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Board Diversity and ESG Performance in Indonesia: The Role of Financial Performance Moderators

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ABSTRACT

This study investigates the effect of board diversity, specifically gender, age, and nationality, on Environmental, Social, and Governance (ESG) scores in non-financial publicly listed companies in Indonesia from 2019 to 2023. Using Resource Dependence Theory, the study also examines whether profitability and cash flow moderate these relationships. A fixed effects panel regression was applied to 28 firms, resulting in 140 firm-year observations. The results show that gender diversity significantly improves ESG performance, while age diversity has an adverse effect. Nationality diversity alone has no significant impact. Nationality diversity does not substantially influence ESG performance on its own. However, Cash flow and profitability strengthen the effect of ND on ESG. Meanwhile, financial performance indicators alone do not significantly enhance ESG outcomes. These findings suggest that financial capacity allows firms to leverage diverse boards for sustainability goals better. The study offers practical insights for managers and regulators to align board composition with ESG strategies and encourages further research on other forms of board diversity.

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Introduction

Environmental, Social, and Governance (ESG) practices have gained global recognition for their positive impact on ecological and societal outcomes and firm performance.[1], [2]. Implementing ESG is crucial for long-term success as it strengthens stakeholder trust by improving the company's public image and promoting greater corporate sustainability through risk management and the adoption of sustainable business practices [3], [4]. Consequently, the enhancement in decision-making quality, higher efficiency, and stakeholder trust boost financial performance [4]. According to data from IDX.com, as of 2024, 94% of Indonesia's publicly listed companies have published sustainability reports (SR) [5]. However, though SR has been widely published, the quality and depth of ESG implementation remain a concern. The average ESG risk score of companies listed on the IDX is 28.46 out of 40, which places them in the 'moderate risk' category [6]. Importantly, this score is above the median threshold of 20, indicating that many companies still face significant ESG risks. Therefore, examining the key factors that influence ESG outcomes in Indonesian companies is essential.

Based on previous research, many factors affect ESG Implementations, some of them are the board diversity, investment concern, and external trust [1], [7]-[9]. Among these, board diversity has gained attention as they have an indirect effect on ESG performance, as the board of directors is responsible for strategic decision-making and delivering the company's goals [1], [10]. Board diversity refers to the diversity in the directors of a company in terms of gender, age, and nationality [1], [10]. The board of diversity contributed to defining the decision's efficiency and the company's performance [11]. Diverse boards are believed to bring a broader range of perspectives and experiences, which aid the company in tackling various challenges [1], [11].

However, the effects of board diversity on ESG remain unclear, as different theories result in conflicting perspectives on the impacts. Agency theory believes that the organization's internal factors determine goal achievement, as the diversity in it can increase the interest numbers in the board of diversity that possibly cause conflicts, slower decision-making, and inefficiency, which will make them deviate from the shareholders' goals, such as increasing ESG performance [12]. In contrast, resource dependency theory says that an organization's outcomes are affected by external resources, which makes diversity bring many new resources, like networking, expertise, and knowledge, that positively impact firm outcomes [3], [13]. The conflict between those theories creates a theory gap, as they have their own perspective that impacts the result of the board diversity toward the ESG performance.

To ensure the heterogeneity of the research, it uses three aspects of board diversity, which are gender, age, and nationality [1], [10]. Gender diversity means female directors are present on the board of directors. Diversity in terms of gender provides broader perspectives,

improves information quality, boosts ESG awareness, and stimulates knowledge, increasing ESG performance [3], [14]. In opposition, other research shows it reduces ESG performance [1], [3], [15]. This contrast requires further research on specific countries to know the effects on each country. Age diversity refers to different age groups that will equip the board of diversity with varied experiences and knowledge, which could increase the ESG implementation [1], [16]. Conversely, some studies say it increases the chance of conflicts, minimizes group solidarity, and age discrimination inhibits ESG performance [1], [11]. The contradictory results must be reviewed and studied for specific demographics to gain accurate results. Nationality diversity means there are different nationalities on the board of diversity. Some studies indicate that foreign directors provide valuable resources, increase sustainability awareness, and improve their ESG score [1], [17]. In contrast, other studies show that it reduces the ESG score [1], [18], [19]

The difference in timeline, location, and sector might cause the inconsistency. In accordance with it, this paper will focus on the effect of the diversity in the board of directors that consists of gender, age, and nationality diversity in Indonesia's publicly listed companies from 2019 to 2023, to bring new perspectives and results that might help other parties to use it as consideration. Moreover, the finance sector is excluded to increase the reliability of the result since the finance sector is heavily regulated, which makes it incomparable to the other sectors because they have different characteristics [20].

However, implementing ESG initiatives requires a significant financial investment. Companies with higher profitability and cash flow have a greater ability to invest in ESG [21], [22]. Hence, this paper also analyzes how cash flow and profitability moderate the effect of board diversity on ESG performance. High operating cash flow means that a company has an abundant fund to run its activities, which might increase the chance of investment in another instrument [23], [24]. Profitability refers to how effectively a company can use the invested equity in the company to gain a return. It becomes a key indicator of a company's financial health [25]. The impact of cash flow and profitability remains debatable, as much research shows various effects on the ESG Score. [21], [26]-[28]. Therefore, the ongoing inconsistency in the literature makes this topic a highly relevant and compelling area for further investigation.

By focusing on companies with consistent 5-year reports, excluding the finance sector, this paper seeks to fill the gap in the literature on the relationship between board diversity and ESG performance in Indonesia, moderated by profitability and cash flow. The findings could also guide policymakers, investors, and firm managers in making strategic decisions regarding board composition and ESG investments. Moreover, this research contributes to the body of knowledge by providing empirical evidence on the role of board diversity in shaping ESG performance and supporting efforts to enrich ESG and long-term value creation in Indonesia.

Additionally, this study extends RDT by examining how diversity in the board of directors impacts decision-making that affects the ESG score, whether diversity strengthens the ESG score or not.

The paper is structured as follows: Section 2 presents the literature review, previous study, and theoretical framework. Section 3 explains the methodology and data used. Section 4 reviews the empirical results and provides a detailed discussion of the findings. Section 5 provides the conclusions, implications, and recommendations.

