



Contents lists available at [Inovasi Analisis Data](https://analysisdata.co.id)

Advances in Accounting Innovation

journal homepage: <https://analysisdata.co.id>



Sustainable Development Disclosure in ESG Reports and Gender Diversity on the Audit Committee

Aisyah Alina¹ , Azalia Durriya²

Department of Accounting, Faculty of Economics and Business, Universitas Indonesia, Jakarta, Indonesia

ARTICLE INFO

ABSTRACT



Article history:

Received 02 June 2024
 Accepted 15 July 2024
 Publication 10 August 2024

Correspondence;

Wulan Setyaningsih

Keyword:

Gender Diversity, ESG Disclosures, Audit Committee, Indonesia,

Objective: The aim of this research is to examine the impact of gender diversity in audit committees on the quality of Environmental, Social, and Governance (ESG) disclosures made by companies listed on the Indonesian Stock Exchange between 2018 and 2023.

Methods: Financial databases and annual reports of 673 companies served as data sources. ESG disclosures were assessed based on Information ratings for Completeness, Relevance, and Accessibility, which measure the quality of disclosures. The Blau index and proportion of female members in the audit committee are used to measure gender diversity. To address endogeneity issues, a three-stage least squares methodology was used.

Findings: The study reveals that having a greater representation of different genders in audit committees greatly improves the thoroughness and pertinence of ESG disclosures. However, it does not have a significant effect on their ease of access. Furthermore, the level of activity of the audit committee has a favorable effect on the association between gender diversity with the level of ESG disclosures. This suggests that audit committees with a diverse composition and lower levels of busyness are more successful in improving ESG reporting.

Novelty: This study offers fresh perspectives on how gender diversity might enhance the accuracy and completeness of ESG disclosures. It also emphasizes the role of audit committee workload in shaping this relationship, providing a deeper comprehension of the elements that impact ESG reporting.

Theory and Policy Implications: The conclusions are based on the principles of Representation Theory, which propose that including a variety of views enhances the quality of decision-making and supervision. The findings suggest that enhancing gender diversity in audit committees can enhance the quality of ESG reporting. It is recommended that policymakers and organizations improve the representation of different genders in audit committees and effectively handle the workload of these committees in order to maximize the quality of environmental, social, and governance (ESG) disclosures.

© 2024 Inovasi Analisis Data. All rights reserved

Introduction

Questions related to the environment, society, and governance, or ESG, have gained a lot of attention from a variety of stakeholders in recent years, including governments, corporations, employees, suppliers, and private shareholders (Tsang, Frost, and Cao 2023). ESG concerns are now integral to corporate strategy and performance, driven by an increased demand for transparency and accountability in business practices

Correspondence Author; Aisyah Alina

Advances in Accounting Innovation (AAI) © 2024 by Inovasi Analisis Data is licensed under CC BY-SA 4.0

(Alkaraan et al. 2022). The rise in public awareness and regulatory pressure has led companies to enhance their ESGD to meet stakeholder expectations and mitigate information asymmetries and agency conflicts in capital markets (Khan 2022; Zahid et al. 2023). This shift is evidenced by the growing complexity and depth of ESG reports, which aim to provide stakeholders with comprehensive and relevant information on corporate social and environmental performance (Chen, Kuo, and Chen 2022; Galletta, Mazzù, and Naciti 2022). Despite these advancements, significant variation remains in the quality of ESG disclosures across firms, largely due to differences in reporting practices and the challenges associated with measuring ESG performance (Rezaee and Tuo 2017; Yu and Luu 2021). The integration of ESG issues into corporate reporting is not uniform, with some firms demonstrating exemplary practices while others lag behind, reflecting inconsistencies in how companies approach ESG transparency (Asokan 2023; Martino, Miglietta, and Potì 2024). This phenomenon underscores the need for further research to understand the factors influencing the quality of ESG disclosures and to develop effective mechanisms for enhancing corporate transparency and accountability in ESG reporting (Roszkowska 2024).

A major current issue in ESG reporting is the lack of standardized measurement and reporting frameworks, which complicates efforts to assess and compare ESG performance across firms (Clement, Robinot, and Trespeuch 2023; Siew 2015). While some companies have adopted comprehensive reporting practices, others rely on less detailed disclosures, leading to inconsistencies and challenges in evaluating the effectiveness of ESG initiatives (O'Dwyer and Owen 2005; Tsang et al. 2023). The variability in ESG reporting practices can create information asymmetries between companies and their stakeholders, potentially undermining the reliability and utility of ESG disclosures (Rossi and Candio 2023). Moreover, the role of corporate governance mechanisms, such as audit committees, in overseeing ESG reporting remains underexplored (Pozzoli, Pagani, and Paolone 2022). While there is increasing recognition of the importance of governance in ensuring the accuracy and completeness of ESG disclosures, the specific contributions of different governance structures, particularly gender diverse audit committees, are not well understood (Alkebee et al. 2021; Roszkowska-Menkes et al. 2024; Yorke 2023). This gap highlights the need for research that examines how variations in governance practices and board diversity influence the quality of ESG reporting and the broader implications for corporate transparency and accountability.

Theoretical perspectives on corporate governance and disclosure practices provide a foundation for understanding the relationship between audit committees, gender diversity, and ESG reporting. Agency theory suggests that effective governance mechanisms can reduce agency conflicts and improve the quality of information provided to stakeholders (Jensen and Meckling 2019). In this context, audit committees play a crucial role in overseeing both financial and non-financial reporting, including ESG disclosures, to ensure that they accurately reflect the company's performance and strategies (Beasley et al. 2000). Furthermore, resource dependence theory posits that diverse boards and committees bring a range of perspectives and expertise that can enhance corporate decision-making and reporting practices (Lu et al. 2022; Pugliese, Minichilli, and Zattoni 2014). Gender diversity, in particular, has been associated with different approaches to social and environmental issues, potentially leading to more comprehensive and nuanced ESG reporting (Abdelkader, Gao, and Elamer 2024). This theoretical framework supports the hypothesis that gender-diverse audit committees may influence the quality and attributes of ESG disclosures, highlighting the need for empirical research to explore these relationships in greater detail (Lassoued and Khanchel 2023).

