DETERMINANTS OF ESG DISCLOSURE: AN EMPIRICAL STUDY OF COMPANIES IN 2 ASEAN COUNTRIES

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Abstract

This study aims to analyze Gender diversity, Institutional Ownership, and Governance Committee on ESG Disclosure in the mining sector in Indonesia and Malaysia in the 2019-2023 period. The type of the research is quantitative (desk research) based on secondary data The Data This study used mining sector companies in Indonesia and Malaysia from 2018 to 2023 with a total of 195 samples. The sample was derived using a purposive sampling technique. Panel data regression analysis is carried out using Eviews 13 in this study. This study finds that gender diversity and institutional ownership significantly negatively affect ESG disclosure, while the governance committee has a significant positive effect on ESG disclosure. Limitations in this study able to be provided by measuring ESG disclosure using the GRI standards. This research can be used as a literature reference for further research in studying ESG disclosure; besides, this research can be used as a consideration for stock investors in analyzing ESG disclosure.

Keywords: ESG Disclosure, Gender Diversity, Institutional Ownership, Governance Committee

INTRODUCTION

ESG disclosures in corporate reports can help stakeholders better understand ESG strategies and their social and environmental impacts. In addition, good ESG disclosure can help improve the company's image (Huang, S., & Ge, 2024). Along with the increasing awareness of sustainability issues, in their investment decision-making process, investors are increasingly paying attention to the ESG component (Atan et al., 2018).

Based on the results of the Globescan and Global Reporting Initiative survey in 2020, it shows that the level of public trust in information disclosure in sustainability reports for 2 countries, namely Indonesia and Malaysia, has increased significantly in corporate sustainability reporting during 2019-2022. In Indonesia, the level of public trust in 2019 reached 34% increased to 51% in 2020, and continued to increase to 96% with significant disclosure of the responsibilities of the Board of Directors until 2022. While in Malaysia, the disclosure of sustainability reports continued to increase from 2019 and experienced an increase of 45% in 2020 and continued to increase significantly by reaching 100% as the Board of Directors' responsibility for the sustainability of their company until 2022 (GlobeScan, 2020), (Global, 2023), (Nurfai'jah et al., 2024). Nonetheless, there are still challenges in ESG disclosure, especially in the mining sector, where awareness and commitment to ESG reporting are low. ESG issues in the company are of concern to investors, so investors are increasingly interested in reporting sustainability information such as ESG to investors (H. Barraq, 2021). Based on this, with the disclosure of sustainability report information in the company, ESG disclosure reporting activities are very important for companies (Limkriangkrai & Durand, 2015).

According to a survey conducted by PwC Singapore, (2023) Centre for Governance and Sustainability and released in May 2022, there has been an increase in interest in companies reporting on Environmental, Social, and Governance (ESG) in Asia Pacific as compared to previous years. But it also indicates that only 16% or 102 of loved 650 companies in Asia Pacific are doing ESG reporting, while 84% or 546 companies are not doing their ESG reporting. So, this statement proves that even though there is increasing interest of companies in Asia Pacific to conduct ESG reporting, there are still some companies in Asia Pacific that have not conducted ESG reporting at all yet and the countries

of Taiwan, Thailand, Singapore, and Japan are the country's most successful in implementing ESG. On the contrary, countries like the Philippines, Indonesia, India, and Malaysia which have a percentage of companies below 10% are classified on the "lagging" end of the spectrum with regards to their implementation of ESG reporting (Global, 2023). The purpose of this study is to gain a better understanding of the determinants of ESG disclosure in Indonesia and Malaysia. In the growing focus on sustainability and corporate social responsibility, it is crucial to examine the roles played by gender diversity in boards of directors, institutional ownership, and governance committees in promoting corporate transparency and accountability concerning ESG disclosure.

REVIEW OF LITERATURE

Companies are becoming aware that they do not care only for their customers, a very common concept which has been proven many years ago, which is in the business, they have stakeholders to take care of. The theory describes how the management of the firm manages and meets stakeholder expectations of the firm. The better the ESG performance, the more management is aligned with the requirements of stakeholders (Uyar, A. & Kilic, 2020). The benefits of good ESG performance mean companies are less reluctant to provide ESG information to outside parties. This indicates that ESG-disclosing companies are more prone to provide government-related information to show commitment to contribute to winning investors. Hence, good ESG results. To obtain legitimacy in carrying out business, companies are able to publish social and environmental responsibility reports in published reports. Another factor is the legitimacy theory, which is based on the belief that companies can only survive and thrive when they have the approval of society and encourages companies to disclose ESG (Guthrie & Parker, 1989).

