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CEO Attributes and Quality of Sustainability Reports of Nigerian Listed Firms

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Abstract

Despite the globally growing emphasis on sustainability reporting among corporations, the quality of information disclosed remains highly variable. While the definition of quality is obscure, managers can use discretion in their report since there is no regulatory policy for the disclosure of non-financial information in Nigeria, which leads to lack of transparency and consistency in sustainability reports. Therefore, this study assesses the relationship between managerial characteristics and the quality of sustainability reports of Nigerian listed firms. The sample includes 76 non-financial firms from several sectors spanning ten (10) years from 2015 to 2024. CEO attributes were proxied with CEO compensation, CEO reputation, CEO gender, CEO turnover, CEO shareholdings and multiple directorships while the study used an index for sustainability reporting quality (SRQ). Since the dependent variable SRQ is a categorical variable, the ordered logistic regression technique was used to run the model for the study. The result showed that managerial compensation, multiple directorships and gender positively influence SRQ, while CEO turnover and reputation have a negative effect on SRQ. However, CEO stock ownership is evidenced to have no significant effect on the quality of sustainability reports. The study findings remain robust when employing an alternative SRQ measure using the ESG disclosure index aligned with the GRI framework. The robustness tests confirm a positive relationship of CEO compensation, ownership and multiple directorships with SRQ while reputation has a negative relationship with SRQ, which is consistent with the ordinal regression result. The research is underpinned by the upper echelons and legitimacy theories, examining how managerial characteristics shape the quality of firms' information disclosure and revealing the fact that average sustainability reporting quality by Nigerian firms challenges the notion that disclosures primarily serve compliance objectives. The study demonstrates the impact of CEO dynamics in advancing corporate sustainability reporting in an emerging market like Nigeria.

Keywords: CEO compensation, CEO reputation, CEO gender, CEO ownership, multiple directorships, CEO turnover, sustainability reporting quality, non-financial firms, Nigeria

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Introduction

Sustainability reporting provides information on the impact of a firm's economic activities and policies on the environment, society as well as governance-related activities. Environmental, Social and Governance (ESG), carbon reporting, corporate social responsibility reporting, sustainability reports have some similarities which are the disclosure of environmental, social, governance, and ethical issues [1]. From empirical research, sustainability reports enhance firms' reputation and shareholder confidence, also improving ESG ratings, among others [2–4]. The evolution of ESG reporting driven by the adoption of standardized frameworks such as Global Reporting Initiative (GRI), European Union's CSRD and International Financial Reporting Standards (IFRS) S1 and S2 underscores the importance of transparency and accountability of firms' sustainability disclosures. When companies disclose their carbon emissions and other sustainability information, such information is analysed by rating agencies that create indicators and metrics to aid in the comparison of such metrics over time and amongst other firms [2]. The effectiveness of these disclosures depends on their usefulness and how reliable such information is to investors in sustainable investment allocation [5].

Although environmental, carbon or sustainability reporting is voluntary in many regions, some countries such as Australia, United Kingdom, France, and New Zealand mandate such reports [6]. These countries have requirements/frameworks that companies must adhere to in reporting this non-financial information. However, in countries with voluntary reporting policies, firms may report short-term positive performance while neglecting or reporting less on negative environmental or carbon performance [6]. ESG adoption is still quite low in emerging markets as global sustainability narratives are in the process of being merged into local institutional frameworks. Unlike emerging markets with less efficient market systems, countries with more robust market and legal institutions communicate information more effectively to reduce information asymmetry and protect investors [7; 8]. This can affect comparability of sustainability reports with global firms. Firms in developing economies such as Africa report their financial and economic activities with less attention to environmental issues [9].

Recently, the African Development Bank (AfDB) and IFRS began collaborating on the ISSB adoption by African firms [10]. Nigeria was the first country in Africa to adopt IFRS S1 and S2 [11]. However, few firms have implemented these standards, as the Financial Reporting Council of Nigeria (FRCN)'s roadmap mandates full adoption of the IFRS sustainability disclosure standards by January 2028 with early adoption permitted from January 2024. Hence, there are variations in the reports of many firms as some entities adopt voluntary standards like the GRI while others scarcely align with any standards.

Managers are saddled with the responsibility of providing relevant information on the company's operations [12].

The Chief Executive Officer is not directly involved in the financial statement preparation directly but may influence the Chief Financial Officer in the manipulation of the reports [13]. It is evidenced by prior studies that managers play a significant role in firms' reporting process [14–19]. Harymawan et al. [18] found evidence that busy CEOs with multiple directorships are associated with financial reporting quality. Also, Adeoye et al. [14] concluded that CEO's compensation influences the quality of financial reports. The study by Zimon et al. [4] revealed that CEO's power influences the relationship between firms' sustainability disclosure and reputation. Zvertiaeva and Ershova [20] deduced from the upper echelons theory that decisions and firm performance are influenced by CEO's characteristics. Lazareva (2022) [21] in a study of the impact of CEO's personal traits on ESG performance stressed the importance of CEOs in the strategic choices made by the firm, particularly ESG projects. The study carried out on data from Russian firms found that CEO tenure, education, experience, and optimism positively impact ESG performance. Seifzadeh et al. [19] noted that CEO overconfidence and narcissism enhanced the readability of financial statements since these managers are interested in showing off their performance. The research concluded that competent managers present less complex and complicated financial statements based on the theory of managerial ambiguity.

With increasing pressure from stakeholders and non-governmental agencies on environmentally friendly policies, managers may tend to employ greenwashing techniques. Greenwashing is the process of promoting a firm's environmental policies through public relations while not actually making any significant positive environmental impact [2; 3]. These activities are unethical and reveal the difference between managerial disclosure of CSR/ESG activities and real action taken by the firm [22]. This includes tone management and impression management in sustainable reports [22–26]. These strategies affect the quality of sustainability reports and other narrative information being disclosed. The use of infographics for favourable disclosures, structure, visual and reading manipulations, choice of reporting figures and performance are amongst management choices for tone and impression management [22; 25; 26]. Managers may employ these tools to obscure negative environmental or social information and emphasize more positive information; thus, CEO power can be harnessed as an opportunistic tool for discretion in information disclosure [4; 24].

The expansion of the sustainability reporting framework by some African countries has enhanced the need for more research on this subject on the continent. In the context of Nigeria, one of the largest growing markets in Africa, this research situates sustainability practice in a developing economy within the global ESG discourse. Nigeria's voluntary compliance and lax enforcement create allowance for CEOs to influence disclosure decisions as proposed by the upper echelons theory. With this regulatory vacuum, firms may seek legitimacy through disclosures to manage

stakeholders' expectations. Although research on sustainability issues is expanding, the study offers insights into the determinants of sustainability information disclosure with a particular emphasis on the quality of disclosure and the critical role of CEOs. Therefore, this study seeks to assess managerial characteristics which may influence non-financial information quality. This current study examines the reputation, compensation, turnover, multiple directorships, shareholdings and gender of CEOs. While there are existing studies of the impact of managerial characteristics on earnings quality, firm performance, firm value, etc., there is scarcely any research on the influence of managerial attributes on sustainability information disclosure quality. This study fills this gap and expands the current research on managerial behaviour that is associated with reporting quality. In addition, the study expands the recent studies on the quality of corporate information. The next section highlights relevant literature on the study and hypotheses development. The methodology of the study is discussed in the third section while results from data obtained and analysed are presented in the fourth section, with conclusions drawn from these results in the final section.