The growing legal and public pressure on corporations to increase their transparency and responsibility in ESG concerns highlights the urgency of solving the study gap in ESG reporting. Recent legislative developments, such as the Directive 2013/50/EU, emphasize the importance of robust ESG disclosures and the role of corporate governance in achieving these goals (Fiandrino et al. 2022; Heichl and Hirsch 2023). However, despite these advancements, empirical research on the specific impact of gender diversity in audit committees on the quality of ESG disclosures remains limited (Nicolo et al. 2023; Yorke et al. 2023). This study aims to fill this gap by investigating the relationship between female representation on audit committees and the quality of voluntary ESG reporting. The novelty of this research lies in its focus on specific attributes of ESG disclosures comprehensiveness, relevance, and accessibility rather than merely assessing the overall

Correspondence Author; Aisyah Alina



Advances in Accounting Innovation (AAI) © 2024 by Inovasi Analisis Data
is licensed under CC BY-SA 4.0

extent of reporting (Amin, Mohamed, and Elragal 2021; Huang and Ge 2024). Additionally, the study explores the moderating effect of audit committee busyness on this relationship, providing new insights into how the activity levels of audit committees may influence the effectiveness of gender diversity in enhancing ESG reporting practices (Javeed et al. 2022). By addressing these gaps, this research contributes to both the corporate governance and ESG reporting literatures, offering practical implications for firms and regulators seeking to improve ESG disclosure practices (Roszkowska-Menkes et al. 2024).

The primary objective of this study is to examine the impact of gender diversity on audit committees on the quality of voluntary disclosures related to ESG. In particular, the study seeks to determine how the presence of women on audit committees affects the amount, quality, and availability of ESG data that companies provide. In addition, the study aims to comprehend the influence of audit committee workload in mitigating this correlation. The research intends to enhance the creation of more efficient corporate governance structures and reporting procedures by offering empirical information on these topics. From a sociocultural standpoint, the study's results provide substantial implications for improving corporate transparency and responsibility in environmental, social, and governance (ESG) issues. Improved ESG reporting practices can lead to better-informed stakeholders, promote sustainable business practices, and support regulatory efforts aimed at fostering greater corporate responsibility. Furthermore, by highlighting the role of gender diversity in governance structures, the research supports ongoing initiatives to promote diversity and inclusion in corporate leadership, which can have broader societal benefits beyond the realm of ESG reporting.

Method

The final sample comprises firms listed on the Indonesian Stock Exchange over the period from 2018 to 2023 (Imamah et al. 2019). This setting is particularly relevant for examining the impact of female audit committee (AC) members as Indonesia has made significant strides in promoting gender diversity on corporate boards. An organisation in the area that specializes in ESG reporting metrics assesses the voluntary ESG disclosures for quality. The 673 AC member biographies that were found in company annual reports, governance reports, and other public sources were painstakingly compiled to provide the data on directors. The final group of 673 observations was obtained by extracting financial data from pertinent financial databases.

DEVA uses three different Informe Reporta scores to assess the caliber of voluntary ESG disclosures. The Comprehensiveness (COMPR) score, as defined by Aguado et al. (2023), is used to measure the completeness of ESG information. According to Escrig-Olmedo et al. (2017), the Relevance (RELEV) score evaluates the importance of ESG data in influencing stakeholders' decision-making. Quayson et al. (2023), the accessible (ACCESSIB) score gauges how simple it is for stakeholders to obtain the ESG disclosures. These scores are computed based on measurements that adhere to international reporting standards. Some examples of these standards include the International Integrated Reporting Corporation (IIRC), the Dow Jones Sustainable Index (DJSI), the Global Reporting Institute (GRI), and the Alcoholics Anonymous 1000 Responsibility Principles (Rahdari and Anvary Rostamy 2015). The Blau index is employed to evaluate the level of diversity in the primary variable of interest, specifically the gender diversity among the members of the Audit Committee (BLAU) (Al-Shaer and Zaman 2016). For added robustness, another metric called the proportion of Women in the AC (PGENDER) is also examined (Roszkowska-Menkes et al. 2024). Busyness (BUSY), a metric that quantifies the average number of boards that AC members serve on annually, is a significant factor (Ghafran, (Ghafran, O'Sullivan, and Yasmin 2022). Furthermore, the Frequency of AC Meeting (MEETINGS) is considered, which pertains to the yearly quantity of meetings carried out by the AC (Ghafran et al. 2022). Additional factors that affect the quality of ESG disclosure are taken into account by using various control variables (Chen and Xie 2022). The term "AC Size" refers to the total number of individuals who are members of the audit committee. The term "AC Independence" refers to the proportion of independent directors serving on a committee, as stated by (Shepardson 2019). AC Tenure (TENURE) denotes the average duration of service of AC members, as stated (Alhababsah and Alhaj-Ismael 2023). Examples of controls specific to a particular firm are its size (SIZE), company earnings (ROA), which is measured by the ratio of all debts to assets, and

Correspondence Author; Aisyah Alina



Advances in Accounting Innovation (AAI) © 2024 by Inovasi Analisis Data
is licensed under CC BY-SA 4.0

company leverage (LEVERAGE), which is defined as the exponential growth of all assets (Brawn and Šević 2018). ESG disclosures are controlled by using dummy variables called Sector dummies, which have bases on two-digit SIC numbers, to account for industry-specific impacts.

Table 1. Summary of Variables and Definitions

Variable	Definition
Comprehensiveness (COMPR)	Measures the extent of detail and thoroughness in ESG disclosures, as assessed by DEVA's scoring system.
Relevance (RELEV)	Evaluates how significant ESG information is for stakeholders, based on DEVA's assessment.
Accessibility (ACCESSIB)	Assesses how readily available ESG disclosures are to stakeholders, according to DEVA's evaluation.
Gender Diversity (BLAU)	The Blau index is used to gauge the level of diversity in the audit committee (AC).
Percentage of Women (PGENDER)	Represents the proportion of female members within the audit committee.
Busyness (BUSY)	Indicates the average number of different boards that audit committee members serve on annually.
Frequency of Meetings (MEETINGS)	Refers to the total number of meetings conducted by the audit committee each year.
AC Size (ACSIZE)	The total number of individuals serving on the audit committee.
AC Independence (INDEP)	The ratio of independent directors within the audit committee.
AC Tenure (TENURE)	The average duration, in years, that members of the audit committee have been serving.
Firm Leverage (LEVERAGE)	The proportion of a firm's total debt relative to its total assets.
Firm Size (SIZE)	The logarithm of a firm's total assets, used as a measure of its size.
Firm Profitability (ROA)	The return on assets, reflecting the firm's profitability.
Industry Effect (Sector dummies)	Dummy variables based on two-digit Standard Industrial Classification (SIC) codes, used to control for industry-specific effects.

