“Audit committee characteristics and environmental, social, and governance reporting quality: An analysis of top 100 JSE-listed corporations”

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ARTICLE INFO	Ruth Mutsa Ruziwa, Jean Damascene Mvunabandi and Bomi Cyril Nomlala (2025). Audit committee characteristics and environmental, social, and governance reporting quality: An analysis of top 100 JSE-listed corporations. *Accounting and Financial Control*, *6*(1), 38-52. doi:10.21511/afc.06(1).2025.04
DOI	http://dx.doi.org/10.21511/afc.06(1).2025.04
RELEASED ON	Friday, 08 August 2025
RECEIVED ON	Wednesday, 18 June 2025
ACCEPTED ON	Tuesday, 15 July 2025

JOURNAL	"Accounting and Financial Control"
ISSN PRINT	2543-5485
ISSN ONLINE	2544-1450
PUBLISHER	LLC “Consulting Publishing Company “Business Perspectives”
FOUNDER	Sp. z o.o. Kozmenko Science Publishing

NUMBER OF REFERENCES	NUMBER OF FIGURES	NUMBER OF TABLES
75	0	3

BUSINESS PERSPECTIVES

LLC "CPC "Business Perspectives"
Hryhorii Skovoroda lane, 10,
Sumy, 40022, Ukraine

www.businessperspectives.org

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AUDIT COMMITTEE CHARACTERISTICS AND ENVIRONMENTAL, SOCIAL, AND GOVERNANCE REPORTING QUALITY: AN ANALYSIS OF TOP 100 JSE-LISTED CORPORATIONS

Abstract

Audit committees are key in corporate reporting, ensuring credibility through internal controls, assurance processes, and risk management. This study examines the relationship between audit committee characteristics and Environmental, Social, and Governance reporting quality among the top 100 Johannesburg Stock Exchange-listed corporations. Using agency and legitimacy theories, the study analyzes how audit committees serve as mechanisms for lowering information asymmetries and attaining legitimacy through transparent Environmental, Social, and Governance reporting. It focuses on three audit committee attributes: independence, meeting frequency, and average age. Panel data regression models using Ernst & Young's Excellence in Integrated Reporting Awards were used. Data were obtained from the Bloomberg database spanning five years (2017–2021). The results reveal a significant positive correlation between Environmental, Social, and Governance reporting quality and audit committee independence (p-value < 0.05), but no significant relationship for meeting frequency or average age (p < 0.05). The findings highlight the importance of internal assurance in enhancing Environmental, Social, and Governance reporting, addressing stakeholder concerns on sustainability and corporate responsibility. The study contributes to the governance literature by offering actionable insights for firm managers and evidence that stronger audit committee independence enhances governance structures. This study underscores the need for policies that improve Environmental, Social, and Governance reporting quality and suggests further exploration of qualitative audit committee attributes influencing Environmental, Social, and Governance disclosures. It added to the ongoing debate examining the effect of audit committee characteristics on Environmental, Social, and Governance reporting quality in South Africa's context.

Keywords audit committee, governance, reporting quality, sustainability

JEL Classification M42, G34, M41, Q56

Type of the article: Research Article

Received on: 18th of June, 2025
Accepted on: 15th of July, 2025
Published on: 8th of August, 2025

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Conflict of interest statement:
Author(s) reported no conflict of interest

INTRODUCTION

Traditionally, financial results were an ideal metric to gauge overall company performance and make investment decisions (Muzanya, 2022). However, this perspective has shifted as investors and corporates increasingly acknowledge that climate change, poverty, and social injustices can materially impact businesses' overall performance (Diwan & Sreeraman, 2023). This realization has contributed to the rise of stakeholder capitalism, accompanied by stakeholder demand for Environmental, Social, and Governance (ESG) reporting. Stakeholders now expect businesses to demonstrate accountability for their broader environmental and social impact (Wang & Phillips-Fein, 2023).

http://dx.doi.org/10.21511/afc.06(1).2025.04

Recent events have further amplified this demand. The COVID-19 pandemic underscored the importance of business resilience in the face of supply chain disruptions, while also exposing the need to prioritise employee health and community wellbeing (Ndung'u, 2022; Neri, 2021). A survey by Ernst and Young (EY, 2022) found that, due to the COVID-19 pandemic, 90% of the investors who participated in the study had a vested interest in ESG performance. At the same time, widespread reporting failures and corporate scandals over the past two decades have led to growing scepticism about the reliability and usefulness of ESG disclosures (Dorfleitner et al., 2022; Pozzoli et al., 2022). In response, stakeholders have turned their attention to corporate governance mechanisms, particularly audit committees, as safeguards for transparency and integrity.

