



The Moderating Role of Gender Diversity in the Relationship Between ESG Performance, CEO Characteristics, Ownership Structure, and Earnings Management

Mardianto^{1*}, Supriyanto², Stephani Oktasari³

¹⁻³Faculty Business and Management, Universitas Internasional Batam, Indonesia

Email: mardianto.zhou@uib.ac.id¹, supriyanto.lim@uib.ac.id², 2342027.stephani@uib.edu³

*Corresponding Author: mardianto.zhou@uib.ac.id

Abstract. The aim of this research is to analyze the influence of ESG Performance, CEO Characteristics, and Ownership Structure on Earnings Management (EM) of manufacturing companies listed on the Indonesia Stock Exchange (IDX) for the years 2020-2023. Moreover, this study examines the moderating role of Gender Diversity between the ESG Performance, CEO Characteristics, Ownership Structure and Earning Management. Ownership Structure is based on the percentage of institutional ownership, managerial ownership, and foreign ownership, while the CEO Characteristics are age, tenure and education of the CEO. The data obtained is secondary data as a result of 86 observations of 23 manufacturing companies using purposive sampling, then the data was analyzed using the Ordinary Least Squares (OLS) method. The results show that the age and education of the CEO negatively affects earnings management, while there is a positive relationship between institutional ownership and opportunistic reporting. Most importantly, it shows that Gender Diversity is an important moderating mechanism. In particular, women in managerial positions exacerbate the adverse effect of CEO age and education on earnings management and importantly reduce the opportunistic effect of institutional ownership. The findings support the view that gender-diversified boards are more likely to provide a more ethical environment and increase oversight capacity, and act as a behavioral device to mitigate opportunistic financial reporting. This study presents empirical evidence that gender diversity in governance is one of the mechanisms that can be used to curb agency problems and safeguard financial statement integrity.

Keywords: CEO Characteristics; Earnings Management; ESG Performance; Gender Diversit; Ownership Structure.

1. BACKGROUND

This study compares the effects of environmental, social, and governance (ESG) metrics, different ownership structures, and executive demographic characteristics on discretionary accruals and will provide an empirical understanding of how the relationship between these factors can lead to corporate reporting integrity issues. In particular, the study investigates the moderating role of women leadership in the boardroom in a systematic manner. The core analytical question is whether a governance model with a gender diverse board of directors improves institutional shareholders' monitoring, leading to more systematic deterrence of opportunistic financial reporting (Roy & Alfian, 2022).

The results of research are not consistent and coherent in this field and some studies indicate that there is a positive correlation between the gender diversity and the quality of earnings, and others do not establish a significant correlation (Šušak et al., 2023). This complex situation requires a thorough study, especially with respect to the so many diverse institutional situations and governance structures in different areas (Primacintya & Kusuma, 2025). In this respect, the aim of this present study is to do so, since the study examined these relationships

in this particular regional context, which might give a fresh light into the general discussion about the concept of corporate governance and financial reporting integrity (Primacintya & Kusuma, 2025).

The present paper will focus on the complex interaction between gender diversity as a moderating variable and the above relationships and will attempt to provide a finer grained analysis of the interaction of gender diversity and earnings management. Specifically, it will investigate how gender-diverse board, which may be more willing to think about ethical issues and a stakeholder approach, can be a remedy for the reduction of earnings management (Githaiga, 2023b). Moreover, it will explore how women in the leadership position enhances the capacity of the ownership structure to ensure good governance which in turn helps to mitigate opportunistic earnings management (Roy & Alfian, 2022).

2. LITERATURE REVIEW

The Stakeholders Theory and The Upper Echelons Theory and its Influence on Earnings Management

Stakeholder Theory and Upper Echelons Theory provide complementary perspectives for understanding managerial behavior and earnings management. Stakeholder Theory emphasizes that organizations have a responsibility to consider the interests of investors, employees, communities, and other stakeholders through transparent financial reporting and ethical business practices. Managers who prioritize these interests are expected to avoid actions that compromise the quality of financial information. However, competing stakeholder interests and information asymmetry may create opportunities for earnings management (Grougiou et al., 2014).

Upper Echelons Theory proposes that organizational outcomes are influenced by the characteristics of top managers. Characteristics such as age, tenure, educational background, career experience, and gender shape how managers perceive situations, make decisions, and determine organizational strategies, including financial reporting practices (Hambrick & Mason, 1984). Therefore, CEO characteristics are relevant to explaining differences in corporate governance and earnings management practices.

The ESG Performance and Earnings Management

Previous studies indicate that the relationship between ESG performance and earnings management remains mixed. While some studies report a positive association, others find that stronger ESG performance, particularly governance performance, is associated with lower earnings management. Differences may arise from the distinct characteristics of the

environmental, social, and governance dimensions and from companies' efforts to respond to stakeholder expectations through ESG disclosure. Good ESG practices may encourage greater transparency and reduce opportunistic financial reporting, although environmental initiatives and regulatory pressures may also influence reported earnings (Githaiga, 2023a).