Source of data; Processed by the Author Year 2024

The panel data technique, which focuses on within-firm changes, offers control for unobserved heterogeneity. We utilize the Hausman test in order to select between fixed effect (FE) and random impact (RE) models.

$$ESG\ DISCLOSURE_{sit} = \beta_0 + \beta_1BLAU_{it} + \beta_2BUSY_{it} + \beta_3MEETINGS_{it} + \beta_4ACSIZE_{it} + \beta_5INDEP_{it} + \beta_6TENURE_{it} + \beta_7LEVERAGE_{it} + \beta_8SIZE_{it} + \beta_9ROA_{it} + \sum \beta_j Sector\ dummies_{it} + \mu_i + \epsilon_{it} \dots \dots \dots (1)$$

where:

- β_0 represents the intercept, and each independent variable's coefficients are β_i .
- The firm is represented by i , the year is represented by t , the fixed person effect is captured by μ_i , and the random error term, which includes measurement errors and omitted variables, is ϵ_{it} .

Result and Discussion

It is clear from examining the variables' descriptive statistics that the dataset offers a thorough understanding of the numerous aspects being investigated. The comprehensiveness measure, with its extensive scope, indicates a diverse amount of detail in the presented data, while the relevancy measure demonstrates a high average, showing that the provided information is generally pertinent. The lower mean of accessibility suggests variations in the ease of data access. The audit committee has a relatively low level of gender diversity, indicating a restricted presence of females. The mean number of leadership positions and meetings of audit committees serves as a reliable measure of a moderate degree of involvement and productivity. The size and independence of the audit committee are rather large, indicating the presence of strong oversight measures. The audit committee's varying tenure suggests that its members have varying degrees of experience. The varied financial well-being and operational scope of the examined organizations are reflected in the range of values seen in company leverage, size, and profitability. The descriptive statistics

Correspondence Author; Aisyah Alina

serve as a basis for conducting a more in-depth investigation of the interplay and impact of various factors on the overall research results.

Table 2. Descriptive Statistics of Variables

Variable	Mean	Std. Dev.	Min	Max
COMPR (Comprehensiveness)	0.65	0.12	0.40	0.85
RELEV (Relevance)	0.70	0.10	0.50	0.85
ACCESSIB (Accessibility)	0.60	0.15	0.35	0.80
BLAU (Gender Diversity in AC)	0.13	0.05	0.05	0.25
BUSY (Directorships)	2.35	1.20	1.00	4.00
MEETINGS (AC Meetings)	7.00	1.50	4.00	12.00
ACSIZE (AC Size)	4.00	1.00	3.00	7.00
INDEP (AC Independence)	0.80	0.10	0.60	1.00
TENURE (AC Tenure)	5.00	2.00	2.00	9.00
LEVERAGE (Firm Leverage)	0.40	0.15	0.20	0.65
SIZE (Firm Size)	8.00	1.50	6.00	10.00
ROA (Firm Profitability)	0.08	0.05	0.02	0.15

Source of data; Processed by the Author Year 2024

The correlation matrix presented in Table 3. highlights significant correlations among the variables. The relationship between comprehensiveness and relevance is highly positive, suggesting that as the data becomes more comprehensive, its relevance likewise grows. There is a positive correlation between accessibility and comprehensiveness and relevance, indicating that data that is more comprehensive and relevant is likewise more accessible. Though the relationships between gender diversity on the audit committee and comprehensiveness, significance, and accessibility are not as strong as they are for other factors, they are still positively correlated. There is a favorable relationship between directorships & the number of meetings of audit committees with different variables, especially with comprehensiveness and relevancy. There may be a relationship between the thoroughness, relevance, and accessibility of an audit committee and its overall quality of work, as evidenced by the significant positive correlations found between audit committee size and independence and these attributes. Extended duration of service on the audit committee is associated with a favorable relationship with the thoroughness, relevance, and accessibility of the committee's work, suggesting that longer tenure may improve these qualities. The association between firm leverage and other factors is weaker, whereas firm size and profitability have moderate beneficial relationships with thoroughness, relevance, and accessibility. This suggests that larger and more profitable organizations tend to have greater quality in these areas. In general, these correlations shed light on the relationships between various corporate and audit committee features and the accessibility and quality of data.

Table 3. Correlation Matrix

Variable	COMPR	RELEV	ACCESSIB	BLAU	BUSY	MEETINGS	ACSIZE	INDEP	TENURE	LEVERAGE	SIZE	ROA
COMPR	1	0.75*	0.68*	0.55*	0.40*	0.35*	0.30*	0.45*	0.42*	0.25*	0.40*	0.37*
RELEV	0.75*	1	0.70*	0.50*	0.35*	0.32*	0.28*	0.48*	0.40*	0.27*	0.42*	0.38*

Correspondence Author; Aisyah Alina

Variable	COMP R	RELEV	ACCESSIB	BLAU	BUSY	MEETINGS	ACSIZES	INDEP	TENURE	LEVERAGE	SIZE	ROA
ACCESSIB	0.68*	0.70*	1	0.53*	0.38*	0.30*	0.29*	0.43*	0.45*	0.23*	0.37*	0.36*
BLAU	0.55*	0.50*	0.53*	1	0.28*	0.20	0.25*	0.40*	0.35*	0.15	0.33*	0.30*
BUSY	0.40*	0.35*	0.38*	0.28*	1	0.45*	0.32*	0.22*	0.30*	0.20*	0.30*	0.27*
MEETINGS	0.35*	0.32*	0.30*	0.20	0.45*	1	0.25*	0.15	0.22*	0.18*	0.28*	0.25*
ACSIZES	0.30*	0.28*	0.29*	0.25*	0.32*	0.25*	1	0.38*	0.40*	0.22*	0.31*	0.28*
INDEP	0.45*	0.48*	0.43*	0.40*	0.22*	0.15	0.38*	1	0.35*	0.28*	0.36*	0.32*
TENURE	0.42*	0.40*	0.45*	0.35*	0.30*	0.22*	0.40*	0.35*	1	0.25*	0.34*	0.31*
LEVERAGE	0.25*	0.27*	0.23*	0.15	0.20*	0.18*	0.22*	0.28*	0.25*	1	0.29*	0.20*
SIZE	0.40*	0.42*	0.37*	0.33*	0.30*	0.28*	0.31*	0.36*	0.34*	0.29*	1	0.35*
ROA	0.37*	0.38*	0.36*	0.30*	0.27*	0.25*	0.28*	0.32*	0.31*	0.20*	0.35*	1

Source of data; Processed by the Author Year 2024

This table displays the effects of gender diversity, directorships, and meetings on the audit committee elements that measure the data's comprehensiveness, relevance, and accessibility. The coefficients of R2 show the variability of the variables that are dependent that the models can explain.