One of the performance measures used to assess the extent of voluntary information disclosure by a corporation is ESG disclosure. In other words, ESG information disclosure aims to inform investors' choices through the disclosure of which practices demonstrate the company's commitment to sustainable practices (Moktar et al., 2023). Disclosure is one of the pieces of information necessary for companies to optimize their operations in capital markets. Thus, disclosure is a key aspect of financial statements. Step 6: Disclosure

(technically the last step in the process) the corporation is required to disclose information about its entire operational activities. Concerning Indonesia, regulations on voluntary disclosures or environmental disclosures can be found in the Statement of Financial Accounting Standards (PSAK) Number 1 (2012) Article 9 and in Malaysia is regulated by the Malaysian Accounting Standards Board (MASB) Regulations 1 and 20 (Edi, 2018).

We built a registry of shelter-specific things or signs (that used to be included in the organization's annual report) to measure environmental disclosures. In Indonesia and Malaysia, ESG disclosures rely heavily on the GRI standards. The GRI standards are also encouraged through POJK 51/2017 regarding the Implementation of Sustainable Finance in Indonesia by the Financial Services Authority and by Bursa Malaysia encourage GRI standards for sustainability reporting in Malaysia, the environmental indicators listed in the GRI Standards are their subject, are used is good for companies in Indonesia and Malaysia in this research publication. ESG disclosure process and its indicators if you apply the GRI 300, as an example, the disclosure items are all 32 items. The number of disclosure indicators is all the same for Social (40) and Governance information (27) (GRI 102 and GRI 205) and is presented as GRI 400 for Social and GRI 100 for Governance (Global Reporting Initiative, 2021).

Indeed, several studies have previously found that board gender diversity can help stimulate social processes and ultimately enhance corporate performance (Shakil et al., 2020; Ardito et al., 2021). Nadeem et al. (2017) showed that female directors have relatively higher ethical standards and are more prudent in decision-making than their counterparts. The role of institutional ownership in driving companies toward greater transparency on ESG disclosure is also significant. By the way, institutional investors usually demand improved data on business sustainability practices (Hossain & Reaz, 2007). These are comparable to García-Meca's (2010) discoveries that showed firms with high institutional ownership have a higher level of ESG disclosure. A governance committee is a governance mechanism that can enhance ESG disclosures. Boerner (2011) observes, "Effective governance committees enable companies to fulfill their social responsibility."

Therefore, this study is designed to bridge the gap by examining the effects of gender diversity, institutional ownership, and governance committees on ESG disclosure in the

Malaysian and Indonesian contexts. While the factors that influence ESG disclosure have been discussed in many studies, the specific context of the two countries has remained underexplored.

Diversity at the board level supports ESG corporate, environmental, and social governance. Here, the relationship is not just linear between ESG disclosure efficiency and the presence of women on boards. In this situation, the claim of the board of directors and legitimacy theory prevail over the company trying to gain recognition from the public, as described by legitimacy theory, which holds that all decisions are made by leaders. This finding is consistent with those of Wasiuzzaman, S. (2023), and Arayssi et al., (2020). So too as the research conclusions from Lagasio & Cucari (2019), Agustina (2024), and Brown, K., et al., (2023) which find that the presence of women on the board of directors results in more active companies in implementing and disclosing ESG in the annual report. But on the flip side, the study by Lee et al. (2023), B. Husted, et al. While study (2018) (Manita et al., 2018) mentioned that women on board are negative for ESG.

Several studies, backed by substantial empirical evidence demonstrate the important role played by institutional investors in the ESG performance of companies. By having more institutional shareholders their decision-making will be more aligned towards long-term goals for the company, in the long run, there will be positive value in ESG disclosure for the company and other shareholders. in Lee et al. (2023) and Bai, X. et al., (However, there are mixed results by Ashfaq & Rui (2019) that government ownership and institutional ownership are negatively related to ESGD practices, and study by Lagasio & Cucari (2019), Patnaik (2024) & Siew et al. (2016), there is a statistically significant negative association between ESG disclosure.

A governance committee can also monitor, control, and assist the board regarding the company and business (Arayssi et al., 2020). This sustainability committee enables directors on the board to create and implement sustainability initiatives and create more shareholder interest and knowledge surrounding ESG disclosures. According to this view, researchers reported a positive association between the presence of a governance committee and the extent of ESG disclosure Liao et al. (2015) and Helfaya and Moussa (2017). Amran et al. *(2014), demonstrated that governance committees enhance ESG reporting. Similarly,

Cucari et al. (2018) found that having a governance committee is associated with higher ESG disclosures provided by the GRI.

