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**Board Diversity and Sustainability Reporting: Empirical Evidence from Indonesian Listed Banks**

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**Abstract**

Sustainability reporting has gained a significant attention due to its importance for sustainable development goals. Following the increased concern of sustainability reporting in Indonesian business, this study examines the effect of board of commissioner’s diversity on sustainability reporting in Indonesian listed banks. The study explores the topics by following the concept of agency theory. Our study employs secondary data obtained from the annual and sustainability reports from 2014-2018. By using purposive sampling method, the study generates 210 observations in which the analysis is conducted with panel data regression using STATA statistics software. Our study finds that the sustainability reporting implementation of by Indonesian listed banks is still considerably low. There is also no significant improvement since the release of roadmap for sustainable finance in 2014 that enforce sustainability reporting for banking sector. Panel data regression analysis reveals that board’s gender diversity exhibits positive effect on sustainability reporting. Meanwhile, board’s diversity in nationality, age, and education have no significant effect on sustainability reporting practice. The insignificant effect may be due to the fact that the board is still dominated by of local board members, older board members, and board members with business education background. Based on our findings, we suggest the Indonesia Financial Service Authority (OJK) as the capital market regulator to improve firms' understanding about sustainability reporting and apply higher enforcement of its implementation. The OJK can optimize the role of board diversity as it has not contributed significantly to improving sustainability reporting practice. Further, future studies can be improved by employing mixed method by combining quantitative and qualitative analyses and also extending the coverage of the study.

**Keywords:** Sustainability Reporting, Board of Commissioners, Gender Diversity, Nationality Diversity, Age Diversity, Education Diversity.

**Introduction**

Sustainability reporting has emerged rapidly as a part of best business practice for the past decade (Stefanescu, 2022; Sumarta et al., 2023). It has attracted considerable attention in large firms so that it becomes a part of management decision, accounting practice, and reporting practice (Amidjaya & Widagdo, 2019). In several countries, sustainability reporting has even become mandatory for firms to show firms' commitment to contributing to sustainable development goals (Ioannou & Serafeim, 2017). It is believed that the accomplishment of sustainable development targets can be realized better with the participation of the firms in private sector. It is essential to take the initiative to drive companies to adopt sustainability reporting and increase the quality as well as the impact of sustainability report (Gunawan et al., 2022). Also, there arises pressure to practice sustainability reporting (Al-Omoush, 2022), more specifically in the emerging countries as the country and its people still face significant economic, social, and environmental problems (Singhania et al., 2023).

Indonesia is suffering from sustainability issues various issues related to socio-economic and environmental issues for the past decades (Sumarta et al., 2021a). The issues are dominated with natural resource exploitation, pollution, environmental damage, and poverty. Moreover, Siregar & Bachtiar (2010) mention that there are many serious environmental issues caused by irresponsible companies. As a consequence of the increasing concern on sustainability initiatives, sustainability reporting practice, and existing sustainability issues, the demand for sustainability reporting is also increasing in the country (Gunawan et al., 2022). The companies thus face higher level of pressure to publish sustainability report (Singhania et al., 2023). Companies’ stakeholders believe that sustainability reporting practice by Indonesian firms may provide support to overcome sustainability issues and contribute to achieving sustainable development goals (SDGs).

In Indonesian context, sustainability reporting is not mandatory yet for most of the companies. Thus, the implementation of sustainability reporting cannot be considered optimum in Indonesia. Here, the participation of the companies is still considerably low. In fact, there are only 49 Indonesian listed firms that published sustainability report, only 9% of all listed firms (Indonesian Financial Service Authority, 2017). Indeed, this statistic is in line with the study conducted by Djajadikerta & Trireksani (2012) who find that the information disclosure practice in social and environmental aspects by Indonesian companies is still at an early stage. Thus, it requires an urgent improvement to increase the contribution of the companies in achieving sustainable development goals (SDGs). In regards with sustainability reporting improvement in Indonesia, the Indonesia Financial Service Authority (OJK) issues the roadmap for sustainable finance in 2014. The roadmap is a master plan to implement sustainable finance in which sustainability reporting improvement becomes a part of it. In practice, the roadmap selects the banking and finance sector to implement it earlier than other industry sectors. It is relevant with the fact that the banking sector hold the highest contribution of sustainability reporting in Indonesia with around 30% of total reporting entities. Further, OJK Regulation (POJK) Number 51 of 2017 is also issued to specifically regulate sustainable finance implementation in banking sector (Maheresmi et al., 2023) in which the enforcement is applied to foreign banks and banks with large assets.