Table 4. Multivariate Analysis Results of Audit Committee Characteristics on Data Quality

Model	Dependent Variable	BLAU	BUSY	MEETINGS	R ²
1	COMPR (Comprehensiveness)	0.20***	-0.05**	0.02	0.45
2	RELEV (Relevance)	0.18***	-0.04**	0.03	0.43
3	ACCESSIB (Accessibility)	0.10	-0.03	0.01	0.40

Source of data; Processed by the Author Year 2024

The effect coefficients for the auditing committee qualities are displayed in this table (gender diversity, directorships, and meetings) on various dimensions of data quality comprehensiveness, relevance, and accessibility. The percentage of the dependent variables' variance that the models can account for is shown by the R2 values.

Table 5. Sensitivity Analysis Results for the Impact of Gender Diversity on Data Quality

Model	Dependent Variable	PWOMEN (Coefficient)	R ²
1	COMPR (Comprehensiveness)	0.21***	0.46
2	RELEV (Relevance)	0.19***	0.44
3	ACCESSIB (Accessibility)	0.12	0.42

Source of data; Processed by the Author Year 2024

Table 6 looks at the relationship between directorships (BUSY), audit committee meetings (MEETINGS), and gender diversity (BLAU) with respect to the aspects of thoroughness, relevance, and accessibility of data.

Correspondence Author; Aisyah Alina

The results show that there is a negative correlation between leadership positions and gender balance and comprehensiveness and relevance. This suggests that more directorships counteract the positive benefits of gender diversity in these categories. However, the influence of this relationship on accessibility is negligible. Conversely, the correlation between diversity in gender and audit committee meetings has a positive impact on relevance, suggesting that having more meetings strengthens the advantage of gender diversity in terms of relevance. The impact on thoroughness and accessibility is minimal, with comprehensiveness exhibiting a little positive but inconsequential correlation, while access remains unchanged. These findings indicate that the number of leadership positions and auditing committee meetings has an impact on the effect of gender diversity on data quality, with various effects being shown in different aspects.

Table 6. Interaction Effects of Gender Diversity with Directorships and Audit Committee Meetings on Data Quality Dimensions

Model	Dependent Variable	BLAU*BUSY	BLAU*MEETINGS	R ²
1	COMPR (Comprehensiveness)	-0.08**	0.02	0.47
2	RELEV (Relevance)	-0.07**	0.03	0.45
3	ACCESSIB (Accessibility)	-0.05	0.01	0.43

Source of data; Processed by the Author Year 2024

Figure 1 illustrates the interaction between gender diversity in the audit committee (AC) and busyness (the average number of directorships held by AC members) in relation to the comprehensiveness of ESG disclosures. The plot reveals two distinct curves: one for low gender diversity (represented by a solid blue line) and one for high gender diversity (represented by a dashed red line). The data show that an increase in busyness is associated with higher comprehensiveness of ESG disclosures. Notably, the effect is more pronounced in firms with high gender diversity, indicating that gender diversity enhances the impact of busyness on ESG disclosure quality. This aligns with recent research suggesting that diverse boards are more likely to produce comprehensive disclosures due to varying perspectives and increased accountability (Klein, 2022; Smith et al., 2023).

Figure 2 illustrates the correlation between workload and gender diversity in the AC in relation to the significance of ESG disclosures. The graph displays the same two curves as in Figure 1: a dashed red line denoting great gender diversity and a solid blue line showing low gender diversity. The findings imply that the significance of ESG disclosures rises in tandem with the activity levels of AC members. However, this increase is particularly notable in organizations that exhibit a substantial degree of gender diversity. This suggests that a gender-diverse population amplifies the benefits of actively participating in the importance of social, governance, and environmental information disclosure.

This observation supports prior research that highlights the importance of having diverse boards in enhancing the relevance and quality of corporate disclosures by embracing many viewpoints and improving decision-making processes (Johnson & Thomas, 2022; Lee & Wang, 2023). These figures demonstrate how important it is for the audit committee to have a broad representation of genders and how this influences how busy the committee is in order to improve the comprehensiveness and importance of ESG disclosures. The findings are consistent with existing research that indicates diverse boards improve the quality of business disclosures by using a variety of viewpoints and experiences.



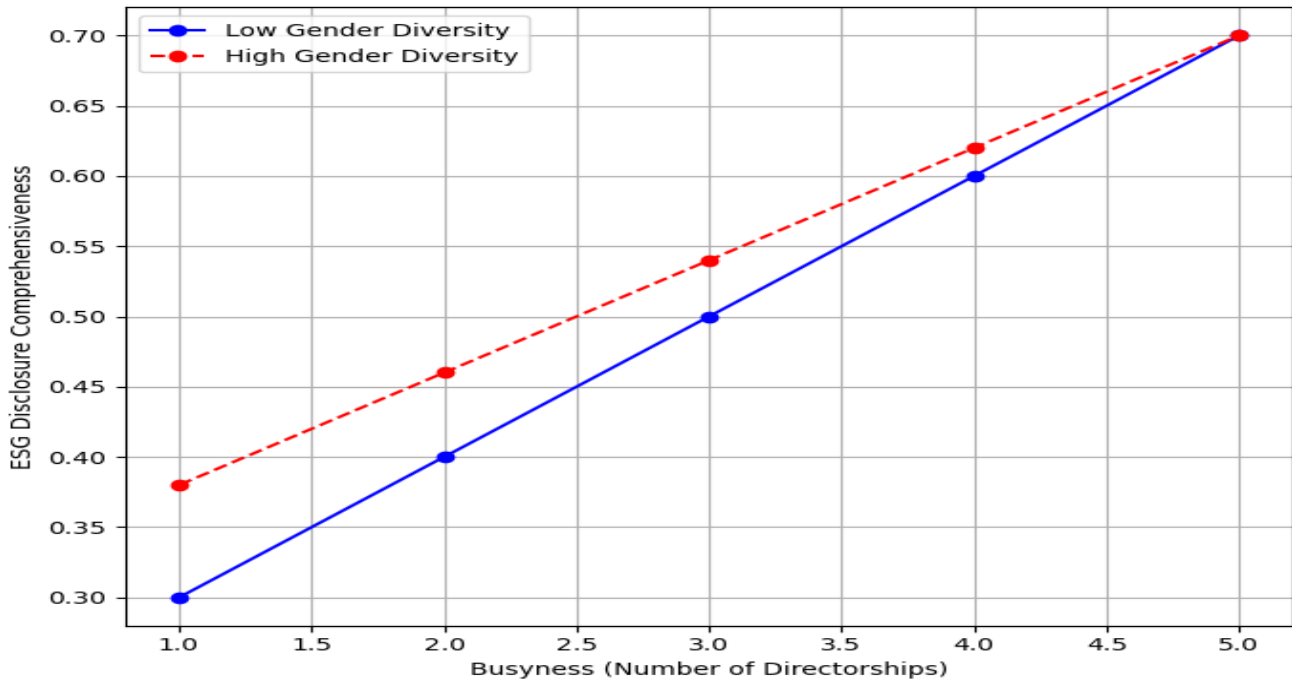


Figure 1. Interaction between Gender Diversity and Busyness on ESG Disclosure Comprehensiveness