H1: Gender diversity has a positive effect on ESG Disclosure
H2: Constitutional Ownership has a positive effect on ESG Disclosure
H3: Governance Committee has a positive effect on ESG Disclosure.

RESEARCH METHOD

Sample selection in this study uses a purposive sampling method, where only mining sector companies that meet certain requirements are included in the analysis. This results in the initial sample selection of 68 mining sector companies listed on the Indonesia Stock Exchange and 21 on the Malaysia Exchange during the 2019-2023 period. If data for five years is considered, the total number of observations used is 195. It is critical to ensure the validity of the data and that the sample is representative of the population (Hussain et al., 2022), Venturing into this process, sample selection was chosen based on the availability of the annual report and sustainability report. Not only such a mechanism can contribute to the accuracy of data in financial and sustainability research (Cheng et al., 2020), but previous research also confirms that companies that are consistent reporters in the area of sustainability present a more transparent governance structure. It is therefore clear that the data selection approach employed in this study meets the empirical research standards employed extensively in Scopus-indexed papers on finance and sustainability.

The dependent variable for this study is ESG Disclosure (ESGD), which is evaluated based on environmental, social, and governance indicators through the 2021 Global Reporting Initiative (GRI) guidelines as adopted in a study by Zahid (2020). It represents one of those measures that indicate a company has transparency and obeys sustainability practices, which is increasingly prominent in corporate governance research. On the other hand, the independent variables comprise Board Gender Diversity (BGD), which is the representation of gender on the board of directors, as analyzed in the study of Arayssi et al. (2020), which indicated that gender diversity positively impacts corporate oversight and accountability for management practices concerning ESG. Institutional Ownership (KINS) represents a type of share possession of institutions that play an essential part in corporate oversight (Husted & Sousa-Filho, 2019), institutions investors help companies to produce

better-quality ESG disclosures through their demand for companies to be more transparent about the information they disclose regarding sustainability. The Governance Committee (KOM) is also measured with a dummy variable that takes the value 1 when the company has a governance committee and 0 when it does not, as used in the study of Arayssi et al. (2020). One governance mechanism that can help improve the effectiveness of corporate sustainability oversight and policies is the formation of a governance committee. This study examines the factors impacting the quality of ESG disclosures in the mining sector with this measurement approach, including an empirical analysis to identify fundamental determinants of corporate sustainability disclosure practices.

Table 1.

Variable Measurement

Symbol	Description	Measurement	Reference
Dependent Variable			
ESGD	ESG Disclosure	Indicator (environmental, social, governance) based on GRI 2021	Zahid (2020)
Independent Variables			
BGD	Board Gender Diversity	Percentage of female directors on the board	Arayssi et al. (2020)
KINS	Institutional Ownership	Percentage of shares owned by institutional investors	Husted & Sousa-Filho (2019)
KOM	Governance Committee	Value 1 if the company has a governance committee, 0 otherwise	Arayssi et al. (2020)

Source: Author 2025

Panel data regression analysis is performed in this study where this method merges cross-section data with time-series data providing a greater analysis of the association/progress of relationships over time across various entities. This study is analyzed by employing EViews 13, a popularly used econometric tool that estimates numerous panel data models such as Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM). Three types of diagnostic tests are run to select the most appropriate one, the Chow test, to check whether to use pooled regression or fixed effects, the Hausman test, to identify whether to apply fixed or random effects and the Lagrange

Multiplier test, to check if random effects are appropriate over pooled regression (Baltagi, 2021). The use of these methods follows best practices in panel data econometrics, as they both minimize bias and reduce the fragility of the results (Hsiao, 2022).

RESULTS AND DISCUSSION

In the case of the Common Effect Model (CEM), the probability (p-value) of the t-statistic for Gender Diversity (GD) is indicated as 0.5472, indicating that this independent variable does not significantly influence ESG disclosure at standard significance levels. In contrast, KI and KTK are highly correlated with p-values of 0.0018 and 0.0000 which means both are robust determinants of the ESG reporting process. The overall significance of the model is confirmed by the F-statistic value of 12.90876 and the p-value which is equal to 0.000000 suggesting an overall effect of independent variables on ESG disclosure. Nevertheless, the adjusted R-squared value of 0.155517 indicates that 15.55% of the diversity in ESG disclosure could be accounted for by this model's independent variables, whilst the balance of variability is driven by other aspects omitted from the evaluation.