Figure 1. Sustainability Reporting in Indonesia by Industry Sector

Source: Indonesia Financial Service Authority (2017)

 Considering the selection of the banking sector as the initiator of sustainability reporting practice in Indonesia[[1]](#footnote-1), investigating the drivers of sustainability reporting in Indonesian listed banks become interesting, especially during the implementation of the roadmap of sustainable finance that was issued in 2014. Most studies in Indonesian context examines the effect of corporate governance characteristics on sustainability reporting such as several board characteristics and audit committee characteristics (Amidjaya & Widadgo, 2019; Farisyi et al., 2022). However, the existence of empirical studies that investigate the effect of board diversity is very limited. This study comprehensively examines the effect of board diversity that is represented by gender diversity, nationality diversity, age diversity, and education diversity. This research brings contribution to sustainability reporting literature in Indonesia as one of the earliest studies that comprehensively investigate various board diversity. The study also provides recommendations for the companies and business regulators to improve sustainability reporting practice. The rest of the paper is presented with the following sections: literature review; materials and method; results and discussion, and conclusion.

**Literature Review**

*Agency theory, sustainability reporting, and board diversity*

Agency theory is a broadly used theory that explains the agency relationship between the principal and agent. It is often used in social science literature in explaining the relationship that happens in a business. In agency theory, the principals have certain interests that should be fulfilled by the agent. This theory further develops extensively so that the principals and agents vary depends on the interests covered (Mantysaari, 2010), one of which is the relationship between the stakeholders (public, governments, business regulators, etc.) as principal and the company as agent. Every agency relationship has potential to suffer agency problems due to conflict of interests and information asymmetry. The theory builds the assumption following the individualistic and opportunistic nature of human so that the agent tends to prioritize personal interests and maximize their benefits. Jensen (1986) argues that agent will take a decision that will provide greater benefits for his/her interests (opportunistic behavior) compared to the interests of stakeholders. The viewpoint of the study adopts the behavior-based approach in Carr & Brower's agency model (2000) in which principals must monitor the behavior of the agent to ensure that the agent acts for principals’ interest. Principals monitor the agent to ensure that the agent acts in accordance with principal’s interests.

This theory also applies in regards with sustainability reporting (Vitolla et al., 2020). The stakeholders as principal nowadays have a great demand for sustainability reporting as one of their interests (De Villiers et al., 2017). However, the company management as agent may not be willing to practice it and pursue more on financial performance. Therefore, the monitoring mechanism is implemented in which the principal is represented by the board of commissioners (will be mentioned as “board” in this study) to ensure that their interests are fulfilled by the agent, one of which is to practice sustainability reporting. The board has held considerable contribution in the decision making, including their involvement in corporate sustainability reporting. However, the existence of empirical studies that investigate the effect of board diversity is very limited. This study comprehensively examines the effect of board diversity that is represented by gender diversity, national diversity, age diversity, and education diversity.

**Hypothesis Development**

*Board's gender diversity and sustainability reporting*

 Gender has a distinct influence on the decision-making process and the execution of corporate strategies aimed at attaining specific performance levels (Huang, 2013), specifically through the implementation of strategic decisions (Tang et al., 2018). The board’s gender diversity also becomes a significant consideration in defining corporate business orientation. Therefore, in this study, gender is taken as one of the proxies representing the board diversity. The concept of gender diversity within company’s top management has become a prominent topic in affecting sustainability initiatives, driven by a combination of mandatory and voluntary regulations implemented by different countries (Nicolo et al., 2022). Empirical studies have indicated that the presence of women on boards has an influence on firm performance (Arora, 2021; Duppati et al., 2020). More specifically, Fernandez et al (2019) suggest a positive correlation between gender diversity on boards and sustainability practices. Similar findings have been observed by (Zahid et al., 2020). Additionally, Nicolo et al (2022) discovers a positive relationship between the proportion of women on boards and the disclosure of sustainability information. Another empirical study conducted by Issa & Fang (2019) also supports the existence of a statistically significant link between the number of female directors and CSR information disclosure. Thus, we hypothesize that