Review of Literature and Hypotheses Development

Cross-Country Framework

There are mandatory and voluntary reporting requirements in several countries. Only a few countries have developed local regulations for the disclosure of ESG and other non-financial information. The institutional factors of the environment where a business operates affect its reporting system [7; 27; 28]. These institutional factors are social beliefs, and the political and legal system. Institutional dynamics can help to understand the different incentives for sustainability reporting. For example, in China, firms are characterised by majority shareholder control, while developed markets such as US and UK have a more dispersed ownership structure as a result of its market structure and public disclosures mitigating information asymmetry [7; 28].

On the other hand, in economies with weak institutions and less investor protection, there are fewer incentives to communicate effectively to outside shareholders and the stakeholders' group, which may lead to selective disclosure and greenwashing [7]. Sustainability information disclosure will be tailored based on the country-specific governance framework; hence, it can be shareholder-oriented or stakeholder-oriented [7]. Therefore, the differences in the institutional context between countries lead to variations in financial reporting quality by firms [28]. This institutional void influences the relationship between managerial characteristics and reporting quality in emerging markets. Firms in countries with governmental pressure have local reporting regulations that are mandatory for firms, therefore, they curb managerial manipulations in reporting.

In emerging markets where the state has significant con-

trol, such as India, Russia, Southeast Asian countries, and Brazil, the firms adopt the stakeholder approach to sustainability practice. In BRICS countries, the institutional-level corporate governance system is a determinant of the disclosure of CSR activities [28–29]. In India, the Business Responsibility and Sustainability Reporting (BRSR) guideline published in 2021 by SEBI required the top 1000 organisations to align and publish ESG information in accordance with the guideline [30]. The author noted an improvement in the quality of sustainability reports of banks using this standard. Similarly, in a study by [31] on the measure of non-financial information disclosure quality by Vietnamese companies, the study assessed the type (qualitative, quantitative and monetary) and volume of information disclosed, as well as future goals in line with the standards of the Vietnam's Ministry of Finance. The research found that Vietnamese firms comply with the standards on non-financial information disclosure. This result is similar to that obtained in the study by Dong et al. [32], which used an assessment disclosure score based on the Transparency Benchmark program by the Netherlands' Ministry of Economics. The author noted that CSR disclosure increases when firms plan to issue more shares or debt the next year.

The European Union comprises a variety of countries with strong and weak institutional frameworks, including legal systems, investor protection, common/code law tradition, and governance oversight mechanisms [33]. The EU recently introduced a new directive referred to as the Corporate Sustainability Reporting Directive (CSRD) 2022/2464, requiring firms to provide more detailed and standardised information on their environmental activities. The CSRD was developed through active collaboration with GRI and ISSB. Countries in the EU are required to adopt this directive in disclosing non-financial information, including ESG information. Studies such as Cicchiello et al. [34] (EU firms); Milena and Lahorka [35] (Croatia); Santamaria et al., 2022 [36] (Italy); Sierra-Garcia et al., [37] (Spain); Kilic and Kuzey [38] (Turkey) employed the EU directives, revealing a high level of adoption of the CSRD guideline by firms in both developed and developing countries in the EU.

Developing countries like Nigeria are characterized by weak quality institutions and fewer capital market developments, which affects the business climate. Low regulatory enforcement, concentrated and mostly family ownership affects the harmonization of the reporting framework. In addition, Nigeria's current voluntary sustainability reporting regime offers managers discretion in reporting ESG information, which may result in tone management and greenwashing in comparison to countries that mandate reporting, hence, the motivation to examine managerial characteristics that affect sustainability reporting quality in Nigerian listed firms.

Sustainability Reporting Quality

Sustainability reports are specifically addressed to stakeholders as a communication tool to reveal effective cor-

porate governance and transparency [39]. Sustainability information is a criterion used by investors in their investment portfolio, and as such, this has enhanced the development of sustainability indices [40–41]. There are variations in the content and information disclosed in sustainability reports as a result of the absence of uniformity in reporting policy, hence, managers use discretion in such reports [2; 42]. Idawati et al. [12] asserted that the presence of a sustainability information in a financial report or a stand-alone report does not guarantee information quality. However, the quality of sustainability reporting reflects the commitment of a firm to environmental, social and economic issues [43]. Determinants of the quality of sustainability reports include corporate governance mechanisms, the use of external assurance provider, standardized reporting framework such as GRI, presence of a sustainability committee [30; 44–46].

In assessing the quality of non-financial information, researchers have constructed and adopted several frameworks. As pointed out by Dong et al. [32], some studies tend to use the issuance or availability of CSR report to proxy for quality of information disclosure, which is grossly inadequate in capturing information quality, hence, firms employ external assurance to verify this information. This independent assurance enhances the credibility of the information and increases stakeholders' reliance on the information disclosed [30; 47]. Also, the use of quantitative information reveals financial commitment and expenditure on environmental-social issues [46; 48–49].

Studies consider the presence of a sustainability committee [45; 47; 49–50] in an attempt to enhance the quality of sustainability information disclosure. The establishment of a sustainability or environmental (social) committee reveals the firm's commitment and strategic position in regard to stakeholders [51]. Al-Shaer and Zaman [52] found that sustainability committees include sustainability targets in CEOs' remuneration package to ensure executives' sustainable behaviours. This committee has an oversight role in ensuring sustainability practices [45; 52].

Furthermore, reporting on activities related to Sustainable Development Goals (SDGs) is expected to improve the quality of sustainability reports. SDGs, also known as the global goals, were adopted by member countries of the United Nations in 2015 as these replaced the Millennium Development Goals (MDGs) [53]. While very few firms presented a sustainability report in their annual report or as stand-alone report before the SDGs, many firms seem to begin to include a sustainability statement in their reports with the advent of the SDGs. Reporting on activities related to the SDGs demonstrates corporations' engagement with sustainability issues, which can enhance information disclosure quality in the sustainability report.

In addition, the use of the Global Reporting Initiative (GRI) standards is expected to enhance the reliance and trust of stakeholders in the information disclosed in the sustainability report. The Global Reporting Initiative (GRI) standard was first launched in the year 2000 as a guideline in the disclosure of non-financial information, including

corporate, governance, environmental and social information [43]. The standards are divided into three sections: universal, specific and sectoral standards. These standards have been continuously reviewed and updated to improve information disclosure and reflect global best practices. Studies that employ the GRI standards as a measure of the quality of sustainability reporting include [36; 43; 47; 54].

Theoretical Review

The upper echelons theory introduced by Hambrick and Mason [55] argued that organization outcomes, including strategies and performance, are reflections of the cognitive behaviour of the entity's top manager. The authors emphasized the influence of top management as powerful actors in the firm. They also provided the foundation for research on the relationship between managerial attributes and firm outcomes. The researchers categorized echelon characteristics into two types: psychological and observable. Demographic characteristics of top management teams such as tenure, education, age, compensation, and income are observable attributes while psychological characteristics include cognitive base and values. A fundamental idea of the upper echelons theory is that top executives, such as the CEO and members of the top management team (TMT), play pivotal roles in shaping the firm with their decisions and actions, being guided by their own attitudes, personalities, and values [55]. In line with this theory, studies find evidence that CEOs' personal traits are crucial to the performance of an organization [21; 56; 57].