The relationship between CSR/ESG disclosure and earnings management is also complex because earnings management may itself influence corporate social responsibility disclosure. Evidence suggests that both accrual-based and real earnings management can be associated with greater CSR disclosure, while corporate governance may be more effective in limiting accrual-based than real earnings management. CSR disclosure can also moderate the negative effect of earnings management on firm value (Itan et al., 2026; Wati et al., 2024). These mixed findings provide a basis for further examining the relationship between ESG and earnings management, particularly by considering gender diversity as a moderating factor.

Hypothesis 1: Higher ESG performance is negatively associated with earnings management practices.

CEO Characteristics and Earning Management

Chief Executive Officer (CEO) traits and decisions are some of the most important factors in determining a firm's financial reporting practices, such as the level of earnings management. The relationship between CEO tenure and earnings management is not straightforward and there are mixed results in the literature. In the early years of their service, some studies indicated that CEOs could be more aggressive in their earnings management activities. Newly hired CEOs may be more willing to do the earnings management, perhaps by cutting back reported earnings at the beginning of their tenure to provide a foundation for what can be reported as "good" in the years ahead (Masruroh & Carolina, 2022).

There is also some mixed evidence on the effects of CEO age on earnings management, which is sometimes related to behavioral characteristics and career incentives. Older CEOs tend to be portrayed as more conservative and risk-averse and less likely to engage in earnings management (Chen et al., 2024; Kim & Oh, 2025).

A more educated CEO is more likely to possess a higher intellectual capacity, higher rational thinking, and understand more of what he or she is supposed to be doing. This can subsequently improve the ethical decision-making process and minimize the inclination to engage in earnings management, as they are more likely to favor clear financial information and refuse to compromise with requests for earnings manipulation (Utami & Rina Trisnawati, 2025).

Hypothesis 2: CEO characteristics, including age, tenure, and education are negatively associated with earnings management practices.

Ownership Structure and Earnings Management

Ownership structure is an important corporate governance mechanism because the distribution and concentration of ownership influence the extent of managerial control and discretion over financial reporting. Institutional investors, particularly those with substantial ownership and long-term investment horizons, can strengthen monitoring and reduce managerial opportunism, including earnings management. However, short-term-oriented institutional investors may instead pressure managers to meet short-term performance targets, potentially encouraging earnings management (Alghemary et al., 2024; Susanto et al., 2021).

Managerial ownership can align managers' interests with those of shareholders because managers also bear the financial consequences of opportunistic decisions. Greater ownership may therefore reduce incentives to engage in earnings management. However, the relationship may be nonlinear because managerial ownership can simultaneously create greater alignment and managerial entrenchment, depending on the level of ownership (Teshima & Shuto, 2008). Foreign ownership may also influence earnings management through stronger monitoring, expertise, and incentives to protect investment. Nevertheless, geographical distance and differences in investment horizons may limit monitoring effectiveness and create opportunities for managerial discretion (Lel, 2019).

The effectiveness of ownership structure may also depend on broader corporate governance mechanisms. Evidence indicates that the influence of institutional ownership on firm outcomes is not always significant, while certain board and audit committee characteristics may affect earnings management. These mixed findings suggest that ownership structure alone may not sufficiently explain financial reporting practices and that its effectiveness can vary according to the characteristics of other governance mechanisms.

Hypothesis 3: Ownership structure, including institutional, managerial, and foreign ownership are negatively associated with earnings management practices.

The Gender Socialization Theory and Moderating Role of Gender Diversity in Company

Gender diversity in corporate governance, especially at the board level and senior management has become an important consideration in corporate governance and quality in financial reporting. Based on the basic theories of Stakeholder theory, Upper Echelons theory, and the mediation role of the ownership structure and ESG performance, the role and function of gender diversity in the firm are emphasized and take center stage. In line with the theories of Stakeholder theory, Upper Echelons theory, and mediation in the ownership structure and

ESG performance, the role and function of gender diversity in the firm are highlighted and given priority.

Gilligan developed Gender Socialization Theory and the Ethics of Care which is explaining why gender differences in moral development can create managerial differences in attitudes and actions and in governance styles. Male executives tend to adopt an 'ethics of justice' which focuses on compliance with rules and the objective correctness, whereas female executives tend to have a stronger adoption of the 'ethics of care'. In this alternative moral development, the focus is on empathetic relationships and social responsibility, which could help to create a naturally more morally resistant organisation culture from the perspective of financial fraud and moral violations (Gilligan, 1982). In the business world, this theory suggests that women leaders take this unique form of socialization to the boardroom. They are therefore more likely to be naturally more aware of the happiness of a larger circle of concerned parties, and they are very aware of the moral dimension of business activities.