In the South African context, ESG reporting is heavily shaped by regulation. The Companies Act requires the appointment of independent audit committees. At the same time, the King IV Report on Corporate Governance (King IV) explicitly recommends that all audit committee members be independent and non-executive board members (IoDSA, 2016). These recommendations are mandatory for all Johannesburg Stock Exchange (JSE) – listed companies (JSE, 2022), positioning South Africa as a regulatory-driven ESG reporting environment. At the same time, mandatory ESG reporting does not automatically translate to improved ESG performance (Arvidsson & Dumay, 2022). Ernst & Young (2022) observed that more than 50% of JSE-listed companies provided ESG disclosures that lacked detail, coherence or forward-looking value propositions, thereby fueling stakeholder skepticism and risking reputational damage.

Despite these concerns, the role of audit committees in improving ESG reporting remains underexplored. Although prior studies have established audit committees as pillars of corporate governance (Pozzoli et al., 2022; Mohammed, 2023; Ma et al., 2024), few have examined their influence specifically on ESG disclosure quality. Most existing research has focused on integrated reporting quality more broadly (Haji & Anifowose, 2016; Chariri & Januarti, 2016), or concentrated on sectors such as banking (Buallay & Al-Ajmi, 2020) and non-financial firms (Fayad et al., 2024; Pernamasari & Chariri, 2024). Moreover, while some studies have explored audit committee attributes such as independence, meeting frequency, financial literacy and gender diversity (Buallay & AIDhaen, 2018; Arif et al., 2021; Matta et al., 2024), attributes such as average age remain relatively unexamined, particularly in the context of ESG reporting. Existing work has considered age primarily in relation to financial reporting quality (Sultana et al., 2019) and earnings management (Alhossini et al., 2021).

This study directly addresses these gaps in the literature, aiming to uncover the true impact of audit committee characteristics on the quality of ESG reporting by JSE-listed corporations, addressing stakeholder demand for credible ESG reporting, and ultimately enhancing the credibility of corporate reporting. Specifically, it examines whether audit committee independence, meeting frequency and average age influence the quality of ESG disclosures. This study draws on a five-year dataset (2017–2021) using EY's Excellence in Integrated Reporting awardees and adopting a multi-sectoral approach, thereby enhancing the generalizability of its findings.

By combining the agency and legitimacy theories, the study provides both economic and socio-political perspectives on how audit committees contribute to ESG reporting. This theoretical framework is particularly relevant in the South African context, where stakeholder skepticism of ESG reporting and compliance-driven disclosures underscores the need to reduce information asymmetry and demonstrate organizational legitimacy. The study contributes to the literature by offering empirical evidence on underexplored audit committee attributes and providing actionable insights for strengthening governance structures through improved ESG oversight.

1. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

1.1. Agency theory

The agency theory aims to mitigate issues arising from the agency relationship between the principal (shareholders) and agent (management) (Donkor et al., 2021). In terms of the agency theory, there tends to be discordant interests between management and shareholders, with the former potentially misusing the powers entrusted to them by the latter (Jensen & Meckling, 1976). The result is agency conflict. In this regard, the audit committee's monitoring and supervisory role is intended to protect shareholder interests and reduce agency costs (Raimo et al., 2021). Audit committees provide oversight of both financial and non-financial reporting processes, including assurance, thereby enhancing the quality of disclosures and minimizing information asymmetry.

Therefore, from an agency theory standpoint, the use of ESG reports aims to reduce information asymmetries and lessen conflicts between stakeholders and management (Qaderi et al., 2022). ESG reporting serves to enhance the standard of information accessible to providers of financial capital, such as equity and debt holders, as well as lenders and creditors (IIRC, 2021). Hence, these stakeholders are the principals who are concerned about the possibility that agents (management) may impede, vaguely represent, or misrepresent value creation (Wang et al., 2020). As a credibility-enhancing mechanism, audit committees help to ensure transparent disclosures and align the interests of management with those of stakeholders. This study argues that audit committee members are a crucial determinant of ESG reporting quality, whose role is to improve integrated reporting processes and reduce agency costs.

1.2. Legitimacy theory

The legitimacy theory suggests that, in order for organizations to be considered legitimate, they must conform to societal expectations, including values, standards, and laws (Beasley et al., 2009). From a legitimacy theory perspective, the use of corporate governance mechanisms can be genuine or undertaken as impression management (Velte, 2022). There is a risk that corporate governance mechanisms, including audit committees, are symbolic rather than aimed at attaining legitimacy and ensuring survival (Lakhani & Herbert, 2022). A similar view is shared by socio-political theories, which predict a negative association between the quality of non-financial disclosures and audit committees (Velte, 2018). Similarly, this study argues that audit committees' involvement in ESG reporting is aimed at achieving organizational legitimacy.