Table 2
Results of the Common Effect Model (CEM)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.247846	0.037087	6.682.866	0.0000
GD (Gender Diversity)	-0.091455	0.151668	-0.602995	0.5472
KI (Institutional Ownership)	0.064209	0.020309	3.161.568	0.0018
KTK (Governance Committee)	0.216056	0.047792	4.520.780	0.0000

Summary Data

Statistic	Value	Statistic	Value
Root MSE	0.308014	R-squared	0.168576
Mean Dependent Var	0.354571	Adjusted R-squared	0.155517
S.D. Dependent Var	0.338669	S.E. of Regression	0.311223
Akaike Info Criterion	0.523684	Sum Squared Residual	1.850.018
Schwarz Criterion	0.590822	Log Likelihood	-4.705.917
Hannan-Quinn Criterion	0.550867	F-statistic	1.290.876
Durbin-Watson Statistic	0.232940	Prob (F-statistic)	0.000000

Fixed Effect Model (FEM) results show that the t-statistical probability value of GD, KI, and KTK variables are 0.2802, 0.7658, and 0.0000. It indicates that the KTK (Governance Committee) variable has a significant impact on ESG Disclosure (ESGD) at the 1% significance level, while Gender Diversity (GD) and Institutional Ownership (KI) do not have significance. The F-statistical probability value that stands at 0.000000 suggests the overall significance of the model, which simply explains that independent variables have a combined effect on ESG Disclosure. Moreover, an adjusted R-squared value of 0.810151 suggests that around 81.02% of the differences observed in ESG Disclosure can be accounted for by the independent variables, while the other 18.98% are attributed to unaccounted components not captured in the model. Table with the estimator concerning model 3 - F-value is 43.145845 and p-value* 0.0000004652* - so such a model is applicable obviously. The Durbin-Watson statistic of 1.334562 indicates possible autocorrelation but should be checked within tests of robustness.

Table 3
Fixed Effect Model (FEM) Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C (Constant)	0.206951	0.039154	5.285.515	0.0000
GD (Gender Diversity)	0.156241	0.144172	1.083.717	0.2802
KI (Institutional Ownership)	0.013289	0.044532	0.298420	0.7658
KTK (Governance Committee)	0.323732	0.044760	7.232.571	0.0000

Cross-Section Fixed (Dummy Variables)

Statistic	Value	Statistic	Value
Root MSE	0.130710	R-squared	0.850274
Mean dependent var	0.354571	Adjusted R-squared	0.810151
S.D. dependent var	0.338669	S.E. of regression	0.147564
Akaike info criterion	-0.800905	Sum squared resid	3.331.586
Schwarz criterion	-0.095951	Log-likelihood	1.200.882
Hannan-Quinn criter.	-0.515477	F-statistic	2.119.184
Durbin-Watson stat	1.334.562	Prob(F-statistic)	0.000000

The results of the Random Effect Model (REM) analysis show that the t-statistical probability values of the variables Gender Diversity (GD), Institutional Ownership (KI), and Governance Committee (KTK) are 0.3699, 0.2427, and 0.0000, respectively. These results imply that KTK has a statistically significant effect, while the impact of GD and KI on ESG

Disclosure (ESGD) is insignificant at conventional levels. The Probability value of the F-statistic is 0.000000 which shows that the independent variable has an impact on the dependent variable. Moreover, the 0.242707 adjusted R-squared value indicates that 24.27% of the variation in the ESGD is explained by the independent variables, with the remaining variation being affected by other factors not included in the model. We observe a Durbin-Watson statistic of 1.058527, indicating potential autocorrelation implications that necessitate additional diagnostic testing to affirm the model's reliability. Such evidence is consistent with previous literature (Husted & Sousa-Filho, 2019; Arayssi et al., 2020), highlighting the differential impact of corporate governance mechanisms on ESG disclosures and emphasizing the need for firm- and industry-specific aspects influencing sustainability reporting.

Table 4
Fixed Effect Model (FEM) Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.206951	0.039154	5.285.515	0.0000
GD (Gender Diversity)	0.156241	0.144172	1.083.717	0.2802
KI (Institutional Ownership)	0.013289	0.044532	0.298420	0.7658
KTK (Governance Committee)	0.323732	0.044760	7.232.571	0.0000
Cross-Section Fixed (Dummy Variables)				
Statistic	**Value**			
Root MSE	0.130710			
Mean dependent variable	0.354571			
S.D. dependent variable	0.338669			
Adjusted R-squared	0.810151			
R-squared	0.850274			
S.E. of regression	0.147564			
Akaike info criterion	-0.800905			
Schwarz criterion	-0.095951			
Hannan-Quinn criterion	-0.515477			
Sum squared residuals	3.331.586			
Log-likelihood	1.200.882			
F-statistic	2.119.184			
Prob(F-statistic)	0.000000			
Durbin-Watson statistic	1.334.562			