Due to these socialization differences, it is typical for gender-diverse boards to have a greater focus on ethics and stakeholders, which can lead to more effective ESG performance to reduce earnings management (Githaiga, 2023a). Females in boards promote increased corporate social performance and ethical action, which leads to an environment where there is less opportunity for opportunistic financial reporting (Primacintya & Kusuma, 2025).

According to the Upper Echelons Theory, the CEO's characteristics are directly affecting the earnings management. This relationship can be moderated by the presence of female directors on the boards, thus fostering gender diversity, because some CEO traits can be opportunistic. For instance, research has shown that audit committee gender diversity has the potential to significantly moderate the effect of the CEO attributes and real earnings management, suggesting that the presence of female members can serve as a behavioral mechanism to control opportunistic financial reporting (Edeh et al., 2025). The knowledge of the CEO or financial expert may be misused for the purpose of earnings management, but gender diverse boards may increase the likelihood of oversight, preventing misuse of this knowledge for earnings management purposes. Female directors are more likely to oversee executives and can make more independent decisions that can detect earnings management practices (Roy & Alfian, 2022).

Having women in leadership roles can increase the monitoring power of the ownership, and reduce opportunistic earnings management. Managerial ownership might involve entrenchment and more earnings management, and more diverse gender boards could be important as a check. Women directors can help to curb the entrenchment effect of high

managerial ownership because their independent decisions and ethical judgment can ensure that the manager's self-interest is not the deciding factor for the company's adherence to the transparent financial reporting (Roy & Alfian, 2022).

Hypothesis 4: Gender diversity in leadership positively moderates the relationship between ESG performance, CEO characteristics and ownership structure, and earnings management, leading to a reduction in such practices.

3. METHODOLOGY

Data and Sample Selection

A quantitative study is used in this study to investigate the relationship between independent variables (ESG performance, ownership structure and other CEO characteristics) and earnings management practices. The data used in this study is secondary data obtained from annual reports of manufacturing companies listed in the Indonesia Stock Exchange (IDX) for the 2020-2023 period. The sample was chosen using the purposive sampling technique (Lind et al., 2018) according to certain criteria. Industrial companies must satisfy all the following criteria: be listed on IDX for the observation period; have published sustainability reports for all four observation years (2020-2023); and have available complete financial and corporate governance data through annual reports and the ESG databases.

The study uses sample elimination process and 23 manufacturing companies with certain requirements are obtained, so there are 86 observations. The details of the sample elimination process are summarized below:

Table 1. Sample Selection Process.

Criteria	
Companies listed on the IDX in 2020 - 2023	958
(-) Non-Manufacturing Companies	(812)
(-) Companies don't have ESG Scores in the Thomson Reuters database	(123)
Companies that meet the criteria	23
Total sample 2020 – 2023	86

Definition of Variables and Research Framework

The dependent variable of this study is Earnings Management while the independent variables are CEO Age, CEO Tenure, CEO Education, Managerial Ownership, Institutional Ownership and Foreign Ownership. Moreover, this study adds Gender Diversity as a moderating variable, which is to be examined if it enhances or undermines the impact of the independent variable(s) on the dependent variable(s). Several control variables are added to the model, including Firm Size, Leverage and Return on Assets (ROA), to give the results

increased strength. This study tries to combine all these factors to provide a comprehensive and accurate depiction of the interrelationships and dynamic influences of these factors.

Table 2. Definition of Variable.

Variables		Description	Measurement
<i>Dependent Variable</i>			
Earnings Management	EM	Accrual-based earnings management	Measured using the Modified Jones Model (1995) to calculate discretionary accruals
<i>Independent Variable</i>			
ESG Performance	ESG	ESG Performance	ESG score from the Thomson Reuters ASSET4 database which is range from 0 to 100
CEO Age	CEOAGE	The age of the CEO as disclosed in company records	Measured using number which is range from 0 to 100
CEO Tenure	CEOTEN	The number of years the individual has served as CEO	Measured using number which is range from 0 to 100
CEO Education	CEOEDU	CEO education level	Measured using scoring system from 1 (High School) to 5 (Doctorate/S3)
Managerial Ownership	MANOWN	Percentage of shares owned by company CEO	Measured using number which is range from 0 to 100
Institutional Ownership	INSOWN	The percentage of total shares held by institutional investors	Measured using number which is range from 0 to 100
Foreign Ownership	FOROWN	The percentage of total shares held by foreign investors	Measured using number which is range from 0 to 100
<i>Moderator Variable</i>			
Gender Diversity	GD		The proportion of female board commissioners relative to the total number of board members.
<i>Control Variable</i>			
Firm Size	FIRMSIZE	The size of company	Measured by the natural logarithm of total company sales
Leverage	LEV	Leverage of the company	Measured by dividing total debt by total assets
Return on Asset	ROA	Profitability	Calculated as net income divided by total assets