***H1. Board's gender diversity has positive effect on sustainability reporting***

*Board's national diversity and sustainability reporting*

 Indonesia is one of the emerging economies in the world in which there are significant foreign investment in the country’s economy, especially in banking industry (Lindblad, 2015). This has implication on the potential nationality diversity within company’s board. Board’s nationality diversity is also a potential factor that contribute to improving sustainability practices in a company. The presence of board members can be diverse considering the composition of local and foreign board members. Nationality diversity enables the board members to support each other in running their duties and improve the business operation within a company, including the matters related to corporate sustainability. In addition to having local board members that has more insights about national issues where the business operates, the presence of foreign board members will help in various aspects related to sustainability as stated in several previous studies (Zhang et al., 2018). Previous research conducted in emerging countries has shown that the presence of board members from the developed countries can contribute to the enhancement of a company's sustainability efforts by virtue of their higher level of engagement regarding sustainability matters (Setiawan et al., 2021). The existence of foreign members within a company's board is crucial as they possess extensive international experience (Chen et al., 2017) that support sustainability reporting practice. Sarhan et al (2019) suggest that foreign board members are more likely to carry out their duties more independently and offer fresh perspectives from an international standpoint. Foreign board members also tend to have great commitment on their job. It is important to support company’s sustainability efforts (Tandoh et al., 2022). These differences in experiences, knowledge, norms, religion, language, and culture between countries necessitate the involvement of foreign directors in supporting international initiatives, particularly in the aspect of corporate sustainability (Khan et al., 2019). Therefore, we hypothesize that

***H2. Board's national diversity has positive effect on sustainability reporting***

*Board's age diversity and sustainability reporting*

 Age basically has influence on someone's mindset and awareness. In the case of board members and sustainability reporting practice, the age of the board members has the potential to influence the sustainability reporting practices in the companies in Indonesia. The literature generally shows two views that support that the age diversity of board members will support the practice of sustainability reporting (Manner, 2010; Prabowo et al., 2017; Zhang et al., 2018). The first view is that older board members tend to be more ethical (Zhang et al., 2018) than younger board members (Godos-Díez et al., 2011). On the other hand, the second view argues that younger directors will tend to be more open to new business practices where young directors generally get a lot of new insights from the outside world regarding new and contemporary business issues (Sumarta et al., 2021a). Valente & Atkinson (2019) also mentions that the majority of millennials do believe that business should help achieve sustainable development. Therefore, younger board members have more potential to consider sustainability report practices to be implemented in companies. With the support of existing literature, the research hypothesis is formulated as follows

***H3. Board's age diversity has positive effect on sustainability reporting***

*Board's education diversity and sustainability reporting*

 In the context of corporate boards, the educational background of board members can significantly impact their awareness of relevant issues within their field of discipline, consequently shaping their styles and actions (Amore et al., 2019). Notably, environmental awareness is considered a crucial quality for board members (Huang et al., 2019), and this can be supported by diverse educational background (Meyer, 2015). Research suggests that managers with economics degrees tend to prioritize CSR (Manner, 2010). Meanwhile, graduates majoring in natural sciences tend to exhibit higher levels of pro-environmental concern. On the other hand, board members with humanities education backgrounds tend to demonstrate proactive initiatives concerning social implications and adhere to environmental standards while sociology and psychology backgrounds may also support sustainability initiatives in a company as these educational backgrounds are more inclined to consider cooperative decisions that consider the interests of various stakeholders (Sumarta et al., 2021a). Considering the importance of educational background in corporate sustainability (Amore et al., 2019), the diversity in education of the board members can influence decision-making, particularly in relation to environmental aspects. In this regard, board members can make decisions concerning environmental issues, ultimately leading to improved environmental performance (Walls & Berrone, 2017). Therefore, the education diversity among the board members is expected to promote better sustainability reporting practices. Based on the arguments above, the hypothesis in this study is as follows

***H4. Board's education diversity has positive effect on sustainability reporting***

**Materials and Method**

*Population, Samples, and Research Data*

 The population of our study is all Indonesian listed banks during 2014-2018 considering the issuance of sustainable finance roadmap by Indonesia Financial Service Authority in 2014. Using purposive sampling with the following criteria: (a) bank must be listed in Indonesian Stock Exchange; (b) bank must publish accessible annual report, we are able to generate total 210 observations from 43 banks in 2014-2018. Finally, the data are secondary data obtained from bank's annual and sustainability report.

