(5), 2330–2343. https://doi.org/https://doi.org/10.1002/csr.2488

Chen, Y. S., Huang, A. F., Wang, T. Y., & Chen, Y. R. (2020). Greenwash and green purchase behaviour: The mediation of green brand image and green brand loyalty. *Total Quality Management & Business Excellence*, *31*(1–2), 194–209. https://doi.org/https://doi.org/10.1080/14783363.2018.1426450

Cho, C. H., Michelon, G., Patten, D. M., & Roberts, R. W. (2015). CSR disclosure: the more things change…? *Accounting, Auditing & Accountability Journal*, *28*(1), 14–35. https://doi.org/https://doi.org/10.1108/AAAJ-12-2013-1549

Cohen, S., Kadach, I., Ormazabal, G., & Reichelstein, S. (2023). Executive Compensation Tied to ESG Performance: International Evidence. *Journal of Accounting Research*, *61*(3). https://doi.org/10.1111/1475-679X.12481

Coles, J. L. (2008). Disclosure policy: A discussion of Leuz, Triantis and Wang (2008) on “going dark.” *Journal of Accounting and Economics*, *45*(2–3), 209–220. https://doi.org/https://doi.org/10.1016/j.jacceco.2008.01.002

Datta, S., Doan, T., & Toscano, F. (2021). Top executive gender , board gender diversity , and financing decisions : Evidence from debt structure choice. *Journal of Banking and Finance*, *125*, 106070. https://doi.org/10.1016/j.jbankfin.2021.106070

de Freitas Netto, S. V., Sobral, M. F. F., Ribeiro, A. R. B., & Soares, G. R. D. L. (2020). Concepts and forms of greenwashing: A systematic review. *Environmental Sciences Europe*, *32*, 1–12. https://doi.org/https://doi.org/10.1186/s12302-020-0300-3

Deephouse, D. L. (1996). Does isomorphism legitimate? *Academy of Management Journal*, *39*(4), 1024–1039. https://doi.org/https://doi.org/10.5465/256722

Delmas, M. A., & Burbano, V. C. (2011). The drivers of greenwashing. *California Management Review*, *54*(1), 64–87. https://doi.org/https://doi.org/10.1525/cmr.2011.54.1.64

Dowling, J., & Pfeffer, J. (1975). Organizational Legitimacy: Social Values and Organizational Behavior between the Organizations seek to establish congruence. *The Pacific Sociological Review*, *18*(1), 122–136.

Duarte, J. P., Bastos, S. A. P., d’Angelo, M. J., de Oliveira, E. S., & Fortunato, G. (2024). Oversight Mechanisms and the Reduction of Greenwashing. *Revista de Gestao Social e Ambiental*, *18*(8), 1–22. https://doi.org/10.24857/rgsa.v18n8-065

Eccles, R. G., Krzus, M. P., Rogers, J. L., & Serafeim, G. (2021). ntegrated reporting and the future of accounting. *Strategic Finance*, *103*(5), 36–443. https://doi.org/https://doi.org/10.1037/e715092011-001

Edmans, A., Gabaix, X., & Jenter, D. (2017). Executive compensa- tion: A survey of theory and evidence. In *The handbook of the economics of corporate governance* (pp. 383–539). Elsevier B.V. https://doi.org/https://doi.org/10.2139/ssrn.2992287

Eesley, C., & Lenox, M. J. (2006). Firm Responses to Secondary Stakeholder Action. *Strategic Management Journal*, *27*(8), 765–781. https://doi.org/https:// doi. org/ 10. 1002/ smj. 536

Eliwa, Y., Aboud, A., & Saleh, A. (2023). Board gender diversity and ESG decoupling: Does religiosity matter? *Business Strategy and the Environment*, *32*(7), 4046–4067. https://doi.org/10.1002/bse.3353

Elsheikh, T., Almaqtari, F. A., Mohammed, H., Hattami, A., Al, M. A., & Ettish, A. A. (2024). The moderating effect of women in boardrooms on the relationship between control of corruption and corporate sustainability performance. *Discover Sustainability*, *5*, 502. https://doi.org/10.1007/s43621-024-00490-1

Enciso-Alfaro, S. Y., & García-Sánchez, I. M. (2022). Corporate governance and environmental sustainability: Addressing the dual theme from a bibliometric approach. *Corporate Social Responsibility and Environmental Management*, *30*, 1025–1041. https://doi.org/https://doi.org/10.1002/csr.2403

Fama, E. F., & Jensen, M. . (1983). Separation of Ownership and Control. *Journal of Law and Economics*, *26*, 301–325. https://doi.org/http://dx.doi.org/10.1086/467037