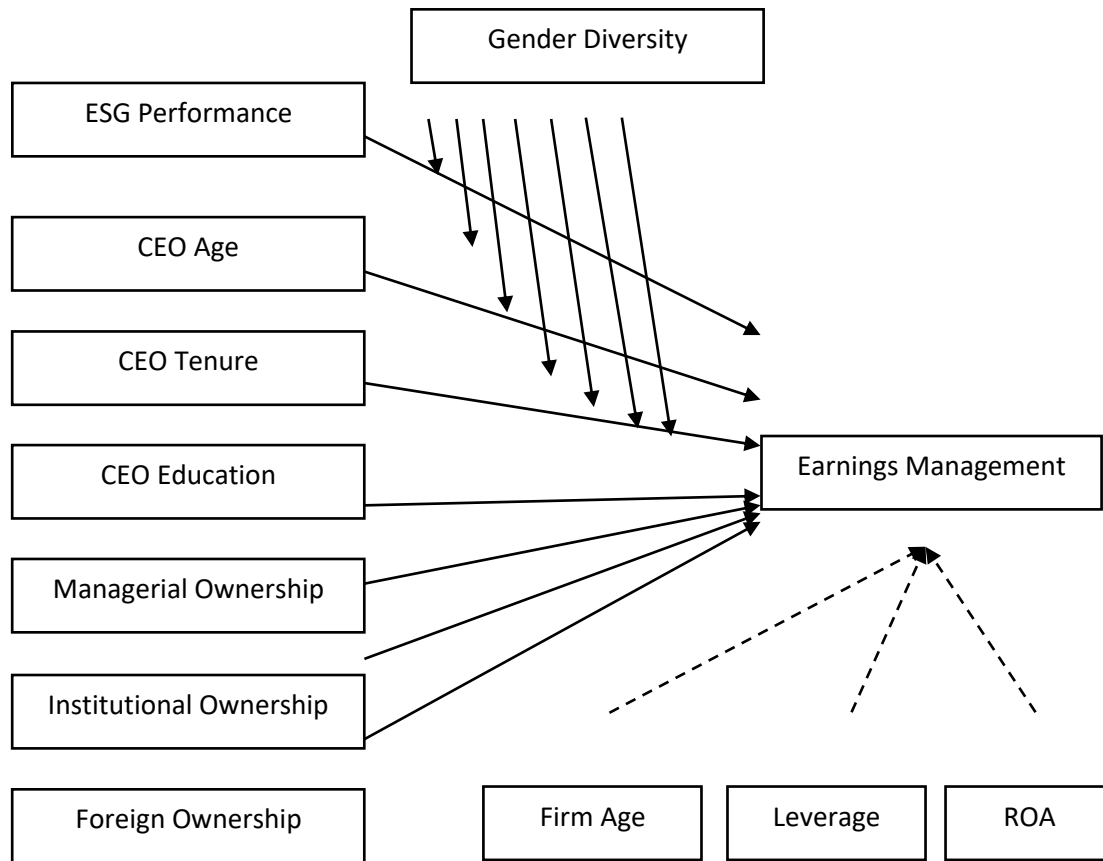


Image 1. Research Framework.

Model Specification

The analytical technique used is Ordinary Least Squares (OLS) which is the most common technique used in empirical studies for estimating linear relationship between variables (Wooldridge, 2013). The intent of this study is to find the line of best fit to the data points to provide estimators that are unbiased, consistent and have the smallest variance. The following multiple regression equation is used to look at the effects between the variables:

Model 1 (*Direct Effect*)

$$EM_{it} = \alpha + \beta_1 ESG_{it} + \beta_2 CEOAGE_{it} + \beta_3 CEOTEN_{it} + \beta_4 CEOEDU_{it} + \beta_5 MANOWN_{it} + \beta_6 INSOWN_{it} + \beta_7 FOROWN_{it} + \beta_8 FIRMSIZE_{it} + \beta_9 LEV_{it} + \beta_{10} ROA_{it} + \varepsilon_{it}$$

Model 2 (*Moderation Effect*)

$$EM_{it} = \alpha + \beta_1 ESG_{it} + \beta_2 GD_{it} + \beta_3 ESG \times GD_{it} + \beta_4 CEOAGE \times GD_{it} + \beta_5 CEOTEN \times GD_{it} + \beta_6 CEOEDU \times GD_{it} + \beta_7 MANOWN \times GD_{it} + \beta_8 INSOWN \times GD_{it} + \beta_9 FOROWN \times GD_{it} + \beta_{10} FIRMSIZE \times GD_{it} + \beta_{11} LEV \times GD_{it} + \beta_{12} ROA \times GD_{it} + \varepsilon_{it}$$

4. ANALYSIS AND RESULTS

Descriptive Statistics

Table 3. Descriptive Statistics.