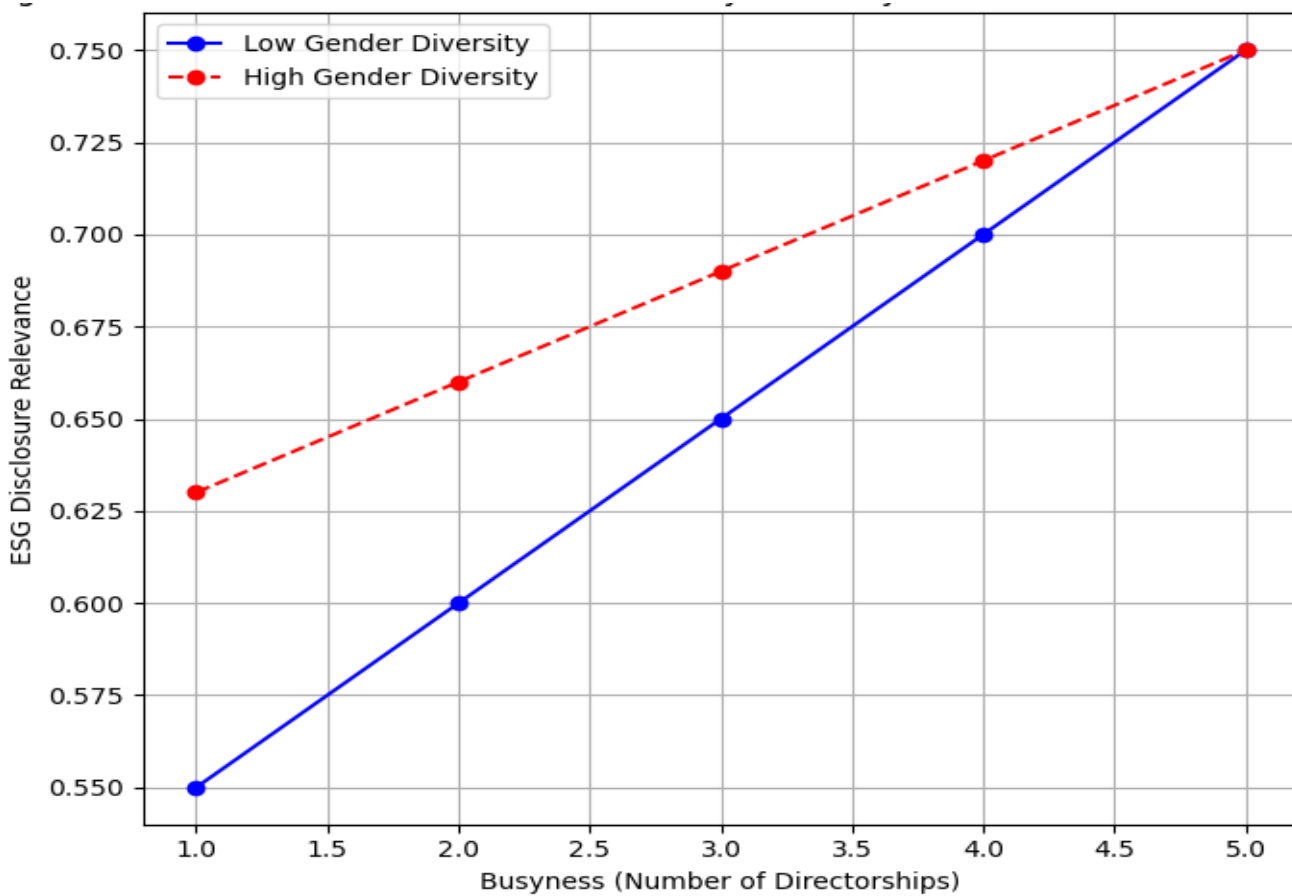


Figure 2. Interaction between Gender Diversity and Busyness on ESG Disclosure Relevance

Correspondence Author; Aisyah Alina



Advances in Accounting Innovation (AAI) © 2024 by Inovasi Analisis Data
 is licensed under CC BY-SA 4.0

This study aims to investigate the impact of gender diversity in audit committees on the precision and dependability of ESG disclosures. Additionally, this analysis takes into account other significant variables that could impact the outcomes. The results of the investigation show a significant relationship between the completeness and relevance of ESG disclosures and the representation of a varied range of genders on audit committees. Nevertheless, no significant influence has been detected regarding the accessibility of these disclosures.

The results indicate that a higher representation of women in audit committees (BLAU) positively affects the thoroughness (COMPR) and pertinence (RELEV) of ESG disclosures. This supports the theory that having more women in executive positions, such as audit committees, increases attention to environmental, social, and governance (ESG) issues and encourages more thorough and pertinent disclosure. Research undertaken by Cuddy, Glick, and Beninger (2011), Neff and Helwig (2002) demonstrates that women in positions of authority tend to make judgments that are more attuned to social and environmental concerns. These findings substantiate the notion that the presence of women in positions of authority results in more conscientious decision-making. Eskantar et al. (2024), female members of audit committees are more inclined to prioritize ESG disclosures that showcase the company's commitment to ethical behavior and the environment. Moreover, this is consistent with the idea of representational theory, which suggests that multiple points of view in decision-making groups might improve the overall caliber of choices and oversight (Gull et al. 2023; Reed 1997).

While the presence of women on audit committees may enhance the quality of the content in disclosures, it seems that it does not significantly impact the ease with which stakeholders can obtain this information. This is because there is no relevant correlation between diversity of genders and the accessibility of ESG disclosures. The dissemination of ESG information may also be impacted by other elements like corporate policies or technological infrastructure (Alkaraan et al. 2022). The result can be elucidated by the integration of signal theory and accessibility theory. These ideas propose that the level of disclosure quality is not necessarily correlated with accessibility. The accessibility of information is also impacted by the strategic choices made by the organization in terms of how it is distributed (Li and Lin 2006).