Farisyi, S. (2023). The role of corporate posture as moderation of relationships among the antecedents of sustainability reporting disclosure in Indonesia. *Cogent Business and Management*, *10*(2). https://doi.org/10.1080/23311975.2023.2233259

Feng, T., Liu, S., & Zhang, Q. (2022). Linking perceived institutional force and environmental strategy: The moderating role of institutional incompleteness. *Baltic Journal of Management*, *17*(3), 392–412. https://doi.org/https://doi.org/10.1108/BJM-06-2021-0221

Fich, E. M., & Shivdasani, A. (2012). Are busy boards effective monitors? In *Corporate Governance* (127th ed., pp. 221–258). Springer.

Freeman, R. E. (1984). *Strategic Management: A Stakeholder Approach*. Cambridge University Press.

Freeman, R. E. (2007). *Managing for stakeholders: Survival, reputation, and success*. Yale University Press.

Galletta, S., Goodell, J. W., Mazzù, S., & Paltrinieri, A. (2023). Bank reputation and operational risk: The impact of ESG. *Finance Research Letters*, *51*(103494). https://doi.org/http://dx.doi.org/10.1016/j.frl.2022.103494.

García-Meca, E., García-Sanchez, I.-M., & Martínez-Ferrero, J. (2015). Board diversity and its effects on bank performance: an international analysis. *Journal of Banking and Finance*, *53*, 202–214. https://doi.org/https://doi.org/10.1016/j.jbankfin.2014.12.002

García-Sánchez, I. M., Hussain, N., Khan, S.-A., & Martínez-Ferrero, J. (2021). Do markets punish or reward corporate social responsibility decoupling? *Business & Society*, *60*(6), 1431–1467. https://doi.org/https://doi.org/10. 1177/0007650319898839

Gatti, L., Pizzetti, M., & Seele, P. (2021). Green lies and their effect on intention to invest. *Journal of Business Research*, *127*, 228–240. https://doi.org/https://doi.org/10.1016/j.jbusres.2021.01.028

Gatti, L., Seele, P., & Rademacher, L. (2019). Grey zone in – greenwash out. A review of greenwashing research and implications for the voluntary-mandatory transition of CSR. *International Journal of Corporate Social Responsibility*, *4*(1), 1–15. https://doi.org/https://doi.org/10.1186/s40991-019-0044-9

Ghitti, M., Gianfrate, G., & Palma, L. (2024). The agency of greenwashing. In *Journal of Management and Governance* (Vol. 28, Issue 3). Springer US. https://doi.org/10.1007/s10997-023-09683-8

Ghozali, I. (2018). *Aplikasi Analisis Multivariate Dengan Program IBM SPSS 25*. Badan Penerbit Universitas Diponegoro.

Gull, A. A., Hussain, N., Khan, S. A., Khan, Z., & Saeed, A. (2023). Governing Corporate Social Responsibility Decoupling: The Effect of the Governance Committee on Corporate Social Responsibility Decoupling. *Journal of Business Ethics*, *185*(2), 349–374. https://doi.org/10.1007/s10551-022-05181-3

Ha, M. T., Ngan, V. T. K., & Nguyen, P. N. (2022). Greenwash and green brand equity: The mediating role of green brand image, green satis- faction and green trust and the moderating role of information and knowledge. *Business Ethics, the Environment & Responsibility*, *31*(4), 904–922. https://doi.org/https://doi.org/10.1371/journal.pone.0277421

Haque, F., & Jones, M. J. (2020). European firms' corporate biodiversity disclosures and board gender diversity from 2002 to 2016. *The British Accounting Review*, *52*(2), 100893. https://doi.org/https://doi.org/10.1016/j.bar.2020.100893

ICEL. (2021). *Telaah Kebijakan Sustainable Consumption and Production (SCP) dalam Merespons Fenomena Greenwashing di Indonesia pada Era E-Commerce*. https://icel.or.id/media/pdf/TelaahKebijakanSustainableConsumptionandProductionSCPdalamMeresponsFenomenaGreenwashingdiIndonesiapadaEraECommerce.pdf

Kahraman, A., & Kazançoğlu, İ. (2019). Understanding consumers' purchase intentions toward natural-claimed products: A qualitative research in personal care products. *Business Strategy and the Environment*, *28*(6), 1218–1233. https://doi.org/doi.org/10.1002/bse.2312

Khlifi, S., & Zouari, G. (2022). The moderating role of good corporate governance on the relationship between corporate social responsibility and real earnings management. *Accounting and Management Information Systems*, *21*(4), 524–545. https://doi.org/http://dx.doi.org/10.24818/jamis.2022.04003

Kleffel, P., & Muck, M. (2023). Aggregate confusion or inner conflict? An experimental analysis of investors' reaction to greenwashing. *Finance Research Letters*, *53*(103421). https://doi.org/http://dx.doi.org/10.1016/j.frl.2022.103421.