Based on the Random Effect Model (REM), the t-statistical probability of the independent variables Gender Diversity (GD), Institutional Ownership (KI), and Governance Committee (KTK) are respectively 0.3699, 0.2427 and 0.0000. This implies that only KTK influences ESG Disclosure (ESGD) statistically significantly, but GD and KI do not at conventional levels. The significant F-statistical probability value (0.000000) indicates the overall model was statistically significant. As for the adjusted R-squared value of 0.242707, it means only 24.27% variance in ESGD can be explained by the model, indicating that the explanatory power of this model is limited when compared with the FEM. Notes: The Durbin-Watson statistic of 1.058527 suggests that autocorrelation may be a problem that will need to be addressed using further diagnostic testing. These outcomes are consistent with previous studies (Chen et al., 2022; García-Sánchez & Martínez-Ferrero, 2020), suggesting that governance features play a crucial role in ESG disclosure structures.

Table 5
Random Effect Model (REM) Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.201762	0.055160	3.657.776	0.0003
GD (Gender Diversity)	0.119841	0.133335	0.898798	0.3699
KI (Institutional Ownership)	0.035977	0.030698	1.171.956	0.2427
KTK (Governance Committee)	0.309930	0.041435	7.479.983	0.0000
Effects Specification				
Component		**S.D.**		**Rho**
Cross-section random		0.282860		0.7861
Idiosyncratic random		0.147564		0.2139
Weighted Statistics				
Statistic				**Value**
Root MSE				0.146012
Mean dependent variable				0.080560
S.D. dependent variable				0.169534
Adjusted R-squared				0.242707
R-squared				0.254417
S.E. of regression				0.147533
Sum squared residuals				4.157.302
F-statistic				2.172.516
Prob(F-statistic)				0.000000
Durbin-Watson statistic				1.058.527

Results of all the Model Selection Tests. Three tests were done in the model selection process, namely: the Chow test, Hausman test, and Lagrange Multiplier (LM) test; to determine whether the chosen model is a Fixed Effect Model (FEM) or a Random Effect Model (REM).

The first test was the Chow test (Redundant Fixed Effects Test) to determine if the FEM is preferred to the Pooled OLS model. As seen from the results, the Cross-section F-statistic (18.331676) and Cross-section Chi-square (334.294750) have both p-values = 0.0000, which are both below the 0.05 threshold. This means the FEM has better suitability than the Pooled OLS model. Therefore, the next stage concerns the implementation of the Hausman test aimed to examine whether the use of FEM or REM is under adequate specs.

The results of the Hausman test indicate that there is a Chi-Square statistic of 2.920221, p-value = 0.4041, greater than 0.05. Both the coefficients would be nearly identical to each other so there is no significant difference between FEM and REM, hence REM model is suitable because it is efficient in estimation. We further carried out the Lagrange Multiplier (LM test) to confirm the selection.

The LM test results, following the Breusch-Pagan test, also indicate a very significant p-value = 0.0000 for cross-section, time, or jointly hence confirming the presence of random effects. Likewise, both the Honda and the King-Wu tests, as well as their standardized variations yield p-values smaller than 0.05, corroborated the conclusion that the REM is the most suitable model. As a result, the REM is chosen as the final model to analyze the data, according to the results following the Chow test, Hausman test, and Lagrange Multiplier test.

Table 6
Model Selection and Random Effect Model (REM) Results

Test & Variable	Statistic	d.f.	Prob.
Chow Test (Redundant Fixed Effects Test)			
Cross-section F	18.331.676	-38,153	0.0000
Cross-section Chi-square	334.294.750	38	0.0000
Hausman Test (Correlated Random Effects Test)			
Cross-section random	2.920.221	3	0.4041

Test & Variable	Statistic	d.f.	Prob.
Lagrange Multiplier (LM) Test			
Breusch-Pagan (Cross-section)	2.231.088	—	0.0000
Breusch-Pagan (Time)	7.480.077	—	0.0062
Breusch-Pagan (Both)	2.305.889	—	0.0000
Honda (Cross-section)	1.493.683	—	0.0000
Honda (Time)	2.734.973	—	0.0031
Honda (Both)	1.249.585	—	0.0000
Random Effect Model (REM) Results			
Variable	**Coefficient**	**Std. Error**	**t-Statistic**
C	0.201762	0.055160	3.657.776
Gender Diversity (GD)	0.119841	0.133335	0.898798
Kepemilikan Institusional (KI)	0.035977	0.030698	1.171.956
Komite Tata Kelola (KTK)	0.309930	0.041435	7.479.983
Effects Specification			
Cross-section random	0.282860	—	Rho: 0.7861
Idiosyncratic random	0.147564	—	Rho: 0.2139
Weighted Statistics			
Root MSE	0.146012	—	
R-squared	0.254417	—	
Adjusted R-squared	0.242707	—	
S.E. of regression	0.147533	—	
Sum squared resid	4.157.302	—	
F-statistic	2.172.516	—	Prob(F-statistic): 0.000000
Durbin-Watson stat	1.058.527	—	
Unweighted Statistics			
R-squared	0.139582	—	
Mean dependent var	0.354571	—	
Sum squared resid	1.914.532	—	
Durbin-Watson stat	0.229853	—	