Therefore, CEO characteristics have a direct impact on organizational outcomes and influence these outcomes indirectly through the actions and dynamics of top management teams (TMTs) [58]. The study by Endiana et al. [59] supports this theory, positing that political affiliations and military connections of top members in a firm improve the quality of sustainability reporting. In addition, Popli et al. [60] reviewed several studies on top managers' psychological and demographic characteristics that affected multinationals' internationalization in respect to the upper echelons theory.

The stakeholder and legitimacy theories are interrelated especially in the context of corporate governance and information disclosure, in other words, environmental/social disclosure may be seen as a governance tool used to ensure accountability and transparency to stakeholders [39]. The stakeholder theory states that a firm is responsible not only to its shareholders but to all stakeholders. Stakeholders are those who affect or can be affected by the actions of the firm. Stakeholders are interconnected through the firms' disclosure of non-financial information such as environmental and social aspects [36]. In respect to the stakeholder theory, sustainability reports are expected to meet the needs of various stakeholder groups and not only shareholders, hence, firms must consider the expectations of other stakeholders [45].

The legitimacy theory is one of the theories that explains the social contract between an organization and society.

This theory suggests that for a company to exist, it must be accepted by society [61]. Financial and non-financial information disclosure helps to legitimize a company's activities as well as enhance stakeholder perception of the firm. Therefore, firms may protect their legitimacy through stakeholder engagement while addressing the gap between stakeholder expectations and sustainability reporting [62]. Furthermore, Crowther and Aras [63] argued that the principal-agent relationship is expanded by the legitimacy theory, and it advances towards stakeholder interests. These theories serve as a framework for the research hypotheses developed in this section. Idawati et al. [12] posits that sustainability reporting is a tool for communicating environmental and social impact of firms' operations, hence, sustainability reporting enables firms to gain legitimacy.

CEO Attributes and Sustainability Reporting Quality

CEO Reputation

An entity with a positive reputation in society will want to preserve its image and goodwill through engaging in environmental and socially acceptable practices [50]. Also, firms disclose sustainability information to project a good social image to stakeholders [64]. Just as documented by studies of corporate reputation, the study by Sridhar [65] proposed that reporting behaviour may be influenced by managers' reputation. Chen and Chen [66] also found an association between managers' ability and the projections in capital expenditures of environmentally sensitive firms. On the other hand, Malmendier and Tate [67] hypothesised that publicly recognized CEOs engage in earnings management, demand more compensation and underperform in subsequent years after the reception of their awards. This aligns with the upper echelons theory, which posits that psychological traits of top managers affect their decisions and choices. To receive more credence and enhance their reputation, more recognized CEOs are likely to disclose more sustainable information than their counterparts. Francis et al. [68] noted that the efficient contract hypothesis indicates that reputable CEOs disclose good earnings quality, thus, reputable managers are knowledgeable and to maintain their reputation, reputed CEOs are expected to take actions resulting to good reporting quality. However, when poor earnings are disclosed by reputable CEOs, it can be linked to the rent-seeking hypothesis. Hence, managers may use their recognition, visibility, and image to report positive information while avoiding the disclosure of information which may affect their reputation. Therefore, the study hypothesizes that:

H1: *CEO reputation positively influences the quality of sustainability reports.*

CEO Compensation

Managerial incentives serve as a mitigating factor for agency conflicts between the shareholders (principals) and

managers (agents). Executive compensation may motivate CEOs to act in the best interest of shareholders. Executive compensation includes salary, bonuses, stock and other financial and non-financial benefits. Some components of executive compensation are linked to performance targets which may influence managerial behaviour [14; 69–71]. In a bid to obtain targeted remuneration, managers may make decisions or engage in activities that may affect shareholders' wealth adversely [69]. Al-Shaer and Zaman [52] noted that CEOs' compensation may affect the quality of sustainability information being disclosed, especially when sustainability metrics are included in the compensation agreements. In accordance with the agency theory, managerial compensation serves as a bonding mechanism, thus, when CEOs' compensation is linked with sustainable practices, they will disclose more information since reports serve as a tool of communication with shareholders. The study hypothesizes that:

H2: *There is an association between CEO compensation and the quality of sustainability reports.*

CEO Ownership

CEO shareholding may reduce agency costs and align the interests of the shareholders with those of the managers [71]. CEO share ownership may serve as an incentive for the long-term maximization of shareholders' wealth. With stock ownership, CEOs can influence significant operations and decision-making in the firm, including the selection of directors [73]. When CEOs own shares in their firms, it encourages effectiveness and performance [73–74]. On the other hand, CEO stock ownership serves as a source of power which may result in entrenchment [20]. Moreover, stock ownership may induce managers to make decisions for short-term gains and self-interest [75]. Oloredo et al. [69] revealed that CEO shareholdings are significant and positively related to firms' financial reporting quality. Hence, CEO shareholdings could mitigate information asymmetry and increase the disclosure of relevant information. From empirical literature, the study hypothesizes:

H3: *CEO share ownership influences the quality of sustainability reports.*

CEO Turnover

Replacement of managers may arise from age (retirement) or resignation (voluntary or forced), taking up appointments in other firms. A new CEO brings unique and different experiences, perspectives, and values supporting the upper echelons theory. Managerial turnover tends to be a signal to investors on the firm and stock performance [76–77]. However, the dismissal or replacement of a manager is quite difficult when managers have some control or are entrenched in the firm [77]. However, when managers do not achieve shareholders' objectives, they might be subject to replacement or dismissal. The hypothesis of forced managerial turnover by Huson et al. [76] assumes that there is an improvement in firm performance and managerial quality in the event of forced management turnover. [78; 79] document that CEO turnover improves ESG disclosure

and a means of breaking reporting pattern. However, the scapegoat hypothesis holds that managerial performance is based on luck or chance, therefore, managers with poor performance can be fired. In terms of earnings quality, CEO turnover is linked to firms' earnings restatements [15; 80–82]; and turnover of CEOs may lead to tone management, impression as well as greenwashing [83–84]. The study therefore proposes that:

H4: *CEO turnover negatively influences the quality of sustainability reports.*

Multiple Directorships

Managers often tend to hold board positions in other companies. This practice has been found to improve managerial performance, while other studies reveal that this may reduce managerial effectiveness which may result in conflict of interest [18; 85–86]. The resource dependency theory proposes that directors with multiple appointments gain connections, skills, experience and resources that are beneficial to the firm [18; 87]. Moreover, multiple directorships may enhance board effectiveness and monitoring through the connections and networks it creates [88; 89]. However, the study by Al-Haddad et al. [90] supported the busyness hypothesis with their research concluding that multiple directorships have a negative effect on firm value. Other studies document a negative relationship between earnings quality and multiple directorships [85; 91–92]. Busy CEOs may forfeit their responsibilities in their primary appointments, which increases agency costs [18]. The study hypothesizes that:

H5: *Multiple directorships have a negative relationship with sustainability reporting quality.*