1.3. Environmental, Social, and Governance (ESG)

The term ESG was officially launched in 2004 by the United Nations (UN) in its report "Who Cares Wins" (Wan et al., 2023). The report encouraged organizations to enhance their ESG performance and clearly communicate their value drivers and related challenges (Pollman, 2022). It also encouraged regulators to formulate standards and regulatory frameworks to support businesses' integration of financial and ESG information (Gwalani & Mazumdar, 2022). This has led to the development of several ESG reporting frameworks, including the stakeholder-focused GRI standards, investor-oriented frameworks like SASB and IIRC, and some specifically targeting climate-related disclosures (Bose, 2020). While various ESG reporting frameworks allow entities to address the diverse information needs of users, the lack of a harmonized framework undermines the comparability of ESG disclosures, lowering their decision-usefulness (Davies et al., 2020). Efforts are therefore underway to converge ESG reporting frameworks and standards

In 2021, the IIRC merged with the SASB to form the Value Reporting Foundation (VRF) to streamline ESG reporting and clarify enterprise value for businesses and investors (JSE, 2022). The ISSB and GRI are collaborating on high-quality ESG standards, while the IASB and ISSB have adopted the IIRC's framework to integrate financial and sustainability reporting (Abela, 2022; Ndung'u, 2022). However, the researchers say the dynamic macro-environment makes it challenging to standardize ESG reporting, requiring standard-setters to balance global differences with diverse stakeholder information needs.

http://dx.doi.org/10.21511/afc.06(1).2025.04

In South Africa, ESG reporting requirements for JSE-listed companies are drawn from several reporting standards, such as the GRI and ISSB (JSE, 2022). In addition, since 2010, these companies have been mandated to present integrated reports using the IIRC framework (Grassmann, 2021). Notably, the JSE remains the only capital market worldwide that imposes this requirement (Appiagyei et al., 2023). While the IIRC's framework is relatively popular, it's criticized for its narrow focus on providers of financial capital and neglect of context-based sustainability factors (Bose, 2020). However, its multi-capital approach is commendable as it provides comprehensive information on value creation.

Furthermore, the mandatory application of King IV by JSE-listed companies helps to ensure ethical and effective corporate governance. Similarly, other nations, such as the United Kingdom (UK), require certain companies listed on the London Stock Exchange (LSE) to apply the UK code of corporate governance (Mohammed, 2023). While JSE-listed companies have made notable progress in integrating ESG factors into their corporate reporting, a survey by Henley-Risk Insights indicates that some prioritize social factors over environmental considerations, potentially compromising long-term sustainability (Morais et al., 2024). This trend is concerning, as the comprehensive integration of ESG factors informs investor decision-making and enhances competitive positioning, particularly given stakeholder apprehension regarding the credibility of ESG reporting (Greenstone Plus, 2023; Wan et al., 2023).

Consequently, businesses and stakeholders have recognized the need to enhance ESG reporting through more sound governance, focusing on ownership structures and board independence, including its sub-committees (Ma et al., 2024). As such, previous studies have focused on the role of the board of directors in ESG reporting. This is justifiably so, given that the board's role includes establishing corporate social initiatives and formulating strategies for sustainable business practices (Bamahros et al., 2022).

Research highlights audit committees as a pillar of corporate governance and effective moderators of ESG reporting (Pozzoli et al., 2022; Mohammed, 2023; Ma et al., 2024). Notably, audit committee appointments are reinforced by regulation, with some jurisdictions, including South Africa, requiring their appointment (Ma et al., 2024). From an agency perspective, audit committees mitigate agency issues by enhancing ESG reporting quality, reducing information asymmetry, and controlling how the entity portrays its ESG performance.

Furthermore, research has demonstrated that the effectiveness of audit committees in ESG reporting is influenced by several attributes, including their expertise, independence, activism, tenure, size, and meeting frequency (Arif et al., 2021; Helfaya et al., 2023; Bamahros et al., 2022; Pozzoli et al., 2022; Matta et al., 2024).

Consistent with the agency theory, this study examines the impact of audit committee independence and meeting frequency on ESG reporting. In addition, the average age of audit committee members is examined to fill in the gap in the existing literature. The legitimacy of these audit committee attributes will also be examined. The following sections review empirical literature on the audit committee characteristics under study.

1.4. Hypothesis development

From an agency theory perspective, audit committees' independence, meeting frequency, and average age enhance the committee's capacity to monitor management, mitigate information asymmetries, and reduce opportunistic behavior (Alhossini et al., 2021; Arif et al., 2021). Independent audit committees have been associated with improved voluntary disclosures and higher-quality ESG reporting (Buallay & Al-Ajmi, 2020; Qaderi et al., 2020; Arif et al., 2021). However, some studies, including those undertaken on large South African companies, report no significant associations (Haji & Anifowose, 2016).