According to the results of the Chow test, Hausman test, and Lagrange Multiplier test, the Random Effect Model (REM) model is appropriate for the test used (results in Tables 4, 5, and 6). This is also supported by the Prob. F-statistic = 0.000000, Adjusted R-squared

= 0.242707: Independent variables are good at explaining the variability of dependent variables.

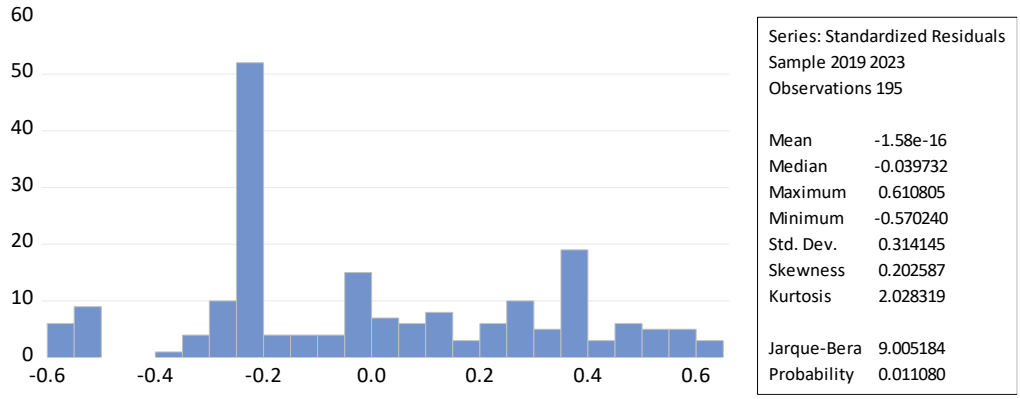

Figure 1
Test for Normality

The normality test shows the probability value is 0.011080, lower than 0.05, which means the data do not follow the normal distribution. Nevertheless, based on the Central Limit Theorem (CLT) with a sample size above 30, data can be assumed to be normally distributed (Savitri et al., 2021; Marhawati et al., 2022; Ruth Pranadipta & Natsir, 2023; Wahyuningsih et al., 2024; Febriyanto et al., 2023). Since the current study contains 195 observations, which is larger than 30, it can be necessary to say that the data meet the normality assumption.

The results of multicollinearity testing, where the independent variables are Gender Diversity (X1), Institutional Ownership (X2), and Governance Committee (X3), then in this case it shows that the independent variables have a Centered VIF value ≤ 10, so it can be said that there are no symptoms of multicollinearity or pass the multicollinearity test.

Table 7
Multicollinearity

Variable	Coefficient Var	Uncentered VIF	Centered VIF
C	0.001375	2.769050	NA
GD	0.023003	2.087119	1.002829
KI	0.000412	1.448651	1.053939
KTK	0.002284	1.627088	1.051349

The autocorrelation test results, based on the Durbin-Watson statistic, shows a value of 1.058527, which suggests that there is no autocorrelation in the regression model. This conclusion is in line with the argument proposed by Santoso (2012) and Savitri et al. DW statistic between the range -2, +2 if a regression model is free of autocorrelation. Thus, the results actually validate that the regression model used in this investigation is free of autocorrelation.

Table 7
Autocorrelation Test

Root MSE	0.146012	R-squared	0.254417
Mean dependent var	0.080560	Adjusted R-squared	0.242707
S.D. dependent var	0.169534	S.E. of regression	0.147533
Sum squared resid	4.157302	F-statistic	21.72516
Durbin-Watson stat	1.058527	Prob(F-statistic)	0.000000

The results of the heteroskedasticity test using the White test indicate that the probability value of the Chi-Square test is 0.0163, which is less than 0.05. This finding suggests that the regression model exhibits heteroskedasticity, meaning that the variance of the error terms is not constant across observations. As a result, the assumption of homoskedasticity is violated, which may impact the efficiency of the estimated coefficients. Appropriate corrective measures, such as using robust standard errors or transformation techniques, should be considered to address this issue.