CEO Gender

From previous literature, another attribute influencing managerial reporting behaviour is the gender of the CEO. The male-female dynamics was explained using the Upper echelons theory by Perry et al. [93] affirming the benefits of diversity in the managerial team. From the behavioural finance insights, females exhibit unique leadership traits with greater ethical sensitivity, risk perceptions and stakeholder-oriented goals [93–94]. Aligning with the agency theory, female CEOs are often found to enhance transparency, therefore, help to reduce information asymmetry. While Ye et al. [95] found non-significant relationship between gender diversity and reporting quality other studies found that the presence of female directors may enhance higher reporting quality [49; 96–99]. Davis and Garcia-Cestona [94] found that firms are less likely to restate their financial statements when there are more females on the board and the chief financial officer is a female. Garcia-Sanchez et al. [97] noted that more females on board improves the board monitoring role and influences earnings quality. In relations to environmental disclosure, the study by Dyck et al. [98] revealed that firms have more environmental and sustainability performance with more female directors and making provision for majority voting requirements. Al-Shaer and Zaman

[96], Olagunju et al. [49], Singhania et al. [99] concluded in their studies that female directors are associated with higher sustainability reporting quality. Furthermore, regulatory policies as well as corporate governance codes have advocated gender diversity in the board setting. This has increased the presence of females on the board, while studies found that gender diversity enhances board effectiveness, therefore, this study tests that:

H6: *The presence of female CEOs positively influences the quality of sustainability reports.*

Methodology

Population and Study Sample

The population of the study included the 102 non-financial firms listed on the Nigerian stock exchange (NGX) as of June 2025. Financial institutions were excluded because of the peculiarities in their financial statements, moreover, other sectors such as industrial, oil & gas, and consumer goods are more environmentally sensitive, therefore, they are expected to provide sustainability reports. The study excludes firms with missing data and recently listed firms, arriving at sample that comprises 76 companies.

Table 1. Study sample across industries

Sector	Total number of firms	Firms with missing or incomplete information
Agriculture	5	0
Conglomerate	6	1
Constructure/ Real Estate	10	5
Consumer goods	20	5
Healthcare	7	2
ICT	8	2
Industrial Goods	12	5
Natural Resources	4	0
Oil & Gas	8	1
Services	20	3
Utilities	2	2
	102	26

Source: Compiled by the author (2025).

Model specification

The study constructs the model as follows:

$$SRQ_{it} = \beta_0 + \beta_1 REP_{it} + \beta_2 COMP_{it} + \beta_3 OWN_{it} + \beta_4 TURN_{it} + \beta_5 MULTP_{it} + \beta_6 GEND_{it} + \beta_7 Controls_{it} + \mu_{it} \quad (1)$$

Measurement of sustainability Reporting Quality

Several studies use the disclosure index to measure sustainability reporting quality. While this is a good measure, it identifies and confirms information reported in report, it does not necessarily reveal the quality of the reports. This

study uses an index whereby scores are assigned based on the availability of the metrics (Table 2). This methodology is suitable for Nigeria given the voluntary reporting regime and absence of uniform sustainability standards/guidelines. Therefore, the observable quality dimensions are deemed appropriate.

Table 2. Index measurement for the quality of sustainability report

Criteria	Source	Score
Existence of sustainability report	Erin et al. [45]; Olagunju et al. [49]; Oyerogba et al. [46]	1, 0 otherwise
Sustainability report includes quantitative data on environmental, economic and social	Oyerogba et al. [46]; Olagunju et al. [49]	1, 0 otherwise
The firm has a sustainability committee	Al-Shaer and Zaman, [52]; Erin et al. [45]; Olagunju et al. [49]; Oyerogba et al. [46]; Sebrina et al. [47]	1, 0 otherwise
Sustainability report includes assurance on the report	Erin et al. [45]; Olagunju et al. [49]; Oyerogba et al. [46]; Sebrina [47]	1, 0 otherwise
Sustainability report includes SDGs activities	Erin et al. [53]; Idawati et al. [12]	1, 0 otherwise
Sustainability report complies with the GRI framework	Hidayah et al. [54]; Michelson [50]; Santamaria et al. [36]; Sebrina et al. [47]	1, 0 otherwise

Source: Compiled by the author (2025).

Variable Measurement

Table 3. Variable Measurement

Acronym	Variable	Type	Measurement
SRQ	Quality of Sustainability Report	Dependent Variable	Score 0–6 computed from the score in Table 2
	Managerial Attributes	Independent Variable	
REP	Reputation		Measured as dummy variable, 1 if a CEO as awards, recognitions and 0 otherwise
COMP	Compensation		Logarithm of reported CEO emolument
OWN	Share ownership		Proportion of CEO shareholdings to total number of shares outstanding
TURN	Turnover		Measured as dummy, 1 when there is a change in CEO and 0 otherwise
MULP	Multiple directorship		Measured as a dummy, 1 when a CEO is on the board of another firm and 0 otherwise
GEND	Gender		Measured as dummy, 1 when there is a female CEO and 0 otherwise

Acronym	Variable	Type	Measurement
Control Variables			
LOSS	Loss		Measured as a dummy, 1 when a firm reports a loss during the period, and 0 otherwise
PERF	Firm performance		Measured as a proportion of net income to total assets
SIZE	Firm size		Logarithm of total assets
GOVTOWN	Government Ownership		Proportion of shareholdings held by government agencies and ministries to total number of shares outstanding
MULTINAT	Multinational		Measured as a dummy, 1 when a firm is a multinational corporation and 0 otherwise
FOREOWN	Foreign Ownership		Proportion of shares held by foreign individuals, corporations and institutions to total number of shares outstanding
IND	Industry proxy		Measured as a dummy, 1 for a firm in an environmentally sensitive industry, 0 otherwise

Source: Compiled by the author (2025).

Firm-specific attributes that influence the disclosure and quality of non-financial information include firm size, growth, profitability, leverage, and firm value [43; 45; 46; 49; 54; 66]. Larger firms are exposed to a wide range of stakeholders and have more impact on society in comparison to smaller firms [41]. Also, it is easier for large firms to disclose information on corporate social responsibility compared to smaller companies. When companies report more profit, managers may dwell more on their profitability or performance and focus less on other areas of the annual report such as the sustainability report. In addition, the ownership structure of the firm tends to affect the extent of information disclosure [28; 49; 100-101], therefore, this study controls for foreign ownership, government ownership, and multinational firms. Moreover, the study includes an industry dummy to control for industries that are more prone to environmental sustainability issues such as oil & gas, natural resources, construction, industrial, and manufacturing sectors.

Source of Data Collection

The annual report remains one of the most used sources of obtaining non-financial information, especially sustainability reporting quality. Nevertheless, some firms publish stand-alone sustainability reports, thus, this study obtained information on the SRQ index using both stand-alone reports and sustainability reports in the annual reports.

Method of Data Analysis

The Ordinal/Ordered Logistic Regression technique is suitable for the study because the dependent variable is an ordinal categorical variable, hence the Ordinary Least Square (OLS) is not appropriate for the study. The quality of sustainability reporting is an ordered categorical index ranging from 0–6, representing increasing levels of report-

ing quality rather than cardinal differences. An ordered logit model therefore appropriately exploits this ordinal structure without imposing linearity or requiring dichotomization, which would result in information loss. There are little differences between the results of logit and probit models. Ordered logit was preferred for the ease of interpretation through odds ratios and marginal effects. We decided to choose logit because it is much easier to interpret and easily readable/understandable. The ordered probit was not adopted because it differs from the ordered logit only in the assumed distribution of the latent error term.