Kumar, K., Kumari, R., Ponia, A., & Kumar, R. (2023). Factors Influencing Corporate Sustainability Disclosure Practices: Empirical Evidence From Indian National Stock Exchange. *Journal of Financial Reporting And Reporting*, *21*(2), 300–321. https://doi.org/https://doi.org/10.1108/JFRA-01-2021-0023

Kuo, Y. K., Khan, T. I., Islam, S. U., Abdullah, F. Z., Pradana, M., & Kaewsaeng-On, R. (2022). Impact of green HRM practices on environmental performance: The mediating role of green innovation. *Frontiers in Psychology*, *13*, 916723. https://doi.org/https://doi.org/10.3389/fpsyg.2022.916723

Li, Q., Shan, H., & Tang, Y. (2024). Corporate Climate Risk: Measurements and Responses. *The Review of Financial Studies*, *37*(6), 1778–1830. https://doi.org/https://doi.org/10.1093/rfs/hhad094

Li, W., Li, W., Seppänen, V., & Koivumäki, T. (2022). Effects of greenwashing on financial performance: Moderation through local environmental regulation and media coverage. *Business Strategy and the Environment*, *32*(1), 820–841. https://doi.org/https://doi.org/10.1002/bse.3177

Liu, Y., Miletkov, M.K., Wei, Z., Yang, T. (2015). Board independence and firm performance in China. *Journal of Corporate Finance*, *30*, 223–244. https://doi.org/https://doi.org/10.1016/j.jcorpfin.2014.12.004

Liu, G., Qian, H., Shi, Y., Zhang, Y., & Wu, F. (2024). Does ESG report greenwashing increase stock price crash risk? *China Journal of Accounting Studies*, 1–25. https://doi.org/https://doi.org/10.1080/21697213.2024.2303070

Liu, X., Cifuentes-Faura, J., Zhao, S., & Wang, L. (2023). Government environmental attention and carbon emissions governance: firm-level evidence from China. *Economic Analysis and Policy*, *80*, 121–142. https://doi.org/10.1016/j.eap.2023.07.016

Lopez-Arceiz, F. J., Bellostas, A. J., & Moneva, J. M. (2021). Accounting Standards for European Non-profits. Reasons and Barriers for a Harmonisation Process. *Accounting in Europe*, *18*(1), 43–74. https://doi.org/https://doi.org/10.1080/17449480.2020.1795215

Lu, J., & Wang, J. (2021). Corporate governance, law, culture, environmental performance and CSR disclosure: A global perspective. *Journal of International Financial Markets, Institutions and Money*, *70*, 101264. https://doi.org/10.1016/j.intfin.2020.101264

Lulu, C. L. (2021). Stakeholder Pressure and the Quality of Sustainability Report: Evidence From Indonesia. *Journal of Accounting, Entrepreneurship and Financial Technology (Jaef)*, *2*(1), 53–72. https://doi.org/10.37715/jaef.v2i1.1864

Ma, Y., & Ahmad, M. I. (2024). Do board characteristics impact greenwashing? Moderating role of CSR committee. *Heliyon*, *10*(20), 38743. https://doi.org/http://dx.doi.org/10.1016/j.heliyon.2024.e38743

Majid, N. A., & Jaaffar, A. H. (2023). The Effect of Women ' s Leadership on Carbon Disclosure by the Top 100 Global Energy Leaders. *Sustainability*, *15*(11), 1–26. https://doi.org/https://doi.org/10.3390/su15118491

Marquis, C., Toffel, M. W., & Zhou, Y. (2016). Scrutiny, norms, and selective disclosure: A global study of greenwashing. *Organization Science*, *27*(2), 483–504. https://doi.org/https://doi.org/10.1287/orsc.2015.1039

Naciti, V. (2019). Corporate governance and board of directors : The effect of a board composition on fi rm sustainability performance. *Journal of Cleaner Production*, *237*, 117727. https://doi.org/10.1016/j.jclepro.2019.117727

OECD. (2015). *Principles of Corporate Governance*. OECD Publishing.