Similarly, frequent audit committee meetings signal diligence and enhance oversight (Bamahros et al., 2021). Empirical literature links audit committee meeting frequency to better sustainability and CSR disclosures (Buallay & Al-Dhaen, 2018; Pozzoli et al., 2022) and high-quality ESG reporting (Arif et al., 2021; Matta et al., 2024). Despite this trend, some research presents mixed find-

ings. Madi et al. (2014) found no significant link between meeting frequency and CSR disclosures, while Mohd Ariff et al. (2023) reported a negative association with integrated reporting quality.

The average age of audit committee members is commonly viewed as a proxy for experience (Sultana et al., 2019; Ghafran et al., 2022). Older members presumably bring valuable experience and improve reporting quality (Sultana et al., 2019), although other evidence suggests that younger members may be more effective in curbing earnings management (Komal et al., 2023)

Under the legitimacy theory, audit committees are ceremonial, aligning with societal norms and expectations instead of enhancing ESG reporting (Lakhani & Herbert, 2022; Velte, 2022). The appointment of independent audit committee members can be a legitimization strategy with limited impact on monitoring effectiveness (Girella et al., 2019), intellectual capital, or CSR disclosures (Raimo et al., 2021). Similarly, frequent meetings do not necessarily translate to improved oversight (Mohd Ariff et al., 2023). Finally, the appointment of older audit committee members may reflect societal perceptions of competence rather than monitoring effectiveness (Ghafran et al., 2022).

In line with these discussions, this study aims to investigate the existence of a causal relationship between audit committee characteristics and the quality of ESG reporting among JSE-listed corporations, providing recommendations addressing concerns regarding these potential causal linkages. Specifically, the study examined whether characteristics such as the independence of audit committee members, meeting frequency, and member age influence ESG reporting quality.

The hypothesis for the study is formulated as follows:

H0: *There is no causal relationship between ESG reporting quality and audit committee members' independence, meeting frequency, and average age.*

H1: *There is a causal relationship between ESG reporting quality and audit committee members' independence, meeting frequency, and average age.*

2. METHODOLOGY

The research methodology for the study was informed by positivist epistemology (Sun, 2021). Justifiably so, given that the study sought to clarify the role of audit committees by measuring and quantifying their impact on ESG reporting by organizations listed on the JSE. Consistent with positivism, structured data collection methods and meticulous analysis techniques are used to maintain objectivity. The study used a quantitative research methodology to facilitate statistical analysis and empirical validation of the causal relationships between audit committee characteristics and ESG reporting quality (Baran, 2022; Leavy, 2022).

A deductive approach was employed, beginning with an extensive review of theoretical frameworks and empirical studies to formulate hypotheses (Bell et al., 2022). In addition, the study controlled three variables established in earlier research as determinants of integrated reporting quality: audit committee size, board diversity, and the presence of a CSR/sustainability committee. The study sampled the top 100 JSE-listed corporations by market capitalization, selecting firms that participated in EY's Excellence in Integrated Reporting Awards. Data were collected from secondary sources, primarily EY's Excellence in Integrated Reporting Awards and the Bloomberg database, covering a five-year period from 2017 to 2021. This period was selected to incorporate recent ESG reporting trends, ensuring the findings remain relevant to current corporate practices while allowing for a five-year analysis to capture trends and variations in audit committees' influence on ESG reporting.

Both listed and unlisted companies' data were acknowledged to avoid survivorship bias, but only data for listed companies were used. However, the selection of these companies hinged on data availability and their consistent listing for a minimum of five years, as this was required for longitudinal analysis. All the companies that were listed for less than five years were excluded. Additionally, companies for which data could not be extracted due to factors such as delisting, mergers, or acquisitions were excluded. While this selection criterion ensured data consisten-

http://dx.doi.org/10.21511/afc.06(1).2025.04

cy for longitudinal analysis, it may have introduced survivorship bias, as delisted companies were not considered. Excluding delisted companies, which may have faced financial distress and weak governance, could overrepresent companies with stronger governance and better ESG practices (Bergianti et al., 2023).