Results and Discussion

Table 4. Summary of SRQ Results

Label	Freq	Percentage (%)	Cumulative
Poor	473	62.24	62.24
Low	86	11.32	73.55
Fair	64	8.42	81.97
Moderate	61	8.03	90.00
Good	47	6.18	96.18
High	24	3.16	99.34
Excellent	5	0.66	100.00
Total	760	100	

Source: Compiled by the author (2025).

For the quality of sustainability report, the study labelled the results for the scores from 0 to 6.

0 = Poor, 1 = Low, 2 = Fair, 3 = Moderate, 4 = Good, 5 = High, 6 = Excellent.

Any item captured will be recorded, and the maximum score is 6, when all criteria are met. The study used both stand-alone sustainability reports by firms and sustainability reports in the annual reports. From Table 4, the relatively large proportion of the firm observations (62.24%) did not disclose sustainability reports in the annual report or as a stand-alone report during the study period. 8.03% of the firm observations had a moderate sustainability reporting quality meeting three of the six criteria while 0.66% of the firms' observations met all the criteria.

Descriptive Statistics

The basic summary statistics of the variables are presented in Table 5. They include the mean, maximum, minimum, and standard deviation of the variables. The average of the log of managerial compensation is 10.41, ranging from 4.79 to 15.18. On managerial stock ownership, the mean of CEO shareholdings is 30.57%, while some CEOs do not own shares in the firm with a minimum of 0. The mean

value of multiple directorships and managerial reputation, which are measured with dummy variables are 0.315 and 0.212, respectively, which indicates that about 31.5% of the sampled firms have their CEOs serve on the board of other firms, while 21.1% of CEOs have awards and public recognitions. The average value of gender implies that 31% of the sampled firms are run by female CEOs.

The study controlled for certain firm-specific features such as firm size, loss, and performance. Loss measured as a dummy showed a mean of 0.34. The average firm size is 16.58, ranging from 10.98 to 23.01. Firm performance proxied with return on assets ranges from -1.51 to 0.73. This low performance may be as a result of the COVID-19 pandemic since firms were shut down and operating activities were reduced. Many firms are still recovering from the global shutdown caused by the COVID-19 pandemic. Government ministries and agencies have shares in some companies with an average of 0.52%, while foreign firms and institutions have an average of 17.55% shares in some companies in Nigeria. An average of 19.7% of the sampled firms are multinational corporations.

Table 5. Summary Statistics

Variable	Mean	Max	Min	Std. Dev
COMP	10.40897	15.17879	4.787492	1.751773
OWN	0.305718	0.5507462	0	0.1424393
MULTP	0.314888	1	0	0.4647775
GEND	0.3104517	1	0	0.3104517
TURN	0.1684211	1	0	0.3744862
REP	0.2118421	1	0	0.4088826
PERF	-0.0017348	0.7289066	-1.510478	0.1663879
SIZE	16.57587	23.00782	10.97574	2.02882
LOSS	0.3381579	1	0	0.4733941
GOVTOWN	0.0052477	0.1591	0	0.0240007
MULTINAT	0.1973684	1	0	0.3982748
FOREOWN	0.1755461	0.9742	0	0.2775367
INDU	0.5776316	1	0	0.4942619

Source: Compiled by the author (2025).

Correlation Analysis

A correlation analysis is run to show the association between variables and identify variables with high correlation, which may lead to a problem of multicollinearity. Table 6 presents the correlation matrix between the variables, which showed that there was no strong association between any of the variables. The Variance Inflation Factor (VIF) was also used to identify if there was a presence of

multicollinearity. VIF measures the correlation between independent variables, which may lead to collinearity problems in the model. The rule of thumb for the measure of multicollinearity is a VIF score exceeding 5 to 10 with R squared ranging from 0.8 to 0.9 [102], which suggests that a variable in the model might be highly collinear. From Table 7, the highest VIF score is 2.67 (Firm size), indicating the absence of multicollinearity.

Table 6. Correlation matrix

	SRQ	REP	COMP	OWN	TURN	MULTP	GEND	PERF	SIZE	LOSS	GOVTOWN	FOREOWN	MULTN	IND
SRQ	1.0000													
REP	0.1607	1.0000												
COMP	0.6231	0.2873	1.0000											
OWN	-0.1223	0.2798	-0.0365	1.0000										
TURN	-0.0407	-0.1163	0.0063	-0.1272	1.000									
MULTPDIRE	0.2009	0.5170	0.2477	0.0700	-0.0495	1.0000								
GEND	0.1030	0.1710	-0.0305	0.0385	0.0294	0.0370	1.0000							
PERF	0.0416	0.0047	0.0576	-0.0431	-0.0358	0.0126	0.0867	1.0000						
SIZE	0.5966	0.2336	0.7326	-0.1210	0.0458	0.2323	-0.1618	0.1160	1.000					
LOSS	-0.0829	0.0452	-0.0521	0.0684	-0.0154	0.0303	-0.0178	-0.6764	-0.1017	1.0000				
GOVTOWN	-0.1594	-0.1032	-0.1963	-0.0724	-0.0304	-0.1119	-0.0837	0.0134	-0.1252	-0.0352	1.0000			
FOREIGNOWN	0.3297	0.0749	0.3490	-0.1483	0.0952	0.0258	-0.0183	0.0101	0.3936	-0.0690	-0.1275	1.000		
MULTINAT	0.4085	0.0497	0.3213	-0.1712	0.0876	-0.0018	0.0376	0.0535	0.3413	-0.1204	-0.1258	0.7373	1.0000	
IND	0.3243	0.1220	0.3098	0.0763	0.0911	0.0246	-0.1246	0.1630	0.4206	-0.1555	0.1238	0.2714	0.2694	1.0000

Source: Compiled by the author (2025).

Table 7. Variance Inflation Factor (VIF)

Variable	VIF	1/VIF
SIZE	2.67	0.375008
FOREIGNOWN	2.34	0.428227
COMP	2.33	0.429066
MULTINAT	2.31	0.433389
PERF	1.92	0.521347
LOSS	1.89	0.528996
REP	1.65	0.604475
MULTP	1.43	0.699418
IND	1.41	0.707292
OWN	1.22	0.816986
GEND	1.14	0.875120
GOVTOWN	1.13	0.885589
TURN	1.06	0.967104
MEAN VIF	1.73	

Source: Compiled by the author (2025).

The results of the regression were provided in Table 8. Column 1 provides the baseline regression considering the indices of the sustainability reporting quality (SRQ), while columns 2-7 present the marginal effects of the categorical data (i.e., from Poor to Excellent). The marginal effects show the likelihood of a worse or better quality of sustainability reporting [46]. The Likelihood ratio (LR Chi²) result (350.35; $p < 0.001$) indicates a strong overall model fit and the independent variables (CEO attributes) explain the levels of sustainability reporting quality. The Pseudo R-square describes the explanatory power and improvement over the baseline, indicating a 25% log-likelihood which is moderate.