OECD. (2021). *Beyond academic learning: First results from the survey of social and emotional skills*. OECD Publishing. https://doi.org/https://doi.org/10.1787/92a11084-en

Radu, O. M., Dragomir, V. D., & Hao, N. (2023). Company-level factors of non-financial reporting quality under a mandatory regime: A systematic review of empirical evidence in the European Union. *Sustainability*, *15*(23), 16265. https://doi.org/https://doi.org/10.3390/su152316265

Rausch, T. M., & Kopplin, C. S. (2021). Bridge the gap: Consumers' purchase intention and behavior regarding sustainable clothing. *Journal of Cleaner Production*, *278*(123882). https://doi.org/https://doi.org/10.1016/j.jclepro.2020.123882

Sebrina, N., Taqwa, S., Afriyenti, M., & Septiari, D. (2023). Analysis of sustainability reporting quality and corporate social responsibility on companies listed on the Indonesia stock exchange. *Cogent Business and Management*, *10*(1). https://doi.org/10.1080/23311975.2022.2157975

Shleifer, A., & Vishny, R. W. (1997). A survey of corporate governance. *The Journal of Finance1*, *52*(2), 737–783. https://doi.org/https://doi.org/10.1111/j.1540-6261.1997.tb04820.x

Suchman, M. C. (1995). Managing legitimacy: Strategic and institutional approaches. *Academy of Management Review*, *3*(3), 571–610. https://doi.org/https://doi.org/10.5465/amr.1995.9508080331

Taglialatela, J., Miroshnychenko, I., Barontini, R., & Testa, F. (2024). Talk or walk? The board of directors and firm environmental strategies. *Business Strategy and the Environment*, *33*(4), 2890–2910. https://doi.org/10.1002/bse.3628

Testa, F., Boiral, O., & Iraldo, F. (2018). Internalization of environmental practices and institutional complexity: Can stakeholders pressures encourage greenwashing? *Journal of Business Ethics*, *147*, 287–307. https://doi.org/https://doi.org/10.1007/s10551-015-2960-2

Testa, F., Miroshnychenko, I., Barontini, R., & Frey, M. (2018). Does it pay to be a greenwasher or a brownwasher? *Business Strategy and the Environment*, *27*(7), 1104–1116. https://doi.org/https://doi.org/10.1002/bse.2058

Torelli, R., Balluchi, F., & Furlotti, K. (2020). The materiality assessment and stakeholder engagement: A content analysis of sustainability reports. *Corporate Social Responsibility and Environmental Management*, *27*(2), 470–484. https://doi.org/https://doi.org/10.1002/csr.1813

Trend Asia. (2021). *Green Initiative Adaro Patut Dipertanyakan!* Pers. https://trendasia.org/green-initiative-adaro-patut-dipertanyakan/

Walker, K., & Wan, F. (2012). The harm of symbolic actions and green-washing: Corporate actions and communications on environmental performance and their financial implications. *Journal of Business Ethics*, *109*, 227–242. https://doi.org/https://doi.org/10.1007/s10551-011-1122-4

Wooldridge, J. M. (2010). *Econometric analysis of cross section and panel data*. MIT press. https://doi.org/10.1007/978-3-319-60783-2_6

Wu, Z., Lin, S., Chen, T., Luo, C., & Xu, H. (2023). Does effective corporate governance mitigate the negative effect of ESG controversies on firm value? *Economic Analysis and Policy*, *80*, 1772–1793. https://doi.org/https://doi.org/10.1016/j.eap.2023.11.018

Yu, E. P., Luu, B. V., & Chen, C. . (2020). Greenwashing in environmental, social and governance disclosures. *Research in International Business and Finance*, *52*, 101192. https://doi.org/10.1016/j.ribaf.2020.101192

Zahid, R. M. A., Maqsood, U. S., Irshad, S., & Khan, M. K. (2023). The role of women on board in combatting greenwashing: A new perspective on environmental performance. *Business Ethics, the Environment and Responsibility*, *34*(February), 121–137. https://doi.org/10.1111/beer.12607

Zhang, D. (2022). Are firms motivated to greenwash by financial con- straints? Evidence from global firms' data. *Journal of International Financial Management & Accounting*, *33*(3), 459–479. https://doi.org/https://doi.org/10.1111/jifm.12153

Zhang, X., Kong, L., & Hu, X. (2024). Shades of green: The impact of greenwashing on stock price crash risk. *Finance Research Letters2*, *70*, 106285. https://doi.org/https://doi.org/10.1016/j.frl.2024.106285

Zhou, G., Liu, L., & Luo, S. (2022). Sustainable development, ESG performance and company market value: Mediating effect of financial performance. *Business Strategy and the Environment*, *31*(7), 3371–3387. https://doi.org/https://doi.org/10.1002/bse.3089