Table 8
Heteroscedasticity Test

Null Hypothesis: Homoscedasticity

F-statistic	2.471856	Prob. F (8,186)	0.0144
Obs*R-squared	18.73939	Prob. Chi-Square (8)	0.0163
Scaled explained SS	7.129560	Prob. Chi-Square (8)	0.5227

These model results (with robust standard errors) show that the adjusted R-squared is equal to 0.2427, meaning that 24.27% of the variance in the adjusted dependent variable is explained by the independent variable set. With an F-statistic of 21.72516 and a probability of 0.000000, we conclude that the model is statistically significant at the 1% level, indicating an overall strong relationship between explanatory and dependent variables. As evidenced

by the DW statistic equal to 1.058527, there is no strong autocorrelation in the model. This would have a random R-squared of 0.4261, but an unweighted R-squared of only 0.1396.

Table 8
Regression Model Summary

Weighted Statistics			
Root MSE	0.146012	R-squared	0.254417
Mean dependent var	0.080560	Adjusted R-squared	0.242707
S.D. dependent var	0.169534	S.E. of regression	0.147533
Sum squared resid	4.157302	F-statistic	21.72516
Durbin-Watson stat	1.058527	Prob(F-statistic)	0.000000
Unweighted Statistics			
R-squared	0.139582	Mean dependent var	0.354571
Sum squared resid	19.14532	Durbin-Watson stat	0.229853

The panel data regression analysis results show that the constant value is 0.201762, this means that if Gender Diversity (GD), Institutional Ownership (KI), and Governance Committee (KTK are 0) then the Environmental, Social, and Governance Disclosure (ESGD) value will be 0.201762. The beta coefficient for Gender Diversity (GD = 0.119841), which denotes that all other variables being constant, a 1% increase in GD leads to a 0.119841% increase in ESGD. Its beta coefficient of Institutional Ownership (KI is 0.035977, which means that a 1% increase in KI will lead to an increase of 0.035977% in ESGD, if the other variables are constant. Next up, we interpret the beta coefficient of Governance Committee (KTK). The beta coefficient is the highest at 0.309930, which means that if KTK increases 1%, then ESGD can increase by 0.309930%. Thus, KTK has the strongest impact on ESGD in the model.

Testing the coefficient of determination is the results can be seen that the value of the Adjusted R-squared value of 0.242707 or 24.27%. Thus shows the coefficient of determinant that Gender Diversity (GD), Constitutional Ownership (KI) and Governance Committee (KTK) independent variables could explain the ESG Disclosure (ESGD) variable of 24.27%, and the rest of 75.73% explained or influenced by other factors out of this study research model.

Table 9
Test Coefficient of Determination (R2)

Root MSE	0.146012	R-squared	0.254417
Mean dependent var	0.080560	Adjusted R-squared	0.242707
S.D. dependent var	0.169534	S.E. of regression	0.147533
Sum squared resid	4.157302	F-statistic	21.72516
Durbin-Watson stat	1.058527	Prob(F-statistic)	0.000000

To obtain the results of the F test that the calculated F result was 21.72516. while the F table derived from F table where Dk: 3-1 = 2, Df: 195-3-1 = 191, then it can be obtained for the value of the F table of 3.043, it means F count ≥ F table (21.725 ≥ 3.043) and the prob level is significant (0.000000 ≤ 0.05), it can be concluded that the variables of Gender Diversity, Constitutional Ownership and Governance Committee simultaneously or together have a significant effect on ESG Disclosure, so this research model can be used.

Table 10
F Test Results

Root MSE	0.146012	R-squared	0.254417
Mean dependent var	0.080560	Adjusted R-squared	0.242707
S.D. dependent var	0.169534	S.E. of regression	0.147533
Sum squared resid	4.157302	F-statistic	21.72516
Durbin-Watson stat	1.058527	Prob(F-statistic)	0.000000

Gender Diversity (GD) Based on the T-test results of the effect of Gender Diversity (X1) on ESGD that has been presented in table 4.22, the T value obtained of 0.898798 which means T count ≤ T table (0.898 ≤ 1.653) As well as with the Prob. value of (0.3699 ≥ 0.05), then Ha is rejected and H0 is accepted, meaning that Gender Diversity have negative effect not significant on ESG Disclosure.

The findings for the Constant Ownership variable (KI), based on the results of the T-test to determine the effect of Constant Ownership (X2) on ESGD presented in table 4.22 shows that the T count value of 1.171956 indicates that T count ≤ T table (1.171 ≤ 1.653) shows that Prob. value of (0.2427 ≥ 0.05), so that Ha is rejected and H0 is accepted, which means that Institutional Ownership has a negative and insignificant effect on ESG Disclosure.