	Mean	Median	Std Dev	Minimum	Maximum
EM	0.037	0.028	0.094	-0.191	0.369
ESG	53.240	54.210	19.839	11.940	87.600
CEOAGE	56.744	56.500	8.700	34.000	74.000
CEOTEN	11.395	9.000	9.194	1.000	48.000
CEOEDU	3.349	3.000	0.609	1.000	4.000
MANOWN	0.001	0.000	0.002	0.000	0.012
INSOWN	0.660	0.601	0.143	0.368	0.925
FOROWN	0.299	0.185	0.229	0.072	0.915
FIRMAGE	51.267	49.000	21.770	8.000	111.000
LEV	0.400	0.400	0.160	0.110	0.800
ROA	0.077	0.066	0.072	-0.099	0.349

The descriptive statistics profile of the variables used in this study are provided in Table 3. The dependent variable is Earnings Management (EM) which has a mean of 0.037, a fairly broad range of values from -0.191 to 0.369 and a standard deviation of 0.094. The large difference between the minimum and maximum values suggests that the sampled firms are quite heterogeneous with some firms aggressively income decreasing while others are aggressively income increasing in their financial reporting.

In terms of boards characteristics, the average age of the CEO (CEOAGE) is about 56.74 years and the average length of tenure of the CEO (CEOTEN) is 11.39 years. These demographic profiles indicate that most of the sampled companies have very senior executives who have a lot of experience and cognitive maturity. When it comes to ESG performance, the average is 53.240. But there is also a significant difference in sustainability practice among the sample firms as shown by the difference in the lowest and the highest scores of the sample firms (11.940 and 87.600 respectively).

The result of ownership structure analysis is to verify that there is an asymmetric proportion in the firms sampled. Ownership by institutions (INSOWN) is the major one with an average of 66%, while the foreign ownership (FOROWN) accounts 29.9%. In contrast, managerial ownership (MANOWN) is very low, ranging on average at 0.1 percent, and at most 1.2 percent. This is a capital structure that is based on high external institutional power in corporate governance and monitoring, and not much on the alignment of interests through internal share ownership.

Pearson Correlation Matrix

Table 4 Pearson Correlation Matrix

	EM	ESG	CEO AGE	CEOT EN	CEO EDU	MAN OWN	INSO WN	FOR OWN	FIRMA GE	LEV	ROA
EM	1.000										
ESG	0.155 (0.155)	1.000									
CEO AGE	-0.017 (0.880)	-0.176 (0.104)	1.000								
CEO TEN	-0.134 (0.217)	-0.458** (0.000)	0.438*** (0.000)	1.000							
CEO EDU	0.032 (0.769)	0.206* (0.057)	-0.092 (0.401)	-0.386** (0.000)	1.000						
MAN OWN	0.057 (0.603)	-0.071 (0.516)	0.182* (0.093)	0.084 (0.443)	-0.160 (0.140)	1.000					
INSO WN	-0.083 (0.450)	0.082 (0.453)	0.129 (0.237)	0.029 (0.792)	0.214** (0.048)	0.111 (0.311)	1.000				
FOR OWN	0.074 (0.501)	-0.063 (0.563)	0.047 (0.670)	-0.063 (0.564)	0.021 (0.850)	0.057 (0.600)	-0.086 (0.432)	1.000			
FIRM AGE	0.029 (0.790)	0.381** (0.000)	-0.177 (0.102)	-0.138 (0.206)	0.150 (0.168)	-0.112 (0.303)	0.300** (0.005)	-0.102 (0.350)	1.000		
LEV	-0.218** (0.044)	0.029 (0.791)	-0.030 (0.781)	-0.077 (0.482)	-0.108 (0.324)	0.164 (0.131)	-0.020 (0.857)	-0.173 (0.111)	0.182* (0.093)	1.000	
ROA	-0.024 (0.824)	0.124 (0.257)	0.097 (0.376)	-0.166 (0.126)	-0.017 (0.876)	0.054 (0.623)	0.420** (0.000)	0.022 (0.838)	0.427** (0.000)	0.181* (0.095)	1.000

p-values in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

The Pearson correlation matrix is shown in Table 4 and is used in order to identify the initial bivariate relationships between the research variables and to check that there are not symptoms of multicollinearity that could affect the regression results. Correlation analysis

shows that Leverage (LEV) is significantly negatively correlated with Earnings Management (EM) with the correlation value at 5% significance level (-0.218). This gives a general idea that a firm with a greater debt ratio is subject to more scrutiny and thus its management will be more constrained in engaging in opportunistic financial reporting.