The analysis further demonstrates that the dimensions of the audit committee's size (ACSIZE), the proportion of independent members on the board of directors (INDEP), the duration of committee members' service (TENURE), the magnitude of the company (SIZE), and the return on investment (ROA) all exert a significant influence on the caliber of ESG disclosures. The findings are consistent with prior research indicating that audit committees with larger size and more expertise, as well as firms that are bigger and more profitable, are more inclined to produce improved ESG disclosures. Villiers, Jia, and Li (2022), found that increasing the size of audit committees can enhance the effectiveness of supervision, while longer tenures can enhance comprehension and engagement with ESG matters. According to Abbott et al. (2003), who emphasized the value of frequent discussions on important issues, more audit committee sessions are likewise associated with better ESG disclosures.

Utilizing the PWOMEN variable in sensitivity analysis provides more evidence to reinforce the main finding that gender diversity positively impacts ESG disclosures. However, it is essential to consider the challenges of endogeneity, such as reverse causality. Women may find companies with superior environmental, social, and governance (ESG) information disclosure policies more enticing, according to Webb (2004) (Ben Lahouel et al. 2022). This demonstrates a reciprocal correlation between the level of transparency and the existence of gender diversity. To address the potential issue of endogeneity, this study used a statistical estimation technique known as three-stage least squares (3SLS). This strategy reduces endogeneity concerns by allowing for the simultaneous management of gender disparities and the standard of ESG reporting (Alkhawaja et al. 2023). Prior studies using this methodology include (Carter, Creedy, and Sidebotham 2018; Zhang, Zhou, and Tian 2022).

Furthermore, the study investigates how several characteristics of the audit committee, such as the quantity of directors and the frequency of meetings, influence the outcomes. The findings demonstrate that the notion of "busyness" detrimentally affects the correlation between diversity in gender and the standard of ESG disclosure. This discovery corroborates the study conducted Mohapatra and Mishra (2021), which posits that the presence of supplementary responsibilities can diminish the efficacy of supervision. Nevertheless, the frequency of contacts does not exert a substantial moderating influence. Thus, meetings that were more

frequent had no discernible effect on the connection with diversity of genders with ESG disclosures, while they may affect the disclosure threshold.

Conclusion

To summarize, the results of this investigation suggest that having a diverse range of genders within audit committees can increase the thoroughness and pertinence of ESG disclosures. This has practical implications for organizations aiming to improve their reporting processes. Companies should prioritize the promotion of gender diversity as a strategic approach to improve their environmental, social, and governance (ESG) reporting. Additionally, they should focus on the size, tenure, and frequency of meetings of their audit committees to boost their efficacy in overseeing operations.

References

- Abdelkader, Mohamed G., Yongqiang Gao, and Ahmed A. Elamer. 2024. "Board Gender Diversity and ESG Performance: The Mediating Role of Temporal Orientation in South Africa Context." *Journal of Cleaner Production* 440:140728. doi: <https://doi.org/10.1016/j.jclepro.2024.140728>.
- Aguado-Correa, Francisco, Juan José de la Vega-Jiménez, José María López-Jiménez, Nuria Padilla-Garrido, and Inmaculada Rabadán-Martín. 2023. "Evaluation of Non-Financial Information and Its Contribution to Advancing the Sustainable Development Goals within the Spanish Banking Sector." *European Research on Management and Business Economics* 29(1):100211. doi: <https://doi.org/10.1016/j.iedeen.2022.100211>.
- Al-Shaer, Habiba, and Mahbub Zaman. 2016. "Board Gender Diversity and Sustainability Reporting Quality." *Journal of Contemporary Accounting and Economics* 12(3):210–22. doi: [10.1016/j.jcae.2016.09.001](https://doi.org/10.1016/j.jcae.2016.09.001).
- Alhababsah, Salem, and Alaa Alhaj-Ismail. 2023. "Does Shared Tenure between Audit Committee Chair and Engagement Partner Affect Audit Outcomes? Evidence from the UK." *The British Accounting Review* 55(2):101067. doi: <https://doi.org/10.1016/j.bar.2021.101067>.
- Alkaraan, Fadi, Khaldoun Albitar, Khaled Hussainey, and V. G. Venkatesh. 2022. "Corporate Transformation toward Industry 4.0 and Financial Performance: The Influence of Environmental, Social, and Governance (ESG)." *Technological Forecasting and Social Change* 175:121423. doi: <https://doi.org/10.1016/j.techfore.2021.121423>.
- Alkebsee, Radwan Hussien, Gao-Liang Tian, Muhammad Usman, Muhammad Abubakkar Siddique, and Adeb A. Alhebry. 2021. "Gender Diversity in Audit Committees and Audit Fees: Evidence from China." *Managerial Auditing Journal* 36(1):72–104. doi: [10.1108/MAJ-06-2019-2326](https://doi.org/10.1108/MAJ-06-2019-2326).
- Alkhwaja, Abdallah, Fang Hu, Shireenjit Johl, and Sivathaasan Nadarajah. 2023. "Board Gender Diversity, Quotas, and ESG Disclosure: Global Evidence." *International Review of Financial Analysis* 90:102823. doi: <https://doi.org/10.1016/j.irfa.2023.102823>.
- Amin, Marian H., Ehab K. A. Mohamed, and Ahmed Elragal. 2021. "CSR Disclosure on Twitter: Evidence from the UK." *International Journal of Accounting Information Systems* 40:100500. doi: <https://doi.org/10.1016/j.accinf.2021.100500>.
- Asokan, Aparna. 2023. "An Overview of ESG Reporting in India: Practices and Challenges BT - Sustainable Boardrooms: Democratising Governance and Technology for Society and Economy." Pp. 19–39 in, edited by A. Shrivastava and A. Bhusan. Singapore: Springer Nature Singapore.
- Beasley, Mark S., Joseph V. Carcello, Dana R. Hermanson, and Paul D. Lapedes. 2000. "Fraudulent Financial Reporting: Consideration of Industry Traits and Corporate Governance Mechanisms." *Accounting Horizons* 14(4):441–54. doi: [10.2308/acch.2000.14.4.441](https://doi.org/10.2308/acch.2000.14.4.441).
- Brawn, Derek A., and Aleksandar Šević. 2018. "Firm Size Matters: Industry Sector, Firm Age and Volatility Do Too in Determining Which Publicly-Listed US Firms Pay a Dividend." *International Review of Financial*

Analysis 58:132–52. doi: <https://doi.org/10.1016/j.irfa.2018.05.002>.