The following panel regression model was used to assess the correlation between audit committee attributes and ESG reporting quality:

$$ESGQ_{it} = \alpha_{it} + \beta_2 ACI_{it} + \beta_3 ACM_{it} + \beta_4 ACA_{it} + \beta_5 Size_{it} + \beta_6 BoardDiv_{it} + \beta_7 CSRC_{it} + \varepsilon_{it}, \quad (1)$$

where: $ESGQ_{it}$ is the ESG reporting quality measured using an ESG reporting index developed using EY's awards. ACI_{it} is the proportion of independent members on the audit committee relative to the total number of audit committee members in JSE-listed companies. ACM_{it} is the number of meetings held by audit committees of companies listed on the JSE per year. ACA_{it} is the average age of members of the audit committees appointed by JSE-listed companies. $Size_{it}$ is the total number of members appointed on the audit committees of JSE-listed companies. $BoardDiv_{it}$ is the percentage of females appointed as board members by JSE-listed companies. $CSRC_{it}$ is the presence of a CSR or sustainability committee in JSE-listed companies. ESG reporting (ESGQ) was the dependent variable, while the independent variables consisted of audit committee independence (ACI), frequency of audit committee members' meetings (ACM), and the average age of members of the audit committee (ACA) (Chariri & Januarti, 2017).

In order to avoid research bias, this study added control variables, namely audit committee size (Size), board diversity (BDIV) and the CSR/sustainability committee (CSRC).

The dependent variable, ESGQ: ESG reporting quality, was measured using an ESG reporting index created in accordance with the ranking in EY's Excellence in Integrated Reporting Awards. While other researchers have used self-developed scores or other measures of quality, such as Bloomberg's ESG score (Buallay & Al-Ajmi, 2020; Arif et al., 2021; Pernamasari & Chariri, 2024), Thomson Reuters DataStream (Fayad et al., 2024) and Pistoni's scoreboard (Raimo et al., 2021), could have been used, the EY awards were used as they have proven to be a reliable measure, particularly where there are variations in the quality of ESG, disclosures (Malola & Maroun, 2019; Mans-Kemp & Van der Lugt, 2020; Eloff & Steenkamp, 2022). Additionally, the awards are based on a structured assessment aligned with the IIRC framework, ensuring consistency in evaluation. Furthermore, scholars have tested and confirmed their reliability and validity (Wang et al., 2020; Hossain et al., 2023); hence, their use in this study. Using an IIRC framework-based mark plan, EY ranks integrated reports for the top 100 corporations into five categories, namely 'Top 10', 'Excellent', 'Good', 'Average', and 'Progress to be made'. In line with Wang et al. (2020), ESGQ was coded from 1 to 5.

The independent variables were measured as follows:

- ACI: Audit committee independence was quantified as the proportion of independent members to the total number of audit committee members;
- ACM: Audit committee meeting frequency was measured by the number of meetings held by the audit committee during a financial period.
- ACA: As data on the average age of audit committee members was not available, this was measured using the average age of board members.

The control variables were measured as follows:

- ACSize: Audit committee size was measured as the number of board members serving on the audit committee;
- BDIV: Board diversity was measured as the percentage of board members who are women;
- CSRC: A score of 1 was assigned if there was a CSR/sustainability committee, and 0 if otherwise.

3. RESULTS AND DISCUSSION

3.1. Descriptive statistics

As shown in Table 1, except for ACM and ACA, a maximum of 445 observations were recorded for all variables under study over the five-year period. ACM had 438 observations, and ACI had 419 due to missing data for these variables over the years. Overall, the results indicate that the quality of the JSE-listed companies' ESG reporting is of a relatively high standard. A maximum of 5 depicts top-quality ESG reporting, while the average of 3 falls under the 'good' category of the EY Excellence in Integrated Reporting Awards. Standard deviation of 1 suggests that the ESG reporting by most of the companies is of good quality. This is in line with the literature that describes ESG reporting by JSE-listed companies as exemplary (Wang et al., 2020).

Table 1. Descriptive statistics

Variable	Number of observations	Mean	Std. Dev.	Min	Max
ESGQ	445	2.6179	1.3381	0	5
ACI	445	0.9448	0.2111	0	1
ACM	438	4.7214	2.3307	0	14
ACA	419	54.5866	12.7397	0	67.67
ACsize	445	3.8044	1.2247	0	7
Board diversity	445	0.2640	0.1276	0	0.6667
CSRC	445	0.8943	0.3076	0	1

With regard to audit committee independence, on average, 94% of audit committee members are independent. At a maximum, the audit committees are wholly independent at 100%. This is consistent with previous studies that established that the audit committees at JSE-listed companies were mostly independent (Haji & Anifowose, 2016). In addition, the relatively low standard deviation of 0.21 indicates that, relative to the mean, most companies listed on the JSE consistently appoint largely independent audit committees. Such findings suggest compliance with the King IV recommendation for companies to have fully independent audit committees for the purposes of providing impartial oversight of ESG reporting.