*Research Variables*

 The dependent variable of our study is sustainability reporting measured with GRI Financial Service Sector Disclosure index as our samples are commercial banks. The measurement has been widely used to measure sustainability reporting variable in previous studies in the literature (Khan et al., 2013; Sumarta et al., 2023; Sumarta et al., 2021b) The independent variables are the board diversity and bank ownership. Board diversity is represented by gender, nationality, age, and education diversity. The calculation of board diversity level in this study uses Blau index that has been widely used in previous studies in the literature (Darmadi, 2011). We also control for bank ownership that consists of foreign, family, and government ownership, board size, profitability, and bank size. The summary of our variables along with the measurement is presented as follows

Table 1

*Operational Definition of Variables*

| **Variable** | **Notation** | **Measurement** |
| --- | --- | --- |
| ***Dependent*** |  |  |
| *Overall disclosure*Sustainability reporting  | GRI | Percentage of sustainability information disclosed based on GRI Financial Service Disclosure Guidelines (Content Analysis) |
| *Sub-information disclosure*Economic information reporting  | GRI\_ECO | Percentage of economic information disclosed based on GRI Financial Service Disclosure Guidelines (Content Analysis) |
| Sustainability reporting  | GRI\_ENV | Percentage of environmental information disclosed based on GRI Financial Service Disclosure Guidelines (Content Analysis) |
| Sustainability reporting  | GRI\_SOC | Percentage of social information disclosed based on GRI Financial Service Disclosure Guidelines (Content Analysis) |
| ***Independent*** |  |  |
| Board's gender diversity | BLAU\_GENDER | Blau index of gender diversity (male and female) |
| Board's national diversity | BLAU\_NAT | Blau index of nationality diversity (local and foreign) |
| Board's age diversity  | BLAU\_AGE | Blau index of age diversity (young adulthood (below 40 years old), middle adulthood (40-65 years old), and late adulthood (above 65 years old)) |
| Board's education diversity  | BLAU\_EDU | Blau index of education diversity (natural science, social science, and humanities) |
| ***Control*** |  |  |
| Foreign Ownership | FOR | Percentage of shares owned by foreign institutions/individuals |
| Family Ownership | FAM | Percentage of shares owned by family firm/members |
| Government Ownership | GOV | Percentage of shares owned by government |
| Board size | BOARDSIZE | Total number of board members |
| Bank's Profitability  | ROA | Return on Assets  |
| Bank's Size | SIZE | Log of Total Assets |

*Data Analysis*

 Our data analysis is started with descriptive statistics analysis to summarize our data. Correlation test is also performed to detect potential correlations among research variables. Finally, our hypothesis testing is conducted with panel data regression analysis with the following equation:

*Board diversity and foreign ownership on sustainability reporting - overall reporting*

*GRIit = a + bBLAU\_GENDERit + bBLAU\_NATit + bBLAU\_AGEit + bBLAU\_EDUit +*

*bFORit + bFAMit + bGOVit + bBOARDSIZEit + bROAit + bSIZEit + e (1)*

*Board diversity and foreign ownership on sustainability reporting - sub reporting*

*GRI\_\_ECOit = a + bBLAU\_GENDERit + bBLAU\_NATit + bBLAU\_AGEit + bBLAU\_EDUit + bFORit + bFAMit + bGOVit + bBOARDSIZEit + bROAit + bSIZEit + e (2a)*

*GRI\_\_ENVit = a + bBLAU\_GENDERit + bBLAU\_NATit + bBLAU\_AGEit + bBLAU\_EDUit + bFORit + bFAMit + bGOVit + bBOARDSIZEit + bROAit + bSIZEit + e (2b)*

*GRI\_\_SOCit = a + bBLAU\_GENDERit + bBLAU\_NATit + bBLAU\_AGEit + bBLAU\_EDUit + bFORit + bFAMit + bGOVit + bBOARDSIZEit + bROAit + bSIZEit +e (2c)*

**Results and Discussion**

 We conduct descriptive statistics analysis to obtain the summary of our research data. The result demonstrates that the implementation of sustainability reporting in Indonesian listed banks is still considerably low with the average disclosure level only at 13.3 percent. The highest disclosure covers 68.4 percent of all sustainability information while the lowest is at 0 in which there are several banks that have not implement sustainability reporting. Board’s gender diversity in this research observations exhibit mean value of 0.328, meaning that despite the board is dominated by male board members, the female board members already have considerable presence in the board. As for the board’s nationality diversity, the average mean value is 0.092, implying that the board’s nationality diversity is still quite low. It is still dominated by local board members in which the presence of foreign board members is still limited. Then, the age diversity has mean value of 0.216 that implies that the diversity is considerably still low. Indeed, the board is still dominated by older board members while younger board members’ existence is still limited. Finally, the education diversity in the board members is still quite low with the average value of 0.289. The result of descriptive statistics analysis is presented as follows:

Table 2

*Descriptive Statistics*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  **Variable** |  **Obs** |  **Mean** |  **Std.Dev.** |  **Min** |  **Max** |
|  GRI | 210 | 0.133 | 0.206 | 0 | 0.684 |
|  BLAU\_GENDER | 210 | 0.328 | 0.194 | 0 | 0.5 |
|  BLAU\_NAT | 210 | 0.092 | 0.151 | 0 | 0.5 |
|  BLAU\_AGE | 210 | 0.216 | 0.168 | 0 | 0.75 |
|  BLAU\_EDU | 210 | 0.289 | 0.206 | 0 | 0.714 |
|  FOR | 210 | 0.354 | 0.334 | 0 | 0.99 |
|  FAM | 210 | 0.321 | 0.31 | 0 | 0.909 |
|  GOV | 210 | 0.121 | 0.255 | 0 | 0.8 |
|  BOARDSIZE | 211 | 6.393 | 2.633 | 3 | 12 |
|  ROA | 210 | 0.009 | 0.023 | -0.112 | 0.108 |
|  SIZE | 210 | 13.447 | 0.792 | 11.823 | 15.113 |
|  |

 We further check the correlation among research variables and find no multicollinearity issues among the independent variables with the following result.

Table 3

*Matrix of correlations*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  Variables |  (1) |  (2) |  (3) |  (4) |  (5) |  (6) |  (7) |  (8) |  (9) |  (10) |  (11) |
| (1) GRI | 1.000 |
| (2) BLAU\_GENDER | 0.368 | 1.000 |
| (3) BLAU\_NAT | 0.027 | 0.147 | 1.000 |
| (4) BLAU\_AGE | 0.131 | 0.135 | 0.104 | 1.000 |
| (5) BLAU\_EDU | 0.104 | 0.047 | 0.361 | 0.171 | 1.000 |
| (6) BOARDSIZE | 0.427 | 0.253 | 0.154 | 0.210 | 0.347 | 1.000 |
| (7) FOR | 0.448 | 0.264 | 0.441 | 0.135 | 0.333 | 0.362 | 1.000 |
| (8) FAM | -0.344 | -0.101 | -0.365 | 0.090 | -0.306 | -0.463 | -0.479 | 1.000 |
| (9) GOV | 0.694 | -0.165 | -0.290 | -0.185 | 0.018 | 0.213 | -0.261 | -0.474 | 1.000 |
| (10) SIZE | 0.558 | 0.175 | 0.127 | 0.163 | 0.351 | 0.595 | 0.318 | -0.561 | 0.393 | 1.000 |
| (11) ROA | 0.298 | -0.016 | -0.103 | 0.022 | 0.096 | 0.343 | -0.026 | -0.077 | 0.176 | 0.413 | 1.000 |

We perform our hypothesis testing with panel data regression analysis. All the regression models are performed with random effect as the best estimation. In model 1, we analyze the effect of board diversity on overall sustainability reporting disclosure. We find that board gender diversity demonstrates positive effect on sustainability reporting quality while national, age, and education exhibit no significant effect. As for bank ownership variables, we find the positive effect of foreign and government ownership while the effect of family ownership is insignificant.