Literature Review

A. Resource Dependence Theory

Resource Dependence Theory (RDT) believes that company performances are affected mainly by the company's ability to utilize external resources like employee expertise, market information, capital, and others. However, it believes that a company needs to have a good relationship with external parties to maximize the resources available to support the company's growth and development [13]. Moreover, RDT sees the board of directors as a source of external resources. As ESG is affected by the external factors that influence the decision, it provides more perspective [29]. Therefore, having a more diverse board of directors will enhance the company's external resources, which will aid the company's financial performance, ESG implementation, and market expansion.

The diversity in the board of directors will make the company richer in knowledge, culture, networking, and perspectives [11], [29]. It will equip the company with strategic tools to achieve stability and boost its growth. According to Beji [10], a good composition of the board of directors might affect their effectiveness in solving problems and decision-making by providing varied perspectives and enhancing initiatives. In emerging economies like Indonesia, companies heavily rely on external resources like funding and strategic partnerships to boost their ESG performance and align with global norms, as their internal ESG capabilities are still developing [30]. Therefore, this paper uses RDT as the grand theory.

B. Gender diversity and ESG score

Gender diversity refers to the representation of both men and women on the board of directors. The presence of both genders will count as diversity. Aligns with the RDT, when the board of directors is more diverse in terms of genders, it will enrich the board with more external resources like women's mindset, social & environmental awareness, and perspectives, which will increase the ESG performance [10], [14], [31].

From a leadership perspective, women are different from men; women tend to have more collaborative leadership, resulting in more social activities [10], [31]. A study on EU banking [14] shows a positive relation between gender diversity and ESG score due to women's ability to reduce conflict, and they tend to be more aware of social and ethical issues. Moreover,

gender diversity can promote stakeholder communication quality, improving its relationship with all stakeholders.

- *H1. Gender diversity has a significantly positive effect on the ESG Score*

C. Age diversity and ESG score

Likewise, Age diversity has already attracted many researchers to investigate the effects of age diversity on ESG Score, as it is one of the factors that can be observed [32]. Along with the RDT theory, the age composition on the board of directors will bring tons of benefits because of its diverse knowledge and traits [29]. Studies by Lachman [33]These studies bring a strong theoretical basis to the effects of each age group in many aspects of human behavior. These studies separate adults into three groups: early adulthood (20-39), middle adulthood (40-59), and old age (60+). Each age group brings advantages and disadvantages; older individuals may have reduced social drive but gain stronger environmental awareness and decision-making skills. In contrast, ecological knowledge and relation quality increase with age. While from an intelligence perspective, the older it gets, the more experience and expertise it gains, resulting in higher wisdom and problem-solving mastery that is demanded in the board of directors [33]. Therefore, the intragenerational combination on the board of directors will increase the number of external resources that will enhance the ESG score.

- *H2. Age diversity has a significantly positive effect on the ESG Score*

D. Nationality diversity and ESG Score

Nationality diversity refers to the existence of other nationalities or citizenships in a board of directors (Such as one or more nationalities exist) [34], [35]. Based on the RDT, nationality will positively impact the workgroup quality by increasing information exchange regarding international market knowledge and improving team performance [34].

Due to the disbelief of the stakeholders toward the foreign directors, it pushed them to be more active in doing the ESG and CSR, and it is supported by other studies that showed foreign directors have a higher ethical performance that aligns with the ESG qualities [36]. In the UK context, national diversity also positively impacts ESG outcomes, as companies with diverse boards are better equipped to address environmental and social issues, as they can help corporate practice to meet the global standards [34]. Based on previous research, nationality diversity could equip the board of directors with experiences in the international market that will enhance the ESG reporting, as it also increases disclosure and transparency [10].

- *H3. Nationality diversity has a significantly positive effect on the ESG score*

E. Moderating Effects of Profitability

One of the firm's performance indicators is profitability, which is a crucial part of its ability to invest and grow [21]. Research by Purbawangsa et al. [26] Believes that the profitability

ratio reflects a company's performance in generating net income more efficiently. Moreover, higher profitability will enable board diversity to influence ESG outcomes effectively. In line with Resource Dependence Theory, board diversity provides valuable external knowledge, networks, and legitimacy. Only profitable firms can operationalize these benefits by allocating sufficient resources to ESG initiatives [37]. Another study on IDX and the Stock Exchange of Thailand (SET) shows that profitability significantly affects ESG. They believe that the higher the profitability of a company, the more resources it has to engage in ESG initiatives as a part of maintaining stakeholder relationships [38]. As a result, having more profit increases the managerial ability to invest in some aspects of the company, such as the environment, social, and governance.

- *H4a. Profitability moderates the relationship between gender diversity on the board of directors and ESG*
- *H4b. Profitability moderates the relationship between age diversity on the board of directors and ESG*
- *H4c. Profitability moderates the relationship between nationality diversity on the board of directors and ESG*

F. Moderating effects of Cash flow Performance

Cash flow refers to the cash movement from the business, including inflow and outflow. It shows the amount of money received and spent by a company, and it reflects the company's liquidity and the cash rotation [39]. In general, cash flow includes operations, financing, investing, and free cash flow [39], [40]**.** In Indonesia, Resource Dependence Theory suggests that diverse boards bring valuable external resources for ESG, but without enough cash flow, firms may struggle to turn these resources into action [30]. Although many studies have examined the individual impacts of board diversity and financial performance on ESG score, research that considers cash flow as an indicator that affects the implementation of board diversity initiatives toward ESG remains limited. Studies on the Indonesian LQ45 Index show that companies with higher free cash flow tend to have excess money to invest in other instruments like ESG [41]. Accordingly, a study on Bangladeshi banks shows that free cash flow has a positive and significant effect on corporate giving as a part of ESG activity [22]. According to these results, cash flow is more than just a reflection of liquidity; it may also be a significant factor in putting the board's ESG initiative into ESG implementation.