The variables of Governance Committee (KTK) obtained that the T-test result to test the effect of Governance Committee (X3) on ESGD as presented in table 4.22 obtained T count of 7.479983 which means T count ≤ T table (7.479 ≥ 1.653) and Prob. value (0.0000 ≤ 0.05), the H0 is rejected which means Ha is accepted that is Governance Committee has a positive and significant influence on ESG Disclosure.

Table 11
T Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.201762	0.055160	3.657776	0.0003
GD	0.119841	0.133335	0.898798	0.3699
KI	0.035977	0.030698	1.171956	0.2427
KTK	0.309930	0.041435	7.479983	0.0000

Source; Author 2025

Gender Diversity has a small and negative effect on ESG Disclosure, showing that increasing the number of women on the board of directors won't surely translate into an increase in ESG disclosure. Several other factors should be studied to see the moderation between Gender diversity and ESG Disclosure. The negative and insignificant effect of institutional ownership on ESG disclosure suggests that institutional ownership does not directly contribute to the transparency of ESG information disclosure. Institutional ownership does not significantly affect ESG disclosure, suggesting that companies do not face enough pressure from institutional stakeholders to enhance ESG performance. Inhibition of institutional ownership does not necessarily lead to improved ESG disclosure. An experienced and knowledgeable governance committee on sustainability issues could have a sizeable positive effect on ESG Disclosure, as sustainability and stakeholder interests are likely discussed. It aids businesses in developing their sustainability strategies and lends credence to their importance in spaces like ESG. It creates new dynamics while pursuing and implementing corporate strategies, managing decisions in the economic and social dimension of business decisions. Our findings indicate that corporate governance committees exert a positive influence on ESG sustainability.

And it means that for each dimension E, S, and G has their own disclosure either through the results of regression analysis of independent variables that consists of Gender

Diversity (GD), Constitutional Ownership (KI), and Governance Committee (CEC) together was able to explain the change that occurs in each dimension of E, S, and G, the overall GRD relatively low below 20% showed that the approach to disclosure of ESG still growing up in Indonesia and Malaysia. Especially in the mining sector. The large influence is based on the level of development of the ESG dimensional approach as a whole that enters the business world from the capital market which is its own attraction so that companies are expected to want to adopt and disclose one or more items/dimensions of sustainability in the company through ESG Disclosures for that is still expected to develop for future companies, thus making this study useful in understanding the factors that can influence ESG disclosure in companies. But this needs more study to understand the phenomenon better.

For future researchers a bigger sample and various industrial sectors and other nations as well as long period of studies would obtain better results. For future researcher can also do research about the value of ESG Disclosure with the Blomberg index, Nasdaq, or the indices that are on the stock exchange in Indonesia or exchanges from other countries. Beyond measurements in financial performance, future research can explore the use of sustainability concepts that are all intertwined in components of the company under investigation.

CONCLUSION

The above findings show that the results of the study indicate that both Gender Diversity (GD) and Institutional Ownership (IP) negatively affect ESG Disclosure, which means that increasing the number of women on the board of directors and institutional ownership does not necessarily make companies more transparent about ESG. This suggests that other factors are more salient in promoting ESG disclosure and that further research should examine more influential variables. On the other hand, the Governance Committee (GC) is positively associated with ESG Disclosure; this indicates that due to the nature of its role as a committee responsible for discussing ESG matters, when the GC's presence has a positive impact, it can also promote better ESG transparency and performance within the company. The results of regression analysis also show that the three independent variables can jointly explain the variances that happens in each ESG dimension, although the

coefficient of determination is relatively low or below 20%. From the data generated, we are able to show that the implementation of ESG disclosure is still lagging behind in Indonesia and Malaysia, as evidenced by in the mining sector. On the other hand, the increasing ESG perspective in the capital market is a magnet for investors and stimulates companies to adopt and disclose sustainability aspects in their business more.

This research has many limitations, including the sample coverage is only limited to mining sector companies in Indonesia and Malaysia so that the results of this research cannot be fully generalized in other sectors or regions. Moreover, the index value of Coefficient of Determination also shows the low level of prediction (coefficient) based on the determinant factor model that is used so that there are still many factors that have not been included in the research model and are relevant and able to contribute to ESG Disclosure. Thirdly, the panel data regression method used in this study has some limitations in capturing dynamic aspects of ESG disclosure that may progressively change over time with the development of regulations and corporate awareness for sustainability. Thus, for future studies, it is suggested to add more variables, broaden the coverage of industries, and possibly explore a more complex methodology in order to achieve a more complete view of what drives ESG Disclosure.

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