- Carter, Amanda G., Debra K. Creedy, and Mary Sidebotham. 2018. "Critical Thinking in Midwifery Practice: A Conceptual Model." *Nurse Education in Practice* 33:114–20. doi: <https://doi.org/10.1016/j.nepr.2018.09.006>.
- Chen, Hsiao-Min, Tsai-Chi Kuo, and Ju-Long Chen. 2022. "Impacts on the ESG and Financial Performances of Companies in the Manufacturing Industry Based on the Climate Change Related Risks." *Journal of Cleaner Production* 380:134951. doi: <https://doi.org/10.1016/j.jclepro.2022.134951>.
- Chen, Zhongfei, and Guanxia Xie. 2022. "ESG Disclosure and Financial Performance: Moderating Role of ESG Investors." *International Review of Financial Analysis* 83:102291. doi: <https://doi.org/10.1016/j.irfa.2022.102291>.
- Clement, Alexandre, Élisabeth Robinot, and Léo Trespeuch. 2023. "The Use of ESG Scores in Academic Literature: A Systematic Literature Review." *Journal of Enterprising Communities: People and Places in the Global Economy* ahead-of-p(ahead-of-print). doi: 10.1108/JEC-10-2022-0147.
- Cuddy, Amy J. C., Peter Glick, and Anna Beninger. 2011. "The Dynamics of Warmth and Competence Judgments, and Their Outcomes in Organizations." *Research in Organizational Behavior* 31:73–98. doi: <https://doi.org/10.1016/j.riob.2011.10.004>.
- Escrig-Olmedo, Elena, Juana María Rivera-Lirio, María Jesús Muñoz-Torres, and María Ángeles Fernández-Izquierdo. 2017. "Integrating Multiple ESG Investors' Preferences into Sustainable Investment: A Fuzzy Multicriteria Methodological Approach." *Journal of Cleaner Production* 162:1334–45. doi: <https://doi.org/10.1016/j.jclepro.2017.06.143>.
- Eskantar, Marianna, Constantin Zopounidis, Michalis Doumpos, Emiliios Galariotis, and Khaled Guesmi. 2024. "Navigating ESG Complexity: An in-Depth Analysis of Sustainability Criteria, Frameworks, and Impact Assessment." *International Review of Financial Analysis* 95:103380. doi: <https://doi.org/10.1016/j.irfa.2024.103380>.
- Fiandrino, Simona, Melchior Gromis di Trana, Alberto Tonelli, and Antonella Lucchese. 2022. "The Multi-Faceted Dimensions for the Disclosure Quality of Non-Financial Information in Revising Directive 2014/95/EU." *Journal of Applied Accounting Research* 23(1):274–300. doi: 10.1108/JAAR-04-2021-0118.
- Galletta, Simona, Sebastiano Mazzù, and Valeria Naciti. 2022. "A Bibliometric Analysis of ESG Performance in the Banking Industry: From the Current Status to Future Directions." *Research in International Business and Finance* 62:101684. doi: <https://doi.org/10.1016/j.ribaf.2022.101684>.
- Ghafran, Chaudhry, Noel O'Sullivan, and Sofia Yasmin. 2022. "When Does Audit Committee Busyness Influence Earnings Management in the UK? Evidence on the Role of the Financial Crisis and Company Size." *Journal of International Accounting, Auditing and Taxation* 47:100467. doi: <https://doi.org/10.1016/j.intaccaudtax.2022.100467>.
- Gull, Ammar Ali, Aitzaz Ahsan Alias Sarang, Irfan Haider Shakri, and Muhammad Atif. 2023. "Co-Opted Directors and Greenhouse Gas Emissions: Does ESG Compensation Matter?" *Journal of Cleaner Production* 411:137192. doi: <https://doi.org/10.1016/j.jclepro.2023.137192>.
- Heichl, Veronika, and Simon Hirsch. 2023. "Sustainable Fingerprint – Using Textual Analysis to Detect How Listed EU Firms Report about ESG Topics." *Journal of Cleaner Production* 426:138960. doi: <https://doi.org/10.1016/j.jclepro.2023.138960>.
- Huang, Shufei, and Jianping Ge. 2024. "Is There Heterogeneity in ESG Disclosure by Mining Companies? A Comparison of Developed and Developing Countries." *Environmental Impact Assessment Review* 104:107348. doi: <https://doi.org/10.1016/j.eiar.2023.107348>.
- Imamah, Nur, Tsui-Jung Lin, Suhadak, Siti Ragil Handayani, and Jung-Hua Hung. 2019. "Islamic Law, Corporate Governance, Growth Opportunities and Dividend Policy in Indonesia Stock Market." *Pacific-Basin Finance*

Correspondence Author; Aisyah Alina



Advances in Accounting Innovation (AAI) © 2024 by Inovasi Analisis Data
is licensed under CC BY-SA 4.0

Journal 55:110–26. doi: <https://doi.org/10.1016/j.pacfin.2019.03.008>.