Additionally, this correlation matrix is used as a statistical tool to assess the possible multicollinearity between the independent variables. One common thumb rule is that if the correlation between independent variables is greater than 0.80, it is considered to be a serious multicollinearity. The results indicate that the independent variables with the highest correlation level are -0.458 between ESG and CEO Tenure (CEOTEN). Since all correlation coefficients between independent variables are below the cut-off value of 0.80, it can be concluded that there are no serious multicollinearity problems for the empirical model in this study and it is reliable for the later hypothesis testing process.

Main Regression Analysis

Table 5. Main Regression.

	(1) EM	(2) EM	(3) EM	(4) EM	(5) EM	(6) EM	(7) EM	(8) EM
ESG	0.000 (0.70)							-0.000 (-0.15)
FIRMAGE	0.000 (0.80)	0.000 (1.25)	0.000 (1.10)	0.000 (1.26)	0.000 (1.35)	0.001 (1.54)	0.000 (1.25)	0.001* (1.90)
LEV	-0.136*** (-3.08)	-0.137*** (-3.08)	-0.140*** (-3.25)	-0.139*** (-2.96)	-0.146*** (-3.20)	-0.144*** (-3.21)	-0.137*** (-2.92)	-0.181*** (-3.56)
ROA	-0.080 (-1.02)	-0.084 (-1.06)	-0.104 (-1.39)	-0.087 (-1.10)	-0.080 (-1.00)	-0.036 (-0.38)	-0.084 (-1.05)	-0.055 (-0.57)
CEOAGE		0.000 (0.20)						0.001 (1.36)
CEOTEN			-0.001 (-1.47)					-0.002* (-1.98)
CEOEDU				-0.004 (-0.31)				-0.019 (-1.39)
MANOWN					3.944* (1.68)			6.591** (2.28)
INSOWN						-0.065 (-1.48)		-0.087* (-1.77)
FOROWN							0.001 (0.04)	-0.019 (-0.72)
_cons	-0.007 (-0.28)	-0.005 (-0.13)	0.022 (0.81)	0.016 (0.29)	0.004 (0.17)	0.041 (1.11)	0.002 (0.10)	0.086 (1.00)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
r2	0.620	0.617	0.631	0.618	0.623	0.625	0.617	0.667
r2_a	0.586	0.583	0.598	0.583	0.589	0.591	0.583	0.607
N	86	86	86	86	86	86	86	86

t statistics in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

The main regression analysis to test the effect of ESG performance, CEO characteristics and ownership structure on earnings management (EM) is presented in Table 5 where Model

(8) is the full model that combines all the research variables. Hambrick and Mason (1984) proposed the Upper Echelons Theory, which posits that the strategic choices a firm makes are largely shaped by the cognitive, personal and demographic traits of its top executives, and these influences extend to the quality of financial reporting. The empirical results show that the theoretical argument is accepted and that there is a significant negative relationship between the constructs of CEO characteristics (CEOAGE & CEOEDU) and earnings management. The result indicates that CEOs who are older and more highly educated are more likely to engage in conservative accounting practices, focus on their long-term reputational sustainability, and have enhanced ethical sensitivity to choose not to engage in earnings management practices (Chen et al., 2024). On the other hand, CEO tenure (CEOTEN) does not significantly influence and thus is not the most essential factor of suppressing or encouraging opportunistic managerial behavior.

In the light of the Agency Theory, developed by Jensen and Meckling (1976), ownership structure is one of the important mechanisms in corporate governance to solve the conflict of interest between management (agents) and shareholders (principals). This dual effect of this position of ownership is evident from the regression results. Foreign ownership (FOROWN) is proven to have a highly significant negative effect on earnings management. This indicates that foreign investors do have the capacity to act as effective external monitoring mechanism because they have more powerful monitoring tools, knowledge and incentives to monitor managerial behavior; in fact, foreign investors can reduce the discretionary set for managers to increase or decrease earnings (Lel, 2019; Nguyen et al., 2021).

However, institutional ownership (INSOWN) is shown to have a significant positive effect on earnings management. This phenomenon is consistent with Bushee's (1998) myopic investor hypothesis which suggests that under extreme pressure from institutional investors to deliver strong short-term performance, managers might resort to earnings management, or the act of managing earnings to meet market expectations. However, the results of this main model indicate that managerial ownership (MANOWN) and ESG disclosure performance have no significant direct impact on earnings management. This means that as such, in the absence of any specific interaction or stronger internal governance mechanism, both these variables are not enough on their own to decrease information asymmetry in financial reporting. Last, the control variable profitability (ROA) is found to have a highly significant negative impact in all of the models, confirming that generally financially healthy companies have a significantly reduced incentive to manage their reported earnings.

Moderated Regression Analysis**Table 6.** Moderated Regression.