- *H5a. Cash flow moderates the relationship between gender diversity on the board of directors and ESG*
- *H5b. Cash flow moderates the relationship between age diversity on the board of directors and ESG*

- *H5c. Cash flow moderates the relationship between nationality diversity on the board of directors and ESG*

Materials and Methods

A. Sample and Data Collection

This journal utilizes secondary data and adopts a quantitative research approach by collecting data from the annual and sustainability reports. The population of this research is all non-bank companies in the Indonesian Stock Exchange (IDX) that published full ESG scores (GRI Standard) from 2019 to 2023. The data extracted from the annual report includes ratios, values, and categories such as Asset Turnover (ATO), profitability, cash flow, firm size, board of directors' number, and others. The data were collected from the official company website and the IDX. Furthermore, the ESG scores are obtained from a secondary source. The sample is selected using a purposive sampling method; the company selection must meet these criteria:

- Listed in IDX 2019-2023
- Non-bank company
- Have complete Annual Report 2019-2023
- Have a complete Sustainability Report 2019-2023

Of 58 non-bank companies that published an ESG score in 2023, only 28 met the criteria and were used as the sample. It equips this journal by providing 140 firm-year observation data for the analysis. Board diversity measurement, such as Gender Diversity (GD), Age Diversity (AD), and Nationality Diversity (ND), gives a strong influence on the board of directors' decision making, technology savviness, and ESG awareness that impact the ESG Performance and Implementation. The broad choices of the company's sector will enrich this journal's results and eligibility for most sectors in the publicly listed companies in Indonesia, especially regarding ESG performance and score.

B. Measurement

The definitions and measurements of the variables used in the analysis are provided in Table 1. This table presents the variables used in the study, covering governance, financial, and firm characteristics. ESG disclosure is measured using GRI-based indicators, while board diversity is captured through gender, age, and nationality variables coded as dummies. Firm performance and structure are represented by profitability, cash flow, leverage, firm size, and firm age.

Table 1. Variable Measurement

Variable Name	Value Description	Measurement	Reference
ESG	The indicator to measure the information disclosure related to the Environmental, Social, and Governance that the company applies.	ESG Score = Total Disclosed Indicators / (Total GRI 300 + GRI 200 + GRI 102)	[42]
Gender Diversity (GD)	The indicator that shows the availability of both men and women on the board of directors	If there is more than one gender, it will be counted as "1" if not "0" as a dummy number	[43]
Age Diversity (AD)	The indicator that shows the availability of the age range group on the board of directors	If there is one or more age groups, they will be counted as "1" if not "0" as a dummy number	[43]
Nationality Diversity (ND)	The indicator that shows the availability of other nationalities on the board of directors	If there is one or more nationality, it will be counted as "1" if not "0" as a dummy number	[43]
Profitability (PROF)	An indicator to measure the effectiveness and efficiency of equity utilization	PROF = Net Income / Shareholders' Equity	[38]
Cash flow (CF)	The amount of cash a company produces from its daily operational activity	CF = (EBIT+Depreciation-Taxes)/Total Assets	[24]
Leverage (LEV)	Ratio between total debt and total assets	LEV = Total Debt / Total Assets	[44]
Firm Size (SIZE)	Natural log of total assets	$Ln\ (Total\ Asset)$	[45]
AGE	The time difference of a company since its establishment until the year of the data used (2019-2023)	Age = Year of the data used – Year of the company establishment	[46]

ESG performance in this study is measured using the Global Reporting Initiative (GRI) Standards, which give a comprehensive and globally recognized framework for firms to disclose their environmental, social, and governance (ESG) activities. These indicators cover a wide range of ESG topics such as energy usage, waste management, labor practices, community engagement, anti-corruption policies, and board composition that might impact climate, human rights, and corruption [47].

C. Data analysis

The relationship between Environmental, Social, and Governance (ESG), board diversity, and financial ratios is examined using three regression models. First, the model includes all variables without an interacting variable to examine their direct effects. Secondly, profitability is included as a moderating variable as an interacting variable. Third, cash flow is included as a moderating variable as an interacting variable. This approach depicts the comparative analysis of the three models:

$$ESG_t = \propto + \beta_{11} GD_t + \beta_{12} AD_t + \beta_{13} ND_t + \beta_{14} LEV_t + \beta_{15} SIZE_t + \beta_{16} AGE_t + \varepsilon \quad (1)$$

$$ESG_t = \alpha + \beta_{21} GD_t + \beta_{22} AD_t + \beta_{23} ND_t + \beta_{24} LEV_t + \beta_{25} SIZE_t + \beta_{26} AGE_t + \beta_{27} PROF_t + \beta_{28} GD_t \times PROF_t + \beta_{29} AD_t \times PROF_t + \beta_{210} ND_t \times PROF_t + \varepsilon \quad (2)$$

$$ESG_t = \alpha + \beta_{31} GD_t + \beta_{32} AD_t + \beta_{33} ND_t + \beta_{34} LEV_t + \beta_{35} SIZE_t + \beta_{36} AGE_t + \beta_{37} CF_t + \beta_{38} GD_t \times CF_t + \beta_{39} AD_t \times CF_t + \beta_{310} ND_t \times CF_t + \varepsilon \quad (3)$$

This study utilizes panel data regression analysis to examine the relationship between board diversity, financial indicators, and ESG performance. Panel data regression utilizes panel data to study the effect of the independent variable on the dependent variable over time and across firms. Generally, there are three forms of mixed estimation models: the fixed effect model, the random effect model, which can be chosen [48]. The selection of the Fixed Effect Model is supported by conducting the Hausman test, which was statistically significant. Therefore, FEM is considered more appropriate.

Fixed Effect Model controls the time-invariant characteristics of individual firms that could otherwise bias the estimation results [49]. These firm-specific factors may include internal policies, corporate culture, or other unobserved characteristics that do not change over time but potentially affect ESG performance. To ensure robustness, this study uses clustered standard error to mitigate the risk of heteroskedasticity and applies winsorization at the 5% level to minimize the influence of outliers. All data analysis is conducted using STATA 17, which can manage unbalanced and balanced panel data structures, ensuring reliable regression estimation.

Results

A. Classical Assumption Test

A normality test is not essential when the data is more than 100. It is relevant for panel data that combines time-series and cross-sectional data, making the normality test not mandatory. Hence, the normality test will not be conducted in this research. Moreover, the key

classical assumptions that must be met for panel data analysis are multicollinearity, heteroscedasticity, and autocorrelation [51]. The multicollinearity test function is used to determine if there is any correlation among the independent variables in the regression model. The standard for Variance Inflation Factor (VIF) was used for the indicator, and the VIF value should be between 10 and 0.1 to ensure no multicollinearity in the data. To find any inconsistencies in the variance of the residuals across the data, heteroscedasticity was examined. Heteroscedasticity is present in this research, as the significance value is lower than 0.05.