The baseline result shows a positive and significant relationship between managerial compensation and sustainability reporting quality (co-eff. 0.7892; $p < 0.0001$), which indicates that an increase in CEOs' compensation would enhance the quality of sustainability disclosure. The result also revealed that an increase in the number of female CEOs will lead to a better disclosure of more information on sustainability issues (coeff. 1.7896; $p < 0.0001$) as the results revealed a significant and positive impact of the presence of female CEOs on sustainability reporting quality. Firms led by female CEOs are much more likely to achieve higher quality sustainability disclosure. Multiple directorships demonstrate a positive and significant effect on sustainability reporting quality (co-eff. 0.4249; $p < 0.1$). CEOs holding positions on other boards are associated with better sustainability reporting.

Table 8. Ordinal Logistic Regression Results

Variables	Baseline regression	Categorical outcome for marginal effects						
		0 = Poor	1 = Low	2 = Fair	3 = Moderate	4 = Good	5 = High	6 = Excellent
REP	-0.7547 (0.2942)**	0.1811 (0.0665)***	-0.0559 (0.0260)**	-0.0715 (0.0264)***	-0.0348 (0.0127)***	-0.0135 (0.0052)***	-0.0045 (0.0019)**	-0.0009 (0.0005)*
COMP	0.7892 (0.1088)***	-0.1966 (0.0269)***	0.0484 (0.0138)***	0.0812 (0.0146)***	0.0429 (0.0087)***	0.0171 (0.0040)***	0.0058 (0.0017)**	0.0012 (0.0006)**
OWN	-2.4775 (1.8125)	0.6172 (0.4516)	-0.1519 (0.1168)	-0.2550 (0.1895)	-0.1348 (0.1009)	-0.0537 (0.0405)	-0.0182 (0.0140)	-0.0036 (0.0032)
TURN	-0.6758 (0.2587)***	0.1633 (0.0596)**	-0.0493 (0.0227)**	-0.0649 (0.0240)***	-0.0318 (0.0117)***	-0.0124 (0.0047)***	-0.0041 (0.0017)**	-0.0008 (0.0005)*
MULTP	0.4249 (0.2410)*	-0.1058 (0.0597)*	0.0230 (0.0127)*	0.0442 (0.0258)*	0.0245 (0.0152)	0.0099 (0.0064)	0.0034 (0.0023)	0.0007 (0.0005)
GEND	1.7896 (0.2942)***	-0.3930 (0.0502)***	-0.0126 (0.0279)***	0.1487 (0.0255)***	0.1462 (0.0374)***	0.0762 (0.0231)**	0.0286 (0.0110)***	0.0059 (0.0033)*
PERF	-1.4145 (1.0512)	0.3524 (0.2619)	-0.0867 (0.0667)	-0.1456 (0.1099)	-0.0770 (0.0592)	-0.0307 (0.0236)	-0.0104 (0.0081)	-0.0021 (0.0018)
SIZE	0.3325 (0.0877)***	-0.0828 (0.0219)***	0.02039 (0.0071)***	0.03423 (0.0101)***	0.0181 (0.0056)***	0.0072 (0.0024)***	0.0024 (0.0009)**	0.0005 (0.0003)*
LOSS	-0.3810 (0.3226)	0.0941 (0.0786)	-0.0253 (0.0235)	-0.0383 (0.0318)	-0.0195 (0.0160)	-0.0077 (0.0063)	-0.0026 (0.0022)	-0.0005 (0.0005)

Variables	Baseline regression		Categorical outcome for marginal effects					
GOVTOWN	-36.3326 (15.0297)**	9.0513 (3.7040)**	-2.2275 (1.2384)*	-3.7396 (1.5414)**	-1.9771 (0.7609)***	-0.7877 (0.3110)**	-0.2662 (0.1143)**	-0.0533 (0.0311)*
FOREOWN	-2.1171 (0.5469)***	0.5274 (0.1358)***	-0.1298 (0.0481)***	-0.2179 (0.0612)***	-0.1152 (0.0330)***	-0.0459 (0.0144)**	-0.0155 (0.0057)***	-0.0031 (0.0017)*
MULTN	1.6974 (0.3429)***	-0.3901 (0.0667)***	0.0227 (0.0232)	0.1572 (0.0300)***	0.1254 (0.0335)***	0.0597 (0.0201)**	0.0217 (0.0088)**	0.0044 (0.0026)*
IND	0.6903 (0.2482)**	-0.1688 (0.0590)***	0.0463 (0.0196)**	0.0683 (0.0246)***	0.0349 (0.0132)***	0.0138 (0.0055)**	0.0046 (0.0020)**	0.0009 (0.0006)*
LR Chi ² (13)	350.35***							
Pseudo R ²	0.2503							

***, ** and * represent significance at $p < 0.01$, $p < 0.05$, $p < 0.1$, respectively. Standard errors are reported in parentheses. Source: Computed by the author (2025).

CEO turnover and reputation appear to be significant and negatively related to the quality of sustainability reports. The replacement (change) in CEO tends to reduce the quality of sustainability information (coeff. -0.6758 $p < 0.001$), and the quality of sustainability reports is more likely to decline with a more reputable manager (coeff. -0.7547 $p < 0.05$).

The study rejects the hypothesis of a positive relationship between managerial stockownership and sustainability reporting quality. Managerial stock ownership is not statistically significant (co-eff. -2.4775 ; $p > 0.1$), thus, it does not affect the quality of sustainability reporting.

From the results of the marginal effects (Column 2–7), for every unit increase in CEO compensation, there is a 19.66% lesser likelihood of poor sustainability information disclosure, a 4.84% greater likelihood of low sustainability reporting quality, and a 8.12% greater likelihood of low sustainability reporting quality. There is a 4.29% greater likelihood that an increase in managerial remuneration results in moderate reporting quality, a 1.71% greater likelihood of good sustainability reporting and a 0.12% greater chance of excellent quality reporting. It is 39.30% less likely that an increase in the number of female CEOs will lead to poor sustainability reporting quality, 14.62% less likely that sustainability reporting quality will be moderate, while an increase in the number of female CEOs will 2.86% more likely be associated with high sustainability reporting quality and 0.59% more likelihood to have an excellent-quality report.

Where a CEO holds appointments on the board of other firms, it is 10.58% less likely that firms have poor sustainability disclosure. There is a 2.30% greater likelihood that an increase in multiple directorships will lead to low sustainability reporting quality, a 4.42% greater likelihood that a sustainability report will be of fair quality, a 2.45% that the quality will be moderate and a 0.34% likelihood of high-quality reporting.

Better CEOs reputation may result in an 18.11% greater likelihood of low sustainability reporting quality, a 5.59% lesser likelihood of poor quality of sustainability reporting, a 7.15% lesser likelihood of a fair quality, a 3.48% lesser likelihood of moderate reporting quality, a 1.35% lesser likelihood of good quality reporting and a 0.09% lesser likelihood of excellent quality of sustainability reporting. Similarly, there is a 16.33% greater likelihood of poor sustainability report quality where there is an increase in CEO turnover, a 4.93% lesser likelihood of producing low-quality reporting, a 6.49% lesser likelihood of fair-quality reporting and a 3.18% lesser likelihood of moderate-quality reporting. An increase in turnover is 0.08% less likely to lead to excellent reporting quality.