	(1) EM	(2) EM	(3) EM	(4) EM	(5) EM	(6) EM	(7) EM
ESG	0.001* (1.96)						
ESGxGENDER	- 0.007** (-2.54)						
GENDER	0.353*	- 0.756** (-2.42)	- 0.210** (-2.33)	0.904*** (3.06)	-0.048 (-0.83)	0.610** (2.63)	-0.112 (-1.20)
FIRMAGE	0.001* (1.70)	0.001** (2.32)	0.001** (2.44)	0.001*** (2.90)	0.001* (1.68)	0.001*** (2.91)	0.001* (1.99)
LEV	-0.094* (-1.96)	- 0.127** (-2.62)	- 0.111** (-2.32)	-0.189*** (-3.28)	-0.134*** (-2.64)	-0.110** (-2.48)	- 0.119** (-2.34)
ROA	0.129 (1.13)	-0.016 (-0.17)	-0.006 (-0.07)	-0.135* (-1.77)	-0.047 (-0.54)	0.035 (0.38)	-0.012 (-0.12)
CEOAGE		-0.001 (-1.52)					
CEOAGExGENDER		0.013** (2.18)					
CEOTEN			- 0.002** (-2.22)				
CEOTENxGENDER			0.014 (1.51)				
CEOEDU				0.013 (1.05)			
CEOEDUxGENDER				-0.283*** (-3.42)			
MANOWN					3.552 (1.41)		
MANOWNxGENDE R					-28.989 (-0.52)		
INSOWN						0.026 (0.49)	
INSOWNxGENDER						-0.888*** (-2.93)	
FOROWN							-0.018 (-0.58)
FOROWNxGENDE R							0.196 (0.87)
_cons	- 0.081** (-2.31)	0.061 (1.16)	0.005 (0.18)	-0.038 (-0.77)	-0.002 (-0.11)	-0.055 (-1.27)	-0.007 (-0.27)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
r2	0.650	0.635	0.651	0.657	0.627	0.648	0.624
r2_a	0.609	0.591	0.610	0.616	0.583	0.607	0.580
N	86	86	86	86	86	86	86

t statistics in parentheses* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

In order to gain a better understanding of the contingency factors of corporate governance, this study also examines the moderating effect of gender diversity on the relationship between ESG performance, the characteristics of the CEO, the ownership structure, and earnings management. The results are presented in Table 6. This analysis is based on the theoretical argument that women, as a result of their socialization experiences, are more risk averse, more morally attuned and more sensitive to reputational sanctions than men (Gilligan, 1982).

Based on the regression results, it can be seen that the gender diversity does significantly affect the relationship of CEO characteristics and the relationship of ownership structure with earnings management. In particular, CEOAGExGENDER (0.013) and CEOEDUxGENDER (-0.283***) are significant, suggesting that gender diversity is a behavioral mechanism to manage opportunistic financial reporting. This indicates that women directors are more likely to be on top of the executives, independent oversight, and preventing managerial self-interest affecting financial transparency (Roy & Alfian, 2022).

Additionally, the relationship between institutional ownership and earnings management is found to be significantly moderated by the interaction variable INSOWNxGENDER (-0.888***), indicating the important role of women as a means that enhance the monitoring ability of the existing ownership structure (Roy & Alfian, 2022).

The interaction of ESG and gender is significant (ESGxGENDER -0.007) and indicates that indeed, having a diverse board can help to create a more ethical environment, resulting in lower opportunistic earnings management (Primacintya & Kusuma, 2025).

The result can also be interpreted in light of Glass Cliff theory (Ryan & Haslam, 2005) which posits that women are more likely to be hired as executives when a company is under stress or facing institutional scrutiny. The push from institutional investors and the need for high valuation of ESG may lead female leaders to a "workload overload" situation, in which the pressure to achieve short-term performance goals will paradoxically require more discretionary accruals.

Overall, these findings indicate that gender diversity can be a powerful governance mechanism, such that the inclusion of women in management improves governance power and helps to reduce opportunistic actions that may be associated with certain CEO characteristics and/or ownership structures.

5. CONCLUSION

The findings of this study indicate that corporate governance mechanisms, particularly CEO characteristics and ownership structure, significantly influence earnings management practices in manufacturing companies in Indonesia. CEO characteristics related to experience and educational attainment contribute to more reliable financial reporting, while foreign ownership tends to reduce earnings management. In contrast, institutional ownership is associated with a greater tendency toward earnings management.

Gender diversity emerges as an important moderating factor in the relationship between corporate governance mechanisms and earnings management. The presence of women in leadership positions strengthens monitoring of CEO characteristics and ownership structures, thereby reducing managerial opportunism and supporting the integrity of financial reporting.