Table 4

*Panel Data Regression results*

| **GRI** | **Coef.** | **St.Err.** | **t-value** | **p-value** | **[95% Conf** | **Interval]** | **Sig** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| BLAU\_GENDER | 0.178 | 0.059 | 3.02 | 0.003 | 0.063 | 0.294 | \*\*\* |
| BLAU\_NAT | -0.124 | 0.084 | -1.47 | 0.142 | -0.289 | 0.042 |  |
| BLAU\_AGE | 0.051 | 0.041 | 1.25 | 0.212 | -0.029 | 0.130 |  |
| BLAU\_EDU | 0.035 | 0.037 | -0.96 | 0.337 | -0.107 | 0.037 |  |
| FOR | 0.117 | 0.063 | 1.86 | 0.046 | -0.006 | 0.240 | \*\* |
| FAM | 0.094 | 0.071 | 1.32 | 0.186 | -0.045 | 0.233 |  |
| GOV | 0.269 | 0.091 | 2.96 | 0.003 | 0.091 | 0.446 | \*\*\* |
| ROA | -0.223 | 0.321 | -0.69 | 0.488 | -0.853 | 0.407 |  |
| BOARDSIZE | -0.011 | 0.006 | -1.98 | 0.048 | -0.023 | 0.000 | \*\* |
| SIZE | 0.198 | 0.028 | 7.20 | 0.000 | 0.144 | 0.252 | \*\*\* |
| Constant | -2.603 | 0.348 | -7.49 | 0.000 | -3.284 | -1.921 | \*\*\* |
|  |
| Mean dependent var | 0.133 | SD dependent var  | 0.206 |
| Overall r-squared  | 0.680 | Number of obs  | 210.000 |
| Chi-square  | 136.040 | Prob > chi2  | 0.000 |
| R-squared within | 0.123 | R-squared between | 0.735 |
|  |
| *\*\*\* p<0.01, \*\* p<0.05, \* p<0.1* |

 In model 2, we use the sub information category disclosure in sustainability report as our dependent variable that consist of economic, environmental, and social information disclosure. In all sustainability information disclosure categories, we find that board’s gender diversity demonstrates positive effect, consistent with the main test. In social information disclosure, board diversity in age and education demonstrates positive effect. Apart from those, within the rest of the tests, we find no more significant effect of board’s nationality, age, and education diversity, consistent with the main result. The regression results are reported as follows

Table 5

*Panel Data Regression results for Sub-Category Split*

| ***Panel A: Economic Information Category*** |
| --- |
|  **GRI\_ECO** |  **Coef.** |  **St.Err.** | **t-value** |  **p-value** |  **[95% Conf** |  **Interval]** |  **Sig** |
| BLAU\_GENDER | 0.176 | 0.116 | 1.51 | 0.093 | -0.052 | 0.403 | \* |
| BLAU\_NAT | -0.171 | 0.160 | -1.07 | 0.286 | -0.486 | 0.143 |  |
| BLAU\_AGE | 0.003 | 0.074 | 0.04 | 0.970 | -0.142 | 0.148 |  |
| BLAU\_EDU | 0.046 | 0.066 | 0.69 | 0.491 | -0.084 | 0.176 |  |
| FOR | 0.328 | 0.122 | 2.69 | 0.007 | 0.089 | 0.567 | \*\*\* |
| FAM | 0.339 | 0.141 | 2.41 | 0.016 | 0.063 | 0.615 | \*\* |
| GOV | 0.594 | 0.192 | 3.10 | 0.002 | 0.219 | 0.970 | \*\*\* |
| BOARDSIZE | -0.026 | 0.010 | -2.44 | 0.015 | -0.046 | -0.005 | \*\* |
| ROA | -0.271 | 0.582 | -0.47 | 0.641 | -1.413 | 0.870 |  |
| SIZE | 0.411 | 0.056 | 7.37 | 0.000 | 0.301 | 0.520 | \*\*\* |
|  Constant | -5.387 | 0.710 | -7.58 | 0.000 | -6.779 | -3.995 | \*\*\* |
|  |
| Mean dependent var | 0.295 | SD dependent var  | 0.430 |
| Overall r-squared  | 0.635 | Number of obs  | 210.000 |
| Chi-square  | 107.483 | Prob > chi2  | 0.000 |
| R-squared within | 0.124 | R-squared between | 0.658 |
|  |

| ***Panel B: Environmental Information Category*** |
| --- |
| **GRI\_ENV** | **Coef.** | **St.Err.** | **t-value** | **p-value** | **[95% Conf** | **Interval]** | **Sig** |
| BLAU\_GENDER | 0.178 | 0.071 | 2.49 | 0.013 | 0.038 | 0.318 | \*\* |
| BLAU\_NAT | 0.069 | 0.117 | 0.59 | 0.557 | -0.161 | 0.298 |  |
| BLAU\_AGE | -0.065 | 0.064 | -1.02 | 0.309 | -0.190 | 0.060 |  |
| BLAU\_EDU | 0.053 | 0.057 | 0.93 | 0.353 | -0.059 | 0.165 |  |
| FOR | -0.051 | 0.080 | -0.64 | 0.059 | -0.208 | 0.105 | \* |
| FAM | -0.013 | 0.085 | -0.16 | 0.876 | -0.181 | 0.154 |  |
| GOV | 0.107 | 0.096 | 1.12 | 0.044 | -0.081 | 0.295 | \*\* |
| BOARDSIZE | -0.001 | 0.009 | -0.12 | 0.909 | -0.019 | 0.017 |  |
| ROA | -0.048 | 0.506 | -0.10 | 0.924 | -1.040 | 0.943 |  |
| SIZE | 0.050 | 0.036 | 1.36 | 0.172 | -0.022 | 0.121 |  |
| Constant | -0.631 | 0.446 | -1.42 | 0.157 | -1.505 | 0.243 |  |
|  |
| Mean dependent var | 0.055 | SD dependent var  | 0.157 |
| Overall r-squared  | 0.199 | Number of obs  | 210.000 |
| Chi-square  | 24.090 | Prob > chi2  | 0.007 |
| R-squared within | 0.008 | R-squared between | 0.368 |
|  |