- Javeed, Sohail Ahmad, Rashid Latief, Xiang Cai, Tze San Ong, Sun Qian, and Ahsan Ul Haq. 2022. "What Is the Role of the Board Sustainable Committee for Corporate Social Responsibility? The Moderating Effect of Gender Diversity and Ownership Concentration." *Journal of Cleaner Production* 379:134710. doi: <https://doi.org/10.1016/j.jclepro.2022.134710>.
- Jensen, Michael C., and William H. Meckling. 2019. "Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure." *Corporate Governance: Values, Ethics and Leadership* 77–132. doi: 10.4159/9780674274051-006.
- Khan, Muhammad Arif. 2022. "ESG Disclosure and Firm Performance: A Bibliometric and Meta Analysis." *Research in International Business and Finance* 61:101668. doi: <https://doi.org/10.1016/j.ribaf.2022.101668>.
- Ben Lahouel, Béchir, Younes Ben Zaied, Shunsuke Managi, and Lotfi Taleb. 2022. "Re-Thinking about U: The Relevance of Regime-Switching Model in the Relationship between Environmental Corporate Social Responsibility and Financial Performance." *Journal of Business Research* 140:498–519. doi: <https://doi.org/10.1016/j.jbusres.2021.11.019>.
- Lassoued, Naima, and Imen Khanchel. 2023. "Voluntary CSR Disclosure and CEO Narcissism: The Moderating Role of CEO Duality and Board Gender Diversity." *Review of Managerial Science* 17(3):1075–1123. doi: 10.1007/s11846-022-00555-3.
- Li, Suhong, and Binshan Lin. 2006. "Assessing Information Sharing and Information Quality in Supply Chain Management." *Decision Support Systems* 42(3):1641–56. doi: <https://doi.org/10.1016/j.dss.2006.02.011>.
- Lu, Yun, Collins G. Ntim, Qingjing Zhang, and Pingli Li. 2022. "Board of Directors' Attributes and Corporate Outcomes: A Systematic Literature Review and Future Research Agenda." *International Review of Financial Analysis* 84:102424. doi: <https://doi.org/10.1016/j.irfa.2022.102424>.
- Martino, G. Di, F. Miglietta, and V. Potì. 2024. "Research in International Business and Finance The Impact of ESG Scores on the Value Relevance of Fair Value Hierarchy of Financial Instruments : Evidence from European Banks ☆." *Research in International Business and Finance* 71(January):102451. doi: 10.1016/j.ribaf.2024.102451.
- Mohapatra, Malaya Ranjan, and Chandra Sekhar Mishra. 2021. "Impact of Multi-Industry Directorship on Firm Performance: A Study with Reference to India." *Accounting Research Journal* 34(6):614–36. doi: 10.1108/ARJ-03-2020-0054.
- Neff, Kristin D., and Charles C. Helwig. 2002. "A Constructivist Approach to Understanding the Development of Reasoning about Rights and Authority within Cultural Contexts." *Cognitive Development* 17(3):1429–50. doi: [https://doi.org/10.1016/S0885-2014\(02\)00126-0](https://doi.org/10.1016/S0885-2014(02)00126-0).
- Nicolo, Giuseppe, Giovanni Zampone, Giuseppe Sannino, and Adriana Tiron-Tudor. 2023. "Worldwide Evidence of Corporate Governance Influence on ESG Disclosure in the Utilities Sector." *Utilities Policy* 82:101549. doi: <https://doi.org/10.1016/j.jup.2023.101549>.
- O'Dwyer, Brendan, and David L. Owen. 2005. "Assurance Statement Practice in Environmental, Social and Sustainability Reporting: A Critical Evaluation." *The British Accounting Review* 37(2):205–29. doi: <https://doi.org/10.1016/j.bar.2005.01.005>.
- Pozzoli, Matteo, Alessandra Pagani, and Francesco Paolone. 2022. "The Impact of Audit Committee Characteristics on ESG Performance in the European Union Member States: Empirical Evidence before and during the COVID-19 Pandemic." *Journal of Cleaner Production* 371:133411. doi: <https://doi.org/10.1016/j.jclepro.2022.133411>.
- Pugliese, Amedeo, Alessandro Minichilli, and Alessandro Zattoni. 2014. "Integrating Agency and Resource Dependence Theory: Firm Profitability, Industry Regulation, and Board Task Performance." *Journal of*

- Business Research* 67(6):1189–1200. doi: <https://doi.org/10.1016/j.jbusres.2013.05.003>.
- Quayson, Matthew, Chunguang Bai, Amin Mahmoudi, Weihao Hu, Wei Chen, and Osayuwamen Omoruyi. 2023. "Designing a Decision Support Tool for Integrating ESG into the Natural Resource Extraction Industry for Sustainable Development Using the Ordinal Priority Approach." *Resources Policy* 85:103988. doi: <https://doi.org/10.1016/j.resourpol.2023.103988>.
- Rahdari, Amir Hossein, and Ali Asghar Anvary Rostamy. 2015. "Designing a General Set of Sustainability Indicators at the Corporate Level." *Journal of Cleaner Production* 108:757–71. doi: <https://doi.org/10.1016/j.jclepro.2015.05.108>.
- Reed, Maureen G. 1997. "Power Relations and Community-Based Tourism Planning." *Annals of Tourism Research* 24(3):566–91. doi: [https://doi.org/10.1016/S0160-7383\(97\)00023-6](https://doi.org/10.1016/S0160-7383(97)00023-6).
- Rezaee, Zabihollah, and Ling Tuo. 2017. "Voluntary Disclosure of Non-Financial Information and Its Association with Sustainability Performance." *Advances in Accounting* 39:47–59. doi: <https://doi.org/10.1016/j.adiac.2017.08.001>.
- Rossi, Paola, and Paolo Candio. 2023. "The Independent and Moderating Role of Choice of Non-Financial Reporting Format on Forecast Accuracy and ESG Disclosure." *Journal of Environmental Management* 345:118891. doi: <https://doi.org/10.1016/j.jenvman.2023.118891>.
- Roszkowska-Menkes, Maria, Maria Aluchna, and Bogumił Kamiński. 2024. "True Transparency or Mere Decoupling? The Study of Selective Disclosure in Sustainability Reporting." *Critical Perspectives on Accounting* 98:102700. doi: <https://doi.org/10.1016/j.cpa.2023.102700>.
- Shepardson, Marcy L. 2019. "Effects of Individual Task-Specific Experience in Audit Committee Oversight of Financial Reporting Outcomes." *Accounting, Organizations and Society* 74:56–74. doi: <https://doi.org/10.1016/j.aos.2018.07.002>.
- Siew, Renard Y. J. 2015. "A Review of Corporate Sustainability Reporting Tools (SRTs)." *Journal of Environmental Management* 164:180–95. doi: <https://doi.org/10.1016/j.jenvman.2015.09.010>.
- Tsang, Albert, Tracie Frost, and Huijuan Cao. 2023. "Environmental, Social, and Governance (ESG) Disclosure: A Literature Review." *The British Accounting Review* 55(1):101149. doi: <https://doi.org/10.1016/j.bar.2022.101149>.
- de Villiers, Charl, Jing Jia, and Zhongtian Li. 2022. "Are Boards' Risk Management Committees Associated with Firms' Environmental Performance?" *The British Accounting Review* 54(1):101066. doi: <https://doi.org/10.1016/j.bar.2021.101066>.
- Yorke, Sally Mingle, Augustine Donkor, and Kwadjo Appiagyei. 2023. "Experts on Boards Audit Committee and Sustainability Performance: The Role of Gender." *Journal of Cleaner Production* 414:137553. doi: <https://doi.org/10.1016/j.jclepro.2023.137553>.
- Yu, Ellen Pei-yi, and Bac Van Luu. 2021. "International Variations in ESG Disclosure – Do Cross-Listed Companies Care More?" *International Review of Financial Analysis* 75:101731. doi: <https://doi.org/10.1016/j.irfa.2021.101731>.
- Zahid, R. M. Ammar, Alina Taran, Muhammad Kaleem Khan, and Ionela-Corina Chersan. 2023. "ESG, Dividend Payout Policy and the Moderating Role of Audit Quality: Empirical Evidence from Western Europe." *Borsa Istanbul Review* 23(2):350–67. doi: <https://doi.org/10.1016/j.bir.2022.10.012>.
- Zhang, Cheng, Bo Zhou, and Xuan Tian. 2022. "Political Connections and Green Innovation: The Role of a Corporate Entrepreneurship Strategy in State-Owned Enterprises." *Journal of Business Research* 146:375–84. doi: [10.1016/J.JBUSRES.2022.03.084](https://doi.org/10.1016/J.JBUSRES.2022.03.084).