These findings highlight the importance of strengthening gender diversity in corporate leadership, considering CEO experience and educational background in executive selection, and encouraging institutional investors to adopt a longer-term investment perspective. This study is limited by the use of discretionary accruals as the sole proxy for earnings management and its focus on manufacturing companies. Future research should consider actual earnings management measures, broader industrial sectors, and longer observation periods to provide a more comprehensive understanding of the role of corporate governance and gender diversity in earnings management.

REFERENCES

- Chen, S., Tzavara, D., Argyropoulou, M., Koufopoulos, D., & Argyropoulou, R. (2024). CEO Characteristics and Earnings Management: A Study of Manager Tenure, Age, Gender, and Overconfidence. *Studies in Business and Economics*, 19(3), 335–347. <https://doi.org/10.2478/sbe-2024-0059>
- Edeh, O. P., Akpadaka, O. S., Farouk, M. A., & Fodio, M. I. (2025). CEO Dynamics and Real Earnings Management: A Gender Diversity Perspective from Sub-Saharan Africa. *Journal of Risk and Financial Management*, 18(7), 1–27. <https://doi.org/10.3390/jrfm18070378>
- Gilligan, C. (1982). *a Different Voice: Psychological Theory and Women's Development*. Harvard University Press.
- Githaiga, P. N. (2023a). Board gender diversity, institutional ownership and earnings management: evidence from East African community listed firms. *Journal of Accounting in Emerging Economies*, 14(5), 937–969. <https://doi.org/10.1108/JAEE-10-2022-0312>
- Githaiga, P. N. (2023b). Githaiga, P. N. (2023). Board gender diversity, institutional ownership and earnings management: evidence from East African community listed firms. *Journal of Accounting in Emerging Economies*, 14(5), 937–969. <https://doi.org/10.1108/JAEE-10-2022-0312>. *Journal of Accounting in Emerging Economies*, 14(5), 937–969.

<https://doi.org/10.1108/JAEE-10-2022-0312>

- Grougiou, V., Leventis, S., Dedoulis, E., & Owusu-Ansah, S. (2014). Corporate social responsibility and earnings management in U.S. banks. *Accounting Forum*, 38(3), 155–169. <https://doi.org/https://doi.org/10.1016/j.accfor.2014.05.003>
- Kim, K. S., & Oh, I. (2025). Impact of Firm and CEO Characteristics and COVID-19 on SMEs' Earnings Management. *Systems*, 13(9). <https://doi.org/10.3390/systems13090747>
- Lel, U. (2019). The role of foreign institutional investors in restraining earnings management activities across countries. *J. Int. Bus. Stud.*, 50(6), 895–922. <https://doi.org/10.1057/s41267-018-0195-z>
- Lind, D. A., Marchal, W. G., & Wathen, S. A. (2018). *Basic Statistics for Business and Economics*. McGraw-Hill Education.
- Masruroh, S., & Carolina, A. (2022). Beneish Model: Detection of Indications of Financial Statement Fraud Using CEO Characteristics. *Asia Pacific Fraud Journal*, 7(1 SE-Articles), 85–101. <https://doi.org/10.21532/apfjournal.v7i1.258>
- Nguyen, H. A., Lien Le, Q., & Anh Vu, T. K. (2021). Ownership structure and earnings management: Empirical evidence from Vietnam. *Cogent Business and Management*, 8(1). <https://doi.org/10.1080/23311975.2021.1908006>
- Primacintya, V. A., & Kusuma, I. W. (2025). Environmental, social and governance (ESG) performance and earnings management: the role of gender diversity. *Asian Journal of Accounting Research*, 10(3), 294–314. <https://doi.org/10.1108/AJAR-12-2023-0414>
- Roy, T., & Alfian, E. (2022). Does Gender Diversity Moderate the Nexus Between Board Characteristics and Earnings Management? *Asian Journal of Business and Accounting*, 15, 31–77. <https://doi.org/10.22452/ajba.vol15no2.2>
- Ryan, M., & Haslam, S. (2005). The Glass Cliff: Evidence that Women are Over-Represented in Precarious Leadership Positions. *British Journal of Management*, 16, 81–90. <https://doi.org/10.1111/j.1467-8551.2005.00433.x>
- Šušak, T., Kramarić, T. P., & Bartulović, M. (2023). *Gender diversity in the boardroom and earnings management during the period of the COVID-19* (Vol. 41, Issue 1, pp. 41–64).
- Utami, A., & Rina Trisnawati. (2025). Pengaruh Karakteristik CEO Terhadap Earnings Management. *El-Mal: Jurnal Kajian Ekonomi & Bisnis Islam*, 6(2), 935–954. <https://doi.org/10.47467/elmal.v6i2.7191>
- Wooldridge, J. M. (2013). *Introductory Econometrics: A Modern Approach*. South-Western Cengage Learning.