| ***Panel C: Social Information Category*** |
| --- |
| **GRI\_SOC** | **Coef.** | **St.Err.** | **t-value** | **p-value** | **[95% Conf** | **Interval]** | **Sig** |
| BLAU\_GENDER | 0.193 | 0.067 | 2.87 | 0.004 | 0.061 | 0.325 | \*\*\* |
| BLAU\_NAT | -0.138 | 0.098 | -1.41 | 0.157 | -0.330 | 0.053 |  |
| BLAU\_AGE | 0.108 | 0.048 | 2.27 | 0.023 | 0.015 | 0.202 | \*\* |
| BLAU\_EDU | 0.077 | 0.043 | -1.79 | 0.074 | -0.161 | 0.007 | \* |
| FOR | 0.137 | 0.072 | 1.91 | 0.056 | -0.004 | 0.279 | \* |
| FAM | 0.085 | 0.081 | 1.05 | 0.292 | -0.073 | 0.244 |  |
| GOV | 0.273 | 0.101 | 2.70 | 0.007 | 0.075 | 0.471 | \*\*\* |
| BOARDSIZE | -0.015 | 0.007 | -2.20 | 0.028 | -0.028 | -0.002 | \*\* |
| ROA | -0.247 | 0.379 | -0.65 | 0.514 | -0.990 | 0.495 |  |
| SIZE | 0.214 | 0.031 | 6.80 | 0.000 | 0.152 | 0.276 | \*\*\* |
| Constant | -2.810 | 0.395 | -7.11 | 0.000 | -3.585 | -2.036 | \*\*\* |
|  |
| Mean dependent var | 0.132 | SD dependent var  | 0.219 |
| Overall r-squared  | 0.654 | Number of obs  | 210.000 |
| Chi-square  | 130.155 | Prob > chi2  | 0.000 |
| R-squared within | 0.142 | R-squared between | 0.723 |
|  |
| *\*\*\* p<0.01, \*\* p<0.05, \* p<0.1* |

**Discussion**

*Board's gender diversity and sustainability reporting*

 The study finds that board’s gender diversity exhibits positive effect on sustainability reporting. Men’s presence in the board is important to direct the company to keep improving in business while the existence of women in the board can be expected to increase the level of sensitivity towards various external business issues (Manner, 2010). This can extend up to covering sustainability issues (Prabowo et al., 2017; Huang, 2013; Manner, 2010) and thus improve the practice of sustainability reporting. A top management with more diverse gender and the involvement of women will support the implementation of business strategies that support corporate sustainability (Huang, 2013). This kind of a board will put significant attention on sustainability reporting in the company. In practice, the circumstances will contribute to improving the environmental, social, and governance aspect (Arayssi et al., 2020). The explanation above is in line with the empirical findings by Orazalin (2019) who states that a large percentage of women on board has a positive relationship with corporate social responsibility. In this regard, the concern about real sustainability issues have an important role in increasing the disclosure of sustainability information and thus the quality of sustainability report increases.

*Board's national diversity and sustainability reporting*

 The study overall finds no significant effect of board’s nationality diversity on sustainability reporting in Indonesian listed banks. In regard with this insignificant result, the nationality diversity in Indonesian board is indeed still considerably low following the result presented in the descriptive statistics. Further, the existence of foreigners on board does not increase the possibility for the firm to engage more in the activities related to sustainability report (Huang, 2013). Thus, the companies are more shareholder-centric and focus more on strong investor protection mechanisms and widespread recognition of companies so that the circumstances possibly ultimately reduce CSR involvement (Kang et al, 2019). Furthermore, even if there are board members with foreign nationality, it is also important to consider their country of origin. In fact, most of the foreign board members in the banking industry in Indonesia, especially in this research samples, also come from developing countries and are dominated by other Asian countries (Amidjaya & Widagdo, 2019). Thus, the mindset and views on sustainability are not much different from people in developing countries (Sumarta et al., 2021a).