Additionally, the autocorrelation was tested using the Wooldridge method, which works well with panel data. This test examines the panel data residuals for serial correlation. A significance value above 0.05 suggests there is autocorrelation in the data. Therefore, to tackle the heteroscedasticity and autocorrelation, clustered standard error is used to adjust the standard error, which reduces within-group correlation and heterogeneity [52].

B. Descriptive Statistics

Table 2 represents the descriptive statistics for all variables used in this research. The average ESG score is 0.466, with a minimum of 0.149 and a maximum of 0.92, which means that the firms have moderate ESG risk on average. The board gender diversity (GD) averaged at 0.586; 58.6% of the firm-year observations have females on their board of directors. Meanwhile, age diversity (AD) and nationality diversity (ND) averages are 0.557 and 0.414, respectively. Indicating medium diversity within the board of directors, with standard deviations of 0.499 and 0.495, reflects similar board variation in diversity across the board of directors.

Table 2. Descriptive Statistics

Variable	N	Mean	Min	Max	Std Dev.
ESG	140	0.4658	0.1489	0.9198	0.2428
GD	140	0.5857	0	1	0.4944
AD	140	0.5571	0	1	0.4985
ND	140	0.4143	0	1	0.4944
LEV	140	0.2162	0	0.68	0.1922
SIZE	140	10.4286	8	12	1.1068
AGE	140	47.0000	19.5	72.5	14.5076
PROF	140	0.1347	-0.0106	0.4258	0.1083
CF	140	6122.15	597.5	24816	6626.55

The Leverage (LEV) averages at 21.6% with a 0.192 standard deviation, indicating generally low leverage on average, but some of it has a high debt ratio of up to 68%. While Asset Turnover (ATO) averages 0.872 and has a standard deviation of 0.553, it means moderate variability in operational efficiency across the companies. Firm size (SIZE) was measured using the natural logarithm of total assets, with an average of 10.43 and 1.11, with a standard

deviation of 1.11. Firm age (AGE) has a mean of 47 years and between 19.5 and 72.5 years, suggesting a diverse range of young and mature firms. Profitability averages 13.5%, with the lowest being –1.1% and the highest being 42.6%, indicating slight negative and high company performance that enhances the data variability. Cash flow averages 6,122.15, with a minimum value of 597.5 and a maximum of 24,816, showing the heterogeneity that enriched the data with diverse cash flow amounts.

C. Hypothesis Testing

The research findings of the effects of GD, AD, ND, profitability (as moderator), and cash flow (as moderator) on ESG Score are provided in this section. This research employs panel data regression to enhance analysis by considering variations in ESG scores over time. This approach ensures reliability by preventing bias that might occur due to omitted significant variables that can reduce the findings' reliability [50], [53]. Fixed effect (FE) was utilized to test the hypotheses, ensuring robust and efficient estimates for the panel data model.

Table 3 presents the regression result, which offers fascinating insights about the relationship between board diversity and ESG score. The effects of board diversity on the ESG score of 28 publicly traded companies in IDX are compared between the base model, which excludes profitability and cash flow as interacting variables, and the moderated model, which includes profitability and cash flow interaction terms.

The result shows that GD affects the ESG score positively for all the models, but at different significance levels: models 1 & 3 with 5% significance and model 2 with 10% significance. This indicates that having one or more females on the board of directors can increase the ESG score. Hence, we accept H1. On the other hand, AD is significant in Models 1 and 3, but it negatively impacts the ESG, with the significance level of 10% in Model 1 and 5% in Model 2, which makes H2 rejected. It suggests that higher age diversity in the board of directors can reduce the ESG score, which can be caused by the age discrimination that increases the chance of team conflict. However, the result for ND toward ESG does not show significance in all the models. The insignificance can be caused by the language and cultural differences that might reduce the quality of communication. Therefore, we reject H3 as it indicates that foreign directors do not affect ESG scores among Indonesian firms.

The moderating variable that was used in Model 2 is profitability. The relation between profitability and ESG is insignificant, which shows that company profitability does not affect the ESG score, as higher profit may reduce tax integrity or ethicality. Next, the interaction between GD and profitability is insignificant, suggesting that profitability may suppress or reduce the effect of GD on environment, social, and governance.

Table 3. Regression Analysis

	Model 1	Model 2	Model 3
Constant	-4.56891 (-6.03)	-4.46516 (-5.53)	-4.31968 (-5.62)
GD	0.097125** (2.65)	0.096503* (1.71)	0.11483** (2.12)
AD	-0.07950* (-2.98)	-0.04187 (-0.94)	-0.85283** (-2.18)
ND	0.09248 (1.21)	0.045522 (0.70)	0.003303 (0.38)
LEV	-1.06182** (-2.62)	-0.99448** (-2.41)	-1.063773** (-2.43)
SIZE	0.09555 (1.25)	0.088817 (1.09)	0.083008 (1.05)
AGE	0.08972*** (6.93)	0.08852*** (6.78)	0.087639*** (6.57)
PROFt		-0.15943 (-0.62)	
GDt x PROFt		0.09754 (0.36)	
ADt x PROFt		-0.20037 (-0.86)	
NDt x PROFt		0.57089* (2.02)	
CF			-0.0000106** (-2.58)
GDt x CFt			5.49 (0.12)
ADt x CFt			2.32 (0.74)
NDt x CFt			0.00001** (2.65)

*Notes: *, **, *** refer to 10%, 5% and 1% significance level consecutively*

Respectively, the moderating impact of profitability on AD is statistically insignificant, which indicates that profitability does not strengthen the relationship between AD and ESG. These two findings lead to rejecting H4a and H4b. The role of profitability on the relationship between ND and ESG is significantly positive, which indicates that profitability successfully strengthens the positive impact of ND on ESG. On the other hand, a highly profitable company can activate and enhance the effects of ND toward ESG, so we accept H4c.

Model 3 shows the impact of cash flow as a moderating variable. The interaction between cash flow and ESG is significant at the 5% significance level and has an adverse effect. This suggests that high cash flow leads to lower ESG scores. The regression analysis shows that cash flow moderation is having no significant impact on GD and AD in influencing the ESG score, indicating that cash flow does not moderate the influence of GD and AD. Hence, we reject H5a and H5b. On the contrary, the moderation effect of cash flow on ND and ESG has been proven significant, showing that high cash flow activates and increases the impact of ND on ESG. Therefore, H5c is accepted.