Robustness Tests

To ensure that the estimations are not sensitive to modelling assumptions or unobserved heterogeneity by firms, a number of robustness checks are carried out. The researchers conducted a robust test using ESG disclosure by firms following extant studies [36; 43; 47; 54; 59]. The research used ESG disclosure of firms by comparing it with the GRI reporting framework. The GRI reporting framework is an internationally recognized and most widely used framework, which provides guidelines on the disclosure of material sustainability information, and ensures stakeholder inclusiveness [6; 28; 36]. Houque and Khan [6] further confirmed that the United Nations' partnership with the GRI to promote SDGs has made the adoption of the GRI more established. Furthermore, previous Nigerian studies on sustainability reporting disclosure employ the GRI template, therefore, serving as a motivation to employ this standard.

The study post-estimation diagnostic tests include autocorrelation and heteroskedasticity for the robustness result (Table 9). The Woodridge test for autocorrelation showed that the null hypothesis for the absence of autocorrelation

Table 9. Post-Estimation Tests

Woodridge Test for Autocorrelation		
F	484.732	
Prob	0.0000	Presence of Autocorrelation
Breusch-Pagan/ Cook- Weisberg test for Heteroskedasticity		
Chi ²	9.92	
Prob	0.0016	Presence of Heteroskedasticity

Source: Compiled by the author (2025).

is rejected. Also, the p-value for heteroskedasticity indicated the presence of heteroskedasticity. To counter these problems, panel estimations are made using robust and cluster-adjusted standard errors to make sure the process of statistical inference is reliable [103; 104]. To study how the results can be sensitive to other panel specifications, the research estimates linear panel model using pooled OLS

and random effects as additional benchmarks (Table 10). The Breusch-Pagan Lagrangian Multiplier (BPLM) test ($\text{chibar}^2 = 1917.80$; $\text{p.value} = 0.000$) is a very strong indicator that pooled OLS is not appropriate. In addition, the Sargan-Hansen test ($\text{chi}^2 = 9.03$; $\text{p-value} = 0.7002$) reveals that the random-effects specification is more suitable than the fixed effects. The findings are generally similar in the

Table 10. Robust Regression Results

Variables	Pooled OLS	RE	RE (robust)
REP coeff	-0.1620191	-0.1594115	-0.1594115
Std error	(0.0526747)***	(0.0624154)**	(0.0632406)**
COMP coeff	0.0221292	0.039461	0.039461
Std error	(0.004326)***	(0.0075749)***	(0.007675)***
OWN coeff	0.0351788	0.5907971	0.5907971
Std error	(0.2087192)	(0.2828762)**	(0.286616)**
TURN coeff	0.0071507	0.0401169	0.0401169
Std error	(0.0496243)	(0.0557428)	(0.0564798)
MULTP coeff	-0.0047772	0.1328798	0.1328798
Std error	(0.011672)	(0.0526508)**	(0.0533469)**
GEN coeff	0.0449459	-0.0921436	-0.0921436
Std error	(0.0628733)	(0.0700618)	(0.070988)
PERF coeff	0.2067607	0.1321066	0.1321066
Std error	(0.1400845)	(0.1929181)	(0.1954686)
FMS coeff	0.0894001	0.1051378	0.1051378
Std error	(0.0120822)***	(0.0151203)***	(0.0153202)***
LOSS coeff	-0.0931488	-0.102151	-0.102151
Std error	(0.0498916)*	(0.0622482)	(0.0630712)
GOVT coeff	-2.823236	-2.202473	-2.202473
Std error	(0.7774069)***	(0.8791784)**	(0.8908017)**
FORE coeff	0.0238955	1.297648	1.297648
Std error	(0.0504247)	(0.1199705)***	(0.1215566)***
MULTN coeff	0.4130519	-0.3653875	-0.3653875
Std error	(0.0666138)**	(0.0792306)***	(0.0802781)***
IND coeff	0.2475785	0.121372	0.121372
Std error	(0.0428205)***	(0.051368)**	(0.0520471)**
C	1.314492	-0.6465991	-0.6465991
	(0.1390905)***	(0.2208413)**	(0.2208413)**

Variables	Pooled OLS	RE	RE (robust)
F	38.20***	–	–
R ²	0.4857	0.4854	0.5021
Adjusted R ²	0.4729		
Wald chi ² (13)		509.87***	482.97**
BPLM			1917.80***
Sargan-Hansen statistics (chi ²)			9.03

Notes: ***, **, and * represent significance at 1%, 5%, and 10% levels, respectively. Also, robust standard errors are in parentheses () while variables are as defined in section 3.

Source: Computed by the author (2025).

form of the signs and significance of the coefficients, indicating the results are not carried out by the unmodelled panel dependence.

Furthermore, to deal with issues of unobserved heterogeneity in ordinal models, the research estimates a random-effects dynamic ordered logistic regression model and compares the outcome with that of the baseline pooled ordered logit model (Table 11). As a dynamic model, we lagged the dependent variable (sustainability reporting quality) in the analysis. The results presented in Table 11 are robust to the main regression results in Table 8. CEO compensation and gender are positive and signifi-

cantly related to the quality of sustainability reports. CEO turnover revealed a negative influence on sustainability reporting quality, while CEO reputation and interconnectedness were negative but not significant. Although ordered probit model is another estimation model of ordinal outcomes; the difference between the two models lies in the assumed distribution of the error term in the ordered probit models. The ordered logit model is used due to ease of interpretation. Therefore, it is found that the robustness tests indicate the key findings about the relationship between CEO characteristics and the quality of sustainability reports.

Table 11. Robustness Test with Random effects dynamic ordered logistic regression

Variables	Pooled Ordered Logistic Regression	Random effects Dynamic Ordered Logistic Regression
L.SRQ		1.4949 (0.1527)***
REP	–0.7547 (0.2942)**	–0.1038 (0.4124)
COMP	0.7892 (0.1088)***	0.5645 (0.1915)***
OWN	–2.4775 (1.8125)	1.0773 (3.2490)
TURN	–0.6758 (0.2587)***	–0.5081 (0.2927)*
MULTP	0.4249 (0.2410)*	–0.2203 (0.3822)
GEND	1.7896 (0.2942)***	1.0390 (0.4197)**
PERF	–1.4145 (1.0512)	–1.4969 (1.3494)
SIZE	0.3325 (0.0877)***	0.3011 (0.1552)*

LOSS	-0.3810 (0.3226)	-0.2338 (0.3987)
GOVTOWN	-36.3326 (15.0297)**	-10.0775 (12.7945)
FOREOWN	-2.1171 (0.5469)***	-1.4520 (1.1394)
MULTN	1.6974 (0.3429)***	1.6570 (0.8017)**
IND	0.6903 (0.2482)**	1.0807 (0.5824)*
LR Chi ² (13)	350.35***	
Pseudo R ²	0.2503	
Wald Chi ² (14)		209.16***

Notes: ***, **, and * represent significance at 1%, 5%, and 10% levels, respectively. Also, robust standard errors are in parentheses () while variables are as defined in section 3.

Discussion of Findings

This study evaluates the effect of managerial attributes on the quality of sustainability reports. The results of the regression analysis revealed that managerial compensation is statistically significant and positively influences the sustainability reporting quality. This result affirms the propositions of the upper echelons and agency theories, connoting the influence of managerial compensation to reduce information asymmetry. Empirical studies show that managerial compensation influences reporting quality [52; 69; 71]. This is inconsistent with the findings of Adeoye et al. [14]; Iveland and Moe [78]; and Oloredo et al. [69] who reported a negative relationship between managerial compensation and financial reporting quality, connoting that managers are motivated to meet earnings forecasts to manipulate financial statements. The positive relationship between CEO compensation and the quality of sustainability reports reflects organisations' practice of performance-based compensation structures. Therefore, in alignment with agency theory, CEO compensation enhances more and better information disclosure.