For the most part, audit committees meet five times per year. At the same time, the standard deviation of 2 suggests fairly significant variability in meeting frequency. The maximum number of audit committee meetings is considerably high at 14 per year. Similar to the study by Chariri and Januarti (2017), these findings signify that the JSE-listed companies hold few meetings per year. However, the frequency of meetings held by JSE-listed companies is not mandated by law. King IV merely advises that audit committees allocate sufficient time and effort in preparation for their meetings (IoDSA, 2016).

The descriptive statistics reveal that audit committee members have an average age of 55 years, and a maximum of 68. Both are significantly different from Sultana et al. (2019), who established an average and maximum age of 45 and 79 years, respectively. These differences could be due to the studies having been undertaken in dissimilar reporting jurisdictions, as the latter study sampled entities listed on the Australian Securities Exchange (ASX). In addition, there is great variability in the age of audit committee members as shown by the standard deviation of 13. This can be attributed to age diversity. In South Africa, there is currently no legislation on the age of board members.

Concerning the control variables, the average size of an audit committee is four, with a maximum of seven. While there are variations in the size of audit committees appointed by the companies listed on the JSE, most are close to the average size as indicated by a standard deviation of 1. This is consistent with the finding that JSE-listed companies maintain an adequate audit committee as per King IV's recommended practice (Haji & Anifowose, 2016). The results for board diversity show that, on average, 26% of board members of the JSE-listed companies are female. Compared to the mean, a standard deviation of 0.12 suggests that the proportion of females on most boards of JSE-listed companies is slightly higher or lower than the average of 26%. This resonates with several other studies, which established low female board membership (Sultana et al., 2019; Raimo et al., 2021; Chouaibi, 2022). Lastly, 90% to 100% of the companies in the sample have a CSR/sustainability committee, an indication of their commitment to sustainability and corporate responsibil-

http://dx.doi.org/10.21511/afc.06(1).2025.04

ity. The standard deviation is also significantly low, indicating less variability in relation to CSR/sustainability committees.

3.2. Multicollinearity results

Diagnostic tests were undertaken prior to the regression analysis to establish the correlation between the variables under study. The results are shown in Table 2.

A Pearson correlation matrix was used to explore the correlation between audit committees' attributes and ESG reporting quality. As shown in Table 2, the correlation is strongest at 0.937 and is found to exist between audit committee independence and audit committee members' average age. Multicollinearity is unacceptable if the correlation coefficient ranges between ±8 and ±9 (Chan et al., 2022). Therefore, the results do not indicate the presence of an intolerable level of multicollinearity. Additionally, a VIF analysis was used to assess possible multicollinearity among the variables under study. The impact of multicollinearity is deemed insignificant if each of the VIFs falls below 10 (Chouaibi, 2022). At the same time, omitting a variable solely because of its high VIF can lead to biased coefficient estimates and falsely significant results. (Mukeredzi, 2019; Lindner, Puck & Verbeke, 2020). As such, audit committee independence was not dropped from the regression despite having a VIF of over 10. Regarding the strongly positive correlation between audit committee independence and members' average age, the VIF results were below 10, suggesting that they posed no significant multicollinearity issue. Furthermore, the inclusion of these variables was justified based on the parsimony theory as they contribute valuable information without adding unnecessary complexity (Baker, 2022).

3.3. Regression results

Regression analysis was carried out to establish whether causal relationships exist between ESG reporting quality and audit committee characteristics. The outcome of the regression model is indicated in Table 3. The validity of quantitative research may be restricted by endogeneity concerns, whereby the overall correlation will not display the causal effect assumed in the study (Velte, 2018). As such, in line with prior studies, the Hausman test was performed to select between the random effects and fixed effects models (Velte, 2018; Omran et al., 2021; Chouaibi, 2022). The null hypothesis was rejected as indicated by a p-value of less than 0.05. As a result, the random effects model was discarded in favor of the fixed effects model.

Overall, the regression model for this study is a good fit to explain the observed variables. The R^2 value indicates that approximately 82.74% of the variability in the dependent variable can be explained by the variability in the independent variables. As such, the regression model was suitable for predicting the impact of audit committee characteristics on ESG reporting quality.

The results relating to audit committee independence reveal a statistically significant association with ESG reporting quality, as evidenced by p-value of less than 0.05. In addition, the coefficient of 0.6188 indicates that the relationship is positive. These results suggest that independent audit committees result in a higher standard of ESG reporting, aligning with the JSE requirement mandating listed corporations to comply with King IV's recommendation to appoint independent audit committees.

At the same time, the result echoes previous studies which found that audit committee inde-

Table 2. Correlation matrix and VIF

Source: Author's computation.