Discussion

The regression results offer various outcomes regarding the impact of board diversity and financial factors on ESG performance. GD shows a consistently positive and significant effect in all models, while AD is found to have a significant but negative impact. In contrast, ND does not directly correlate significantly with ESG score. Regarding the moderating variables, profitability and cash flow do not directly affect ESG. However, both significantly strengthen the relationship between ND and ESG performance.

The result of GD shows a positive relationship with the ESG score, and the result is consistent in all models. This result is supported by Beji [10] and Paolone [14], who found that GD enhances ESG score by contributing broader perspectives, especially in governance and human rights. GD is a rare and valuable resource that improves decision-making and offers long-term sustainability awareness.

This relationship is further explained through the lens of the RDT and the argument that the existence of women on the board of directors will enhance the team with ethical, social, and environmental awareness that reduces team conflict and increases ESG [10], [14], [31]. Meanwhile, male directors often bring a higher risk-taking approach and higher confidence that enhances the implementation effectively [54]. Combining gender characteristics could complement each other and enhance the ESG performance.

In contrast to GD, AD is found to have a negative and significant influence on ESG in most of the models. This can be interpreted as meaning that a more age-diverse board of directors will reduce the ESG score, as each generation has its own traits that can be conflicting. A study shows that each generation may have differences in communication, motivation, and feedback preferences. For example, the older generation prefers face-to-face communication, while the younger generation is used to text/instant messaging. These contrasting mindsets often result in reduced solidarity, communication gaps, and conflicting priorities hindering ESG efforts [55]. Previous studies in Indonesia reported that age diversity has no effect, likely because most companies in Indonesia have boards with directors aged over 40 years. This results in younger members being a minority and makes the opinions of younger boards tend to be less respected by the older members [55].

Aligning with agency theory, greater age diversity can increase agency costs, as directors with risk preferences differ; they may disagree on long-term sustainability strategies that might be riskier. This misalignment between directors may increase agency conflicts, weakening the board's effectiveness in enhancing ESG initiatives [33].

While theoretically beneficial, an age-diverse board should be well-suited to address ESG through complementary qualities. However, in practice, generational value differences and misunderstandings can cause problems for board dynamics. Particularly in emerging

markets like Indonesia, where ESG practices are still developing, differences in leadership style, perception of authority, and speed of decision-making can delay sustainability plans.

Turning to ND, the influence of ND on the ESG score is insignificant. It concludes that having foreign directors on the board will not positively impact ESG scores. Only 41% of sample companies have at least one foreign director, which may limit their influence on a larger scale and explain the negligible impact of ND on ESG performance. Furthermore, limited board independence or symbolic presence may undermine the structural function of foreign directors by limiting their ability to participate in strategic decision-making [1]. Symbolic appointments, language barriers, or unfamiliarity with the local regulatory system may further reduce their efficacy [1].

Additionally, certain companies may face cultural and logistical difficulties in ensuring regular participation of international directors, as foreign board members may not attend meetings consistently [1]. This lack of integration may reduce the company's agility in addressing pressing social or environmental risks, limiting real-time knowledge exchange and board responsiveness to ESG-related topics. Consequently, when board engagement and knowledge absorption remain low, foreign directors' potential contributions to ESG strategy may not be fully realized, even though they may have unique insights [56].

Regarding the moderating effect of profitability, the results reveal mixed outcomes. Profitability does not directly impact ESG, and the roles of moderators on GD and AD are not significant. This means that profitability does not always enhance the board's diversity and ESG relationship. However, profitability has improved, and a significantly moderate relationship between ND and ESG has been shown.

This finding implies that a firm with high profitability and ND will become impactful. One possible reason is that while foreign directors may bring essential ESG practices or insights, these concepts may not be implemented without adequate funding [21]. When financial resources are available, ND has a greater impact because profitability increases a company's ability to implement these ideas by allowing participation in meetings, enabling cross-border collaboration, and financing ESG-related investments [57].

Similarly, high cash flow shows a negative direct impact on ESG, since a company with higher cash flow needs to pay higher taxes, resulting in a lower ESG score [57]. Moreover, a company with higher cash flow shows the inability of the company to use the funds, and it can increase the chance of ESG overinvestment, which causes inefficiency [23], [58]. The regression shows that cash flow does not significantly moderate the relationship between GD and AD toward ESG. However, cash flow has a positive significance in moderating the effects of ND on ESG.

This supports the idea presented by Lau [60], companies with strong cash flow in the Asia–Pacific region are more effective at translating ESG initiatives into actual firm value, while those lacking liquidity often struggle to leverage ESG into tangible gains [59]. This aligns well with the finding that financially robust and nationally diverse firms can activate the international knowledge and perspectives foreign directors bring, transforming them into strategic ESG action.

Conclusion

This research finds that gender diversity consistently improves ESG scores, suggesting diverse perspectives enhance sustainability efforts. In contrast, age diversity is negatively associated with ESG, while nationality diversity has no direct impact unless supported by strong financial performance. Both profitability and cash flow strengthen the positive effect of nationality diversity on ESG when used as moderating variables. The results suggest that financial capacity enhances the utilization of board diversity in achieving ESG objectives. While gender diversity clearly shows a benefit, other dimensions of diversity require the right economic environment to generate impact.

Furthermore, this research gives new resources and insights into the application of Resource Dependency Theory on the impact of board diversity in non-financial companies listed on the Indonesian Stock Exchange. The effect of board diversity components is heterogeneous, where GD can give positive impacts, AD gives negative impacts, and ND impacts depend on the company's financial performance. The effects of economic performance, like profitability and cash flow, are also tested in this research, resulting in interesting outcomes.

In addition, the effects of financial performance indicators are further explored, revealing two key findings. First, profitability does not show significance in ESG. Second, Cash Flow shows a negative relationship with the ESG score. Companies can know the importance of diversity in the board of directors and adapt to their sector and financial adequacy to form a stronger BoD to increase the ESG. For investors, this research enriches the comparative data to forecast and investigate the company's ESG performance, as it might be related to stock performance. Moreover, the Otoritas Jasa Keuangan Indonesia (OJK) can benefit by considering making rules related to board diversity. This might include requiring listed companies to disclose their board diversity in sustainability reports and gradually implementing a minimum diversity threshold to conform to international governance standards.