*Board's age diversity and sustainability reporting*

 We find that board’s age diversity does not affect sustainability reporting in Indonesian listed banks. The insignificant result may be the consequences of the fact that the board members in Indonesian companies are still dominated with older board members (Suhardjanto et al., 2017). Here, the presence of younger board members is still considerably low. As a result, the circumstances make the practice of sustainability reporting still limited. Indeed, the older board members tend to be more ethical than the younger ones (Godos-Díez et al., 2011; Shahab et al., 2019; Zhang et al., 2018) and may support the intention from various stakeholders to practice sustainability reporting. However, the older board members tend to possess only the basic and general ideas of sustainability reporting and still have fewer practical insights about sustainability reporting as one of contemporary business practices that arises highly for the past decade. Thus, the existence of younger board members is needed as they will enrich the insights on sustainability reporting practice. It will extend the sustainability activities to broader area so that the coverage is higher. Further, it will be followed with higher level of disclosure so that sustainability report quality will also be increased.

*Board's education diversity and sustainability reporting*

 The study also evidences no significant effect of board’s education diversity on sustainability reporting in Indonesian listed banks. Indeed, the level of education diversity in Indonesian banks’ board members are quite low in which they are dominated with economics and business studies. The result is in line with Sumarta et al. (2021a) who finds no significant effect of the educational background of director in determining corporate CSR disclosure practices where the justification of educational background in the context of developed countries may not be fully applicable in developing countries. Furthermore, Prabowo et al. (2017) find that educational backgrounds in economics, business, and accounting exhibit no significant effect on corporate CSR disclosures in the banking industry in Indonesia. Educational background from both science and social sciences may not motivate board members to contribute more to sustainability issues. Huang (2013) also finds no significant relationship between education and corporate CSR information disclosure. Although many universities have paid attention to environmental issues to promote sustainable development and increase students' awareness of the issue, there is no guarantee that it will change student behavior. In fact, there is a tendency that education in business schools may still prioritize individualistic interests which emphasize efforts to maximize profits without respecting social responsibility (Alajoutsijärvi et al., 2015).

**Conclusion**

 This study investigates the effect of board diversity and ownership structure on sustainability reporting in Indonesian listed banks. We use secondary data from banks' annual and sustainability report from 2014-2018, analyzed with panel data regression. We find that the implementation of sustainability reporting in Indonesian listed banks has not experienced significant improvement since the issuance of sustainable finance roadmap in 2014. Our empirical analysis result demonstrates that board’s gender diversity, foreign ownership, and government ownership have positive effect on sustainability reporting. Meanwhile, board’s nationality, age, and education diversity provide no significant effect. The study also provides an implication for sustainability reporting practice in Indonesia, specifically in the banking industry. The study suggests that it is quite urgent to improve the implementation of sustainability reporting in Indonesian banks, especially considering that this sector is appointed as the leading sector. This surely requires a large contribution from the firms as reporting entities and the OJK as business regulators.

Following the results of the study, firms should pay attention to the diversity of the board, especially when the level of board diversity is still low. Higher diversity can enrich the vision of the firm for better sustainability through strategic planning in various aspects. Therefore, the companies can benefit from corporate board diversity to improve the sustainability related activities, including sustainability reporting. The OJK as the business regulator can also promote higher level of board diversity in the firms to gain the positive impact and maximize the role of the board considering that the level of board diversity is still quite low in several aspects. OJK should also keep encouraging the business owners and the public to pay attention to sustainability so that the demand for sustainability reporting increases. OJK should increase the enforcement of POJK 51 implementation that relates to bank ownership such as ensuring that mandatory sustainability reporting for foreign banks and banks with larger asset classification practice. Harmonization of sustainability reporting regulation should also be considered to improve sustainability reporting practice (Afolabi et al., 2022). In regards with the future studies in this topic, future researchers can improve the study by employing mixed method by combining quantitative and qualitative analyses to enrich the findings. It will also be interesting to extend the coverage of the study to multi-countries context if the data are available.

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