Variable	ESGQ1	ACI	ACM	ACA	ACsize	Board diversity	CSRC	Statistics VIF
ESGQ1	1.0000	–	–	–	–	–	–	1.2970
ACI	0.3350***	1.0000	–	–	–	–	–	10.8160
ACM	0.2205***	0.4090***	1.0000	–	–	–	–	1.3900
ACA	0.3454***	0.9371***	0.4627***	1.0000	–	–	–	9.6400
ACsize	0.3400***	0.6284***	0.4726***	0.6806***	1.0000	–	–	2.1140
Board diversity	0.3606***	0.4390***	0.2398***	0.4020***	0.3814***	1.0000	–	1.4190
CSRC	0.3786***	0.6582***	0.2082***	0.6589***	0.3933***	0.3862***	1.0000	2.5850

Note: *** = significance at 0.01; ** = significance at 0.05; * = significance at 0.1.

Table 3. Regression results

Variables	Coef.	Std. Err.	z P > z	Coef.	Std. Err.	z P > z
	Random Effects			Fixed Effects		
ESGQ	0.8932	0.01602	0.0000	−0.2666	0.0444	0.0000
ACI	0.6103	0.2722	0.0250	0.6188	0.1779	0.0000
ACM	−0.0058	0.0094	0.5370	−0.0074	0.0059	0.2130
ACA	−0.0010	0.0044	0.8160	0.0003	0.0029	0.9230
ACsize	0.0261	0.0209	0.2120	0.0424	0.0135	0.0020
Board diversity	−0.1157	0.1659	0.4860	−0.0705	0.1030	0.4940
CSRC	0.3024	0.1024	0.0030	0.1298	0.0641	0.0440
_cons	−0.5727	0.0841	0.0000	2.5095	0.1519	0.0000
R^2		0.9857			0.8274	
Adjusted R^2		0.9286			0.5485	
F-Stats		11.3000			11.3000	
Prob. of F-Stat		0.0000			0.0000	
Prob. of Hausman Test		0.0000			0.0000	

pendence is positively correlated with ESG reporting (Bamahros et al., 2022), voluntary disclosures (Madi et al., 2014), CSR disclosures (Appuhami & Tashakor, 2017), and integrated reporting quality (Raimo et al., 2021). All the aforementioned results support the agency theory, which presents independent audit committees as objective and more effective in providing oversight of ESG reporting (Ghafran et al., 2022). As such, having independent members on the audit committee allows for impartial monitoring of reporting processes, which ultimately results in high-quality ESG reporting.

The null hypothesis is therefore rejected. However, some previous studies found no significant association between the independence of audit committee members and integrated reporting, intellectual capital, and ESG reporting (Raimo et al., 2021). Such findings suggest that appointing independent members may only serve as a legitimisation strategy with minimal impact on the audit committee's monitoring role (Girella et al., 2019). Furthermore, independence alone may not be adequate and could be complemented by appropriate levels of expertise and diversity (Toerien et al., 2023).

The results show no significant relationship between audit committee meeting frequency and ESG reporting quality as evidenced by a p-value of 0.2130. This result is supported by a low standard error of 0.0059. Overall, the results indicate that the frequency of audit committee meetings is insignificant in relation to ESG reporting quality, challenging the assumption by the agency theory that more meetings enhance oversight and governance. An earlier study established similar results, albeit with respect to audit committees' meeting frequency and voluntary CSR disclosures (Madi et al., 2014).

Notably, the JSE does not mandate a specific number of audit committee meetings, implying that the number of meetings does not necessarily translate to improved oversight. This is evidenced by the great variation of meeting frequency in the sampled companies, ranging from 2 to 14 per year. It could be that the quality of discussions and the extent of engagement in ESG matters in these meetings are more vital than frequency.

Contrary to the findings of this study, several previous studies have associated frequent audit committee meetings with enhanced ESG reporting (Arif et al., 2021), sustainability disclosures (Buallay & Al-Dhaen, 2018), CSR disclosures (Appuhami & Tashakor, 2017; Pozzoli et al., 2022), enhanced readability of integrated reports (Velte, 2018), and high-quality integrated reporting (Raimo et al., 2021). Such findings are supportive of the agency theory, which associates meeting frequency with increased monitoring of corporate reporting processes.

As the study's findings did not establish a causal relationship between the frequency of audit committee meetings and ESG reporting quality, the null hypothesis was supported.

http://dx.doi.org/10.21511/afc.06(1).2025.04

No significant association was found between the standard of ESG reporting and the average age of audit committee members as the p-value of 0.92 is greater than 0.05. The relatively low standard error of 0.002 confirms that there is no significant association. Hence, the null hypothesis was supported.