Limitations and Suggestions

This study has several limitations that need to be acknowledged. First, the data used in this research are based on 28 listed companies in the Indonesian Stock Exchange that have

complete sustainability reports from 2019 to 2023. The main reason for this restriction is that most listed companies do not consistently publish ESG scores for the whole five-year period; to avoid this, the data chosen is based on 28 companies. This limited number of companies fulfilling the criteria might affect the generalization of the result and long-term trends and variations over specific periods, like economic cycles. Future research can use a broader sample and a more extended timeframe as ESG report trends increase. Second, the measurement of board diversity is calculated using dummy numbers (presence or absence). Therefore, future research can include the intensity or proportion of diversity to identify deeper insight.

Conflict of Interest

The authors declare that there is no conflict of interest.

References

[1] A. Jeyhunov, J. D. Kim, and S. M. Bae, "The Effects of Board Diversity on Korean Companies' ESG Performance," *Sustainability (Switzerland)*, vol. 17, no. 2, Jan. 2025, doi: 10.3390/su17020787.

[2] M. Aydoğmuş, G. Gülay, and K. Ergun, "Impact of ESG Performance on Firm Value and Profitability," Dec. 01, 2022, *Borsa Istanbul Anonim Sirketi*. doi: 10.1016/j.bir.2022.11.006.

[3] Z. Ouni, J. Ben Mansour, and S. Arfaoui, "Board/Executive Gender Diversity and Firm Financial Performance in Canada: The Mediating Role of Environmental, Social, and Governance (ESG) Orientation," *Sustainability (Switzerland)*, vol. 12, no. 20, pp. 1–17, Oct. 2020, doi: 10.3390/su12208386.

[4] I. Zumente and J. Bistrova, "ESG Importance for Long-Term Shareholder Value Creation: Literature vs. Practice," *Journal of Open Innovation: Technology, Market, and Complexity*, vol. 7, no. 2, Jun. 2021, doi: 10.3390/joitmc7020127.

[5] C. Rabbi, "Title BEI 94 Persen Emiten Sudah Sampaikan Laporan Keberlanjutan," IDXChannel.com. Accessed: Jan. 31, 2025. [Online]. Available: https://www.idxchannel.com/market-news/bei-94-persen-emiten-sudah-sampaikan-laporan-berkelanjutan

[6] IDX Indonesia, "ESG Score."

[7] S. Aich, A. Thakur, D. Nanda, S. Tripathy, and H. C. Kim, "Factors Affecting ESG Towards Impact on Investment: A Structural Approach," *Sustainability (Switzerland)*, vol. 13, no. 19, Oct. 2021, doi: 10.3390/su131910868.

[8] D. Hastalona and I. Sadalia, "Literature Review ESG and Sustainability Finance," *Budapest International Research and Critics Institute-Journal (BIRCI-Journal)*, vol. Volume 4, No 3, Aug. 2021, doi: 10.33258/birci.v4i3.2122.

[9] C. Zhang and S. Jin, "What Drives Sustainable Development of Enterprises? Focusing on ESG Management and Green Technology Innovation," *Sustainability (Switzerland)*, vol. 14, no. 18, Sep. 2022, doi: 10.3390/su141811695.

[10] R. Beji, O. Yousfi, N. Loukil, and A. Omri, "Board Diversity and Corporate Social Responsibility: Empirical Evidence from France," *Journal of Business Ethics*, vol. 173, no. 1, pp. 133–155, Sep. 2021, doi: 10.1007/s10551-020-04522-4.

[11] Z. Wu, J. Gao, C. Luo, H. Xu, and G. Shi, "How Does Boardroom Diversity Influence the Relationship Between ESG and Firm Financial Performance?," *International Review of Economics & Finance*, vol. 89, pp. 713–730, 2024, doi: 10.1016/j.iref.2023.10.045.

[12] M. C. Jensen *et al.*, "Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure," Harvard University Press, 1976. [Online]. Available: http://hupress.harvard.edu/catalog/JENTHF.html

[13] J. Pfeffer and G. R. Salancik, "Book Reviews The External Control of Organizations: A Resource Dependence Perspective," 1981. [Online]. Available: http://www.journals.uchicago.edu/t-and-c

[14] F. Paolone, M. Pozzoli, M. Chhabra, and A. Di Vaio, "Cultural and Gender Diversity for ESG Performance Towards Knowledge Sharing: Empirical Evidence From European Banks," *Journal of Knowledge Management*, vol. 28, no. 11, pp. 106–131, 2024, doi: 10.1108/JKM-05-2023-0445.

[15] T. H. H. Nguyen, M. H. Elmagrhi, C. G. Ntim, and Y. Wu, "Environmental performance, sustainability, governance and financial performance: Evidence from heavily polluting industries in China," *Bus Strategy Environ*, vol. 30, no. 5, pp. 2313–2331, Jul. 2021, doi: 10.1002/bse.2748.

[16] A. Alawadi, N. Kakabadse, N. Khan, and V. Bodolica, "Institutional Context Matters: Board Diversity and ESG Outcomes in the UAE," *Corporate Governance (Bingley)*, 2024, doi: 10.1108/CG-03-2024-0135.

[17] G. Mardini and F. Elleuch Lahyani, "Impact of Foreign Directors on Carbon Emissions Performance and Disclosure: Empirical Evidence From France," *Sustainability Accounting, Management and Policy Journal*, vol. 13, pp. 221–246, Jan. 2022, doi: 10.1108/SAMPJ-09-2020-0323.

[18] A. Al-Hiyari, A. I. Ismail, M. C. Kolsi, and O. H. Kehinde, "Environmental, social and governance performance (ESG) and firm investment efficiency in emerging markets: the interaction effect of board cultural diversity," *Corporate Governance: The International Journal of Business in Society*, vol. 23, no. 3, pp. 650–673, Jan. 2023, doi: 10.1108/CG-03-2022-0133.

[19] A. Elgharbawy and L. M. A. Aladwey, "ESG Performance, Board Diversity and Tax Avoidance: Empirical Evidence from the UK," *Journal of Financial Reporting and Accounting*, vol. ahead-of-print, Jan. 2025, doi: 10.1108/JFRA-04-2024-0177.

[20] L. Zhu, Y. Wang, and Q. Zhang, "Financial Market Regulation and Corporate Social Responsibility: Evidence from China's New Asset Management Regulation," *PLoS One*, vol. 20, no. 5, p. e0323742, May 2025, doi: 10.1371/journal.pone.0323742.

[21] K. Hamdi, H. Guenich, and M. Ben Saada, "Does Corporate Financial Performance Promote ESG: Evidence from US Firms," *Cogent Business and Management*, vol. 9, no. 1, 2022, doi: 10.1080/23311975.2022.2154053.

[22] S. M. T. Islam, R. Ghosh, and A. Khatun, "Slack Resources, Free Cash Flow and Corporate Social Responsibility Expenditure: Evidence from an Emerging Economy," *Journal of Accounting in Emerging Economies*, vol. 11, no. 4, pp. 533–551, 2021, doi: 10.1108/JAEE-09-2020-0248.

[23] K. Kyaw, J. Pindado, and C. De-La-Torre, "How ESG Indicators Moderate the Impact of Cash Flow on Investment," *Soc Sci Res*, 2025, doi: 10.2139/ssrn.5095973.

[24] S. Wiguna and E. Murwaningsari, "The Effect of Systematic Risk, Operating Cash Flow and Growth Opportunities on Future Earnings Response Coefficients (FERC), Working Capital as A Moderation Variable," *International Journal of Social and Management Studies (IJOSMAS)*, vol. 3, 2022, doi: 10.5555/ijosmas.v3i2.111.

[25] J. Sani Akbar, S. Pertiba, and P. Pinang, "The Effect of Return on Assets and Return on Equity on Price to Book Value in Banking Companies Listed on the Indonesia Stock Exchange," *International Journal of Economics, Business and Accounting Research (IJEBAR)*, vol. 5, 2021, doi: 10.29040/ijebar.v5i3.2814.

[26] I. B. A. Purbawangsa, S. Solimun, A. A. R. Fernandes, and S. Mangesti Rahayu, "Corporate governance, corporate profitability toward corporate social responsibility disclosure and corporate value (comparative study in Indonesia, China and India stock exchange in 2013-2016)," *Social Responsibility Journal*, vol. 16, no. 7, pp. 983–999, Aug. 2020, doi: 10.1108/SRJ-08-2017-0160.

[27] H. Malini, "Firm Size, Profitability, and ESG Disclosure in Indonesia: Geographical Location as Moderating Variable," *International Journal of Economics Development Research*, vol. 4, no. 5, pp. 2023–2333, 2023, doi: https://doi.org/10.37385/ijedr.v5i2.5002.

[28] X. Tan and S. A. Tuluca, "Liquidity and Profitability's Effect on the Environmental, Social, and Governance Scores of S&P 500 Companies," *Corporate Governance and Sustainability Review*, vol. 8, no. 4, pp. 22–29, 2024, doi: 10.22495/cgsrv8i4p2.

[29] M. H. Amin, H. Ali, and E. K. A. Mohamed, "Does Industry Sensitivity Affect the Relationship Between Board Diversity and ESG Performance? Fresh Evidence From the G-7 Countries," *Journal of Applied Accounting Research*, 2025, doi: 10.1108/JAAR-11-2023-0364.

[30] A. W. F. Kouam, "ESG Integration in Corporate Governance: A Comparative Study of Practices in Emerging Markets," *Springer Science and Business Media LLC*, Nov. 2024, doi: 10.21203/rs.3.rs-5495641/v1.

[31] A. H. Eagly and W. Revelle, "Understanding the Magnitude of Psychological Differences Between Women and Men Requires Seeing the Forest and the Trees," *Perspectives on Psychological Science*, vol. 17, no. 5, pp. 1339–1358, Sep. 2022, doi: 10.1177/17456916211046006.

[32] E. Menicucci and G. Paolucci, "The Influence of Italian Board Characteristics on Environmental, Social, and Governance Dimensions," Oct. 24, 2023, *Emerald Publishing*. doi: 10.1108/MD-09-2022-1224.

[33] M. E. Lachman, "Adult Development, Psychology of," in *International Encyclopedia of the Social & Behavioral Sciences*, N. J. Smelser and P. B. Baltes, Eds., Oxford: Pergamon, 2001, pp. 135–139. doi: https://doi.org/10.1016/B0-08-043076-7/01650-8.

[34] R. EmadEldeen, A. F. Elbayuomi, H. Elmoursy, M. Bouaddi, and M. A. K. Basuony, "Does Board Diversity Drive Sustainability? Evidence from UK-Listed Companies," *Sustainability (Switzerland)*, vol. 17, no. 3, Feb. 2025, doi: 10.3390/su17031177.

[35] F. Shania, P. Andriani, and T. V. Soetanto, "Board Diversity and Corporate Risk: Evidence from Indonesian Listed Manufacturing Companies in 2016–2019," *Jurnal Manajemen Perhotelan*, vol. 8, no. 2, pp. 106–116, 2022, doi: 10.9744/jmhot.8.2.106-116.

[36] M. Abdelkader and Y. Gao, "Uncovering the Role of Foreign Ownership in the Relationship Between Board Nationality Diversity and ESG," *International Journal of Research in Business and Social Science (2147- 4478)*, vol. 12, no. 9, pp. 288–302, Dec. 2023, doi: 10.20525/ijrbs.v12i9.3079.

[37] F. Laela WIjayati, "The Effect of Board Gender Diversity on Sustainability Reporting Practices: Profitability as a Moderating Variable (An Empirical Study of Non-Financial Companies Listed on the Indonesia Stock Exchange for the Period 2020-2022)," *The 4th International Conference on Islamic Economics Studies*, vol. 1, no. 1, Oct. 2024, Accessed: Jul. 10, 2025. [Online]. Available: https://proceedings.uinsaid.ac.id/index.php/icies/article/view/163

[38] P. T. Kartini, R. Maiyarni, and W. Tiswiyanti, "Pengaruh Return on Asset (ROA), Return on Equity (ROE) dan Ukuran Perusahaan Terhadap Corporate Social Responsibility Disclosure," *Jurnal Riset Akuntansi dan Keuangan*, vol. 7, no. 2, pp. 343–366, 2019, doi: 10.17509/jrak.v7i2.15636.