This finding resonates with prior findings, which suggest that the age of board members is insignificant to the quality of integrated reporting (Marrone, 2020). At the same time, the findings suggest that other forms of diversity (experience and knowledge) may be more critical than age alone. On the other hand, prior research has mixed findings, with some indicating that older members bring experience while some suggest younger members bring the vibrancy required for reporting effectiveness. Older audit committee members possess the experience required for effective ESG reporting (Sultana et al., 2019; Ghafran et al., 2022). Buallay and Al-Ajmi (2020) found that the age of audit committee members was positively associated with sustainability reporting by financial institutions.

On the contrary, younger members may contribute positively to earnings management (Komal et al., 2023). The findings on younger audit committee members may be attributed to their contemporary perspectives and technological adaptability, which can be more relevant in ESG-related decision-making.

Concerning control variables, the outcome of the regression analysis indicates a significant positive association between ESG reporting quality and audit committee size as well as the existence of a CSR/sustainability committee with p-values equal to 0.020 and 0.0440, respectively. This aligns with previous studies, which established that larger audit committees resulted in a corresponding increase in the quality of integrated reporting (Raimo et al., 2021). Similarly, the literature indicates that entities that appoint CSR/sustainability committees present higher quality integrated reports (Chouaibi, 2022). Both findings are supportive of the agency theory.

However, the relationship between ESG reporting quality and board gender diversity is not significant as $p > 0.05$. The lack of impact could be explained by the legitimacy theory, which suggests that appointing female directors is compliance-driven rather than ensuring meaningful participation in ESG decision-making. Consequently, their impact depends on the level of inclusion and actual decision-making authority.

The result of this study resonates with some previous findings, which argued that appointing females to the board is usually a compliance exercise that does not translate to any significant participation in decision-making (Omran et al., 2021; Songini et al., 2021). A study on Gulf countries indicated that female directors often feel pressurized to demonstrate their competence at the expense of driving sound ESG reporting (Arayssi et al., 2020).

Contrasting evidence, however, suggests that board gender diversity positively influences ESG reporting (Ismail & Latiff, 2019; Khunkaew et al., 2023; Toerien et al., 2023). Furthermore, females have been shown to enhance the transparency of ESG reporting, with research encouraging their appointment in more traditionally masculine cultures (Helfaya et al., 2021; Ma et al., 2024). Despite mixed findings on board gender diversity, prior research highlights its potential to enhance ESG reporting when paired with genuine inclusion and decision-making authority.

CONCLUSION

The study aimed to examine the impact of audit committee characteristics on ESG reporting quality. This study has demonstrated the need for regulators to strengthen audit committee independence, while policymakers should focus on qualitative standards for audit committee meetings rather than meeting frequency and audit committee members' age. These standards should ensure discussions address ESG risks, sustainability integration, and stakeholder concerns while prioritizing ESG expertise. Additionally, while existing ESG reporting frameworks incorporate assurance mechanisms, they should establish more explicit guidelines for internal oversight, enabling audit committees to strengthen ESG disclosure monitoring beyond compliance.

The study acknowledges survivorship bias, noting that the findings may be skewed towards listed firms with higher ESG reporting quality and cautions against over-generalizing the results to all JSE-listed companies. It also acknowledges potential subjectivity in adjudicating the EY awards and the limitation of focusing solely on the top 100 JSE-listed firms. Future research should consider using alternative measures, such as Bloomberg's ESG score and Pistoni's Scoreboard, which could offer complementary insights and enhance validation in future research. Future studies may adopt a mixed-method approach, integrating quantitative rankings with qualitative content analysis to strengthen measurement. Comparative research on ESG reporting across different regulatory environments could provide further insights.

AUTHOR CONTRIBUTIONS

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ACKNOWLEDGMENT

Gratitude is extended to the anonymous referees for their helpful and thoughtful suggestions, recommendations, and constructive comments, by which the paper was substantially improved. Moreover, the University of KwaZulu Natal is acknowledged for providing excellent research support and facilities. Notably, the article has never been published previously. The paper was extracted from Ruth Mutsa Ruziwa's Masters dissertation, which was submitted to the University of KwaZulu Natal, with first authorship of this article attributed to the same.

Competing interests

No competing interests are declared.

Ethical Approval

Ethical clearance was obtained with protocol reference number 00020701.

Funding information

Funding information is not applicable/ No funding was received.

Additional information

This paper was a joint effort involving collaboration in the conceptualization, design of the article, analysis, and interpretation of the results. The final version was approved for publication with collective responsibility taken for all aspects of the work. Any concerns regarding the accuracy or completeness of this article were appropriately investigated and resolved.

http://dx.doi.org/10.21511/afc.06(1).2025.04

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