[39] F. Al Qaisi, "The Impact of Operating Cash Flow on Stock Price-The Case of Publicly Held Industrial Companies in Jordan," *Test Engineering & Management*, vol. 83, pp. 14779–14788, May 2020.

[40] C. S. F. Hastuti, M. Arfan, and Y. Diantimala, "The Influence of Free Cash Flow and Operating Cash Flow on Earnings Management at Manufacturing Firms Listed in the Indonesian Stock Exchange," *International Journal of Academic Research in Business and Social Sciences*, vol. 8, no. 9, Oct. 2018, doi: 10.6007/ijarbss/v8-i9/4686.

[41] L. Putri Pawitan, D. Saleh Sadikin, and B. Budhijana, "Pengaruh Financial Slack, Free Cash Flow, dan Firm Size terhadap Corporate Social Responsibility Expenditure (CSRE) pada Perusahaan LQ 45," *Jurnal Keuangan dan Perbankan*, vol. 20(2), pp. 117–128, Jun. 2024, doi: 10.35384/jkp.v20i2.525.

[42] E. Leony, A. Rizkiyanti, and L. Uzliawati, "Pengaruh Environmental, Social dan Governance Disclosure Terhadap Profitabilitas Perusahaan Sektor Makanan dan Minuman di Indonesia," *Jurnal Ilmiah MEA*, vol. 8, no. 1, pp. 196–209, 2024.

[43] Y. Chang, K.-T. Wu, S.-H. Lin, and C.-J. Lin, "Board Gender Diversity and Corporate Social Responsibility," *International Journal of Corporate Social Responsibility*, vol. 9, no. 1, Dec. 2024, doi: 10.1186/s40991-024-00095-x.

[44] P. I. Sari and Nurhayati, "Analysis of Debt to Total Asset Ratio and Return On Asset to Financial Performance of PT.Indofood Sukses Makmur. Tbk under a Creative Commons Attribution-NonCommercial 4.0 International License (CC BY-NC 4.0)," *Jurnal Ekonomi*, vol. 12, no. 3, pp. 554–560, 2023, [Online]. Available: http://ejournal.seaninstitute.or.id/index.php/Ekonomi

[45] A. Issa, M. A. A. Zaid, J. R. Hanaysha, and A. A. Gull, "An Examination of Board Diversity and Corporate Social Responsibility Disclosure: Evidence From the Banking Sector in the Arabian Gulf Countries," *International Journal of Accounting and Information Management*, vol. 30, no. 1, pp. 22–46, Feb. 2022, doi: 10.1108/IJAIM-07-2021-0137.

[46] R. Arhinful and M. Radmehr, "The Impact of Financial Leverage on the Financial Performance of the Firms Listed on the Tokyo Stock Exchange," *Sage Open*, vol. 13, no. 4, Oct. 2023, doi: 10.1177/21582440231204099.
[47] V. V Stipic, "Corporate Integrated Reporting: An Overview of GRI Standards," in *Handbook of Research on Energy and Environmental Finance 4.0*, IGI Global, 2022, pp. 189–213. doi: 10.4018/978-1-7998-8210-7.ch007.
[48] Y. Zhang, H. Duan, and X. Wu, "A Study on the Impact of Digital Finance on Innovation of Photovoltaic Enterprises-Based on Panel Data of Listed Photovoltaic Companies," 2024, pp. 280–288. doi: 10.2991/978-94-6463-638-3_28.
[49] M. Breuer and E. Dehaan, "Using and Interpreting Fixed Effects Models," *Journal of Accounting Research*, vol. 62(2), pp. 1183–1226, 2024, doi: http://dx.doi.org/10.2139/ssrn.4539828.
[50] D. N. Gujarati and Porter Dawn C, "Basic Econometrics 5th ed.," Boston, MA, 2009.
[51] I. Ghozali and D. Ratmono, *Analisis Multivariat dan Ekonometrika: Teori, Konsep, dan Aplikasi dengan EViews 8*. Badan Penerbit Universitas Diponegoro, 2022.
[52] A. C. Cameron and D. L. Miller, "A Practitioner's Guide to Cluster-Robust Inference," *Journal of Human Resources*, vol. 50, 2015, doi: https://doi.org/10.xxxx/jhr.50.2.317.
[53] A. H. Studenmund and B. K. Johnson, *Using Econometrics A Practical Guide A.H. Studenmund Sixth Edition*, 6th ed. Essex: Pearson Education Limited, 2014.
[54] E. Menicucci and G. Paolucci, "Gender Diversity and Bank Risk-Taking: An Empirical Investigation in Italy," *Corporate Governance (Bingley)*, vol. 22, no. 2, pp. 317–339, Feb. 2022, doi: 10.1108/CG-11-2020-0498.
[55] D. Alviorizka and W. Supratiwi, "The Effect of Board Diversity on Corporate Social Responsibility (CSR) with Industry Type as a Moderating Variable," *Media Riset Akuntansi, Auditing & Informasi*, vol. 23, no. 1, pp. 115–130, Jul. 2023, doi: 10.25105/mraai.v23i1.15305.
[56] B. Alshabibi, S. Pria, and K. Hussainey, "Nationality Diversity in Corporate Boards and Tax Avoidance: Evidence from Oman," *Adm Sci*, vol. 12, no. 3, Sep. 2022, doi: 10.3390/admsci12030111.
[57] D. M. Kusuma *et al.*, "Pengaruh Book-Tax Differences, Accrual, dan Operating Cash Flow terhadap Upaya Penghindaran Pajak," *Jurnal Pajak Indonesia*, vol. Vol.6, pp. 159–182, 2022, doi: https://doi.org/10.31092/jpi.v6i1.1721.
[58] T. N. K. Quoc, T. H. Nga Phan, and N. M. Hang, "The Effect of Liquidity on Firms' Performance: Case of Vietnam," *Journal of Eastern European and Central Asian Research*, vol. 11, no. 1, pp. 175–186, Feb. 2024, doi: 10.15549/jeecar.v11i1.1344.
[59] W. T. Lau, N. H. A. Razak, Y. K. Chang, and S. H. Ng, "Unlocking ESG Value: The Role of Firm-level Cash Flow in Asia Pacific," *International Journal of Economics and Financial Issues*, vol. 15, no. 4, pp. 207–216, Jun. 2025, doi: 10.32479/ijefi.19431.

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