The study found evidence of a significant and positive relationship of multiple directorships and managerial ownership on one side, and the quality of sustainability reports on the other. Holding multiple appointments enhances the higher disclosure of sustainability information as these CEOs would like to ensure open information disclosure to avoid conflict of interest in fulfilling their responsibilities. Moreover, multiple directorships tend to reveal the professional networks and expertise being derived from sitting on other firms' boards, in alignment with the resource dependency theory thus, refuting the busyness hypothesis. This aligns with the research by Cooper and Uzun [89]; Harywaman et al. [15] which revealed that busy CEOs positively improve financial reporting quality, in alignment with the resource dependency theory. This is not consist-

ent with the results of the studies by Al-Haddad et al. [90]; Ferris et al. [86]; Saleh et al. [92] which found that multiple directorships negatively influence firm performance as they make the managers more busy and less efficient in their primary appointments. Abd Alhadiet al. [85] also documented a negative relationship between multiple directorships and earnings quality.

The study fails to reject the hypothesis regarding the positive relationship between CEO gender diversity and sustainability reporting quality. The result showed that there is a greater likelihood of high-quality sustainability reporting disclosure as female CEOs are associated with better ethical practices and sensitivity to stakeholders. Females on board are active and enhance the effectiveness of the board, hence, female CEOs are more likely to ensure quality carbon information disclosure [6]. The result is in line with previous studies, which found evidence of the positive influence of female directors on sustainability reporting quality [48-49; 96; 98-99].

The greater the recognition and better the reputation of a CEO, the greater the likelihood of a decrease in disclosure quality. This suggests that CEOs may often believe stakeholders rely on their ability and recognition, and for that reason, not disclose relevant information. Hence, it may appear that to maintain their reputation, CEOs disclose ESG information for compliance purposes, in alignment with the legitimacy theory. In this case, CEOs may selectively disclose positive information, which can serve as impression management/ greenwashing, reducing the quality of the information disclosed. This supports the findings of Malmendier and Tate [67], who documented that award-winning CEOs are mostly busy with other activities external to the company and engage in management of earnings. This is inconsistent with the findings of Michelon [50], who also found that reputation is highly significant and positively related to environmental information dis-

closure. Moreover, the study by Sridhar [67] reveals that managers' reputation influences their information disclosure. Also, Chen and Chen [66] reported that managerial ability enhances the disclosure of environmental financial information.

The regression results reveal a negative relationship between CEO turnover and sustainability reporting quality. This may occur as the new CEO tends to adjust to the position and organization especially when such appointments are not internal, therefore, firms experiencing CEO changes tend to have lower-quality sustainability reporting. This reflects the effects of succession changes in the firm, as the new CEO may take time adjusting to a new environment, hence the need to increase board oversight during CEO turnover. The result aligns with that of extant studies, stating that change of managers negatively affect reporting quality [15; 78; 83]. Niu et al. [84]; Yoo et al. [83] asserted that increased CEO turnover leads to more ESG-washing reports. On the other hand, Bernard et al. [79] found a positive relationship between CEO turnover and sustainability performance, noting that sustainability performance improves when an external CEO is appointed.

The notion that ownership of shares by managers may influence their effectiveness and performance may not be applicable in this case. This supports the study by Al Al-mosh and Khatib [105]; Idawati et al. [12], indicating that managerial share ownership does not have an impact on the quality of sustainability report, while contradicting the findings of Oloredo et al. [49]; Saidu [73], who reported a positive impact of managerial ownership on financial reporting quality.

The results of the control variables reveal that firm size is positive and significantly related to SRQ (coeff. 0.3352, $p < 0.0001$). This connotes that larger firms are more likely to disclose more information and have a higher sustainability reporting quality than smaller firms. This supports previous studies, which claim that bigger firms provide more information than smaller firms [49; 101; 106]. This further attests to the fact that multinational firms tend to produce higher quality sustainability reports (coeff. 1.6974, $p < 0.0001$). Multinational firms are likely to have more quality sustainability reports because of their access and competitiveness in the global market, resources and regulatory scrutiny. Furthermore, industry effects reveal that environmentally sensitive firms disclose more information with a significant and positive impact on the quality of sustainability reporting (coeff. 0.6903; $p < 0.001$).

There is a significant but negative relationship between government ownership and sustainability reporting quality (coeff. -36.3326 , $p < 0.05$). Government ownership is less likely to produce better-quality sustainability reports. Foreign ownership has a negative effect on sustainability reporting quality (coeff. -2.1171 ; $p < 0.0001$). This is contrary to the results of Amidjaya and Widadgo [107]; Sumarta et al. [108], who found evidence of a positive effect of government and foreign ownership on sustainability report.

However, there is a negative non-significant relationship between loss and sustainability reporting quality (co-eff -0.3810 , $p > 0.1$). This study also found a similar result in regard to the relationship between firm performance and the quality of sustainability reporting (co-eff. -1.4145 , $p > 0.1$). This suggests that less information may be reported when firms report loss or when there is a decline in profit. This contradicts the study by Chen and Chen [66]; Iveland and Moe [78]; Kumar et al. [101], which discovered that managers disclose more information when firm profit increases. Chen and Chen [66] found that firms that reported loss disclose more financial information on environmental issues. However, this aligns with the study by Iyoha and Ohiokha [106]; Olagunju et al. [49], who found that firm performance is negatively associated with firms' environmental disclosure.

Consistent with the Ordinal regression results in Table 8, the robustness test in Table 10 showed that CEO reputation has a negative and significant effect on the quality of sustainability reporting. CEO compensation, share ownership and multiple directorships positively influence sustainability reporting quality. CEO turnover has a negative and significant effect on sustainability reporting quality. The result aligns with the upper echelons theory, which proposes that managerial traits and characteristics affect strategic decisions. However, the relationship between gender and sustainability reporting quality is not significant. The results of the control variables are mostly similar with the SRQ index using the ordinal logistic regression. Government ownership and foreign ownership are negative, while the size of the company, i.e., multinational corporations, positively influences the quality of sustainability report. Furthermore, the findings are consistent with the delayed effects and robust to dynamic specifications as shown in Table 11.

Conclusion

The paper explores CEO attributes (compensation, gender, turnover, ownership, etc.) as determinants of SRQ – a relatively novel intersection in African finance literature. While previous studies (e.g., Olagunju et al. [49]; Erin et al., [46]) examined firm-specific, governance and SRQ, few have integrated such composite CEO-level analysis. This study evaluated the influence of managerial characteristics on the quality of sustainability reports in Nigerian listed firms. The research obtained relevant data from 76 non-financial firms on the Nigerian Exchange Group (NGX). The study utilized an index to measure the quality of sustainability reporting quality which extends the SRQ measure used in previous studies. The results of the study on the index for sustainability reporting quality demonstrated that only few firms had disclosed sustainability reports either in the annual reports or as a stand-alone report. Furthermore, the findings provide evidence of a significant relationship between CEO characteristics and the quality of sustainability information disclosure.

The agency theory posits that CEO compensation may be employed to align with shareholder-managers' interests.

In addition, CEO gender diversity and multiple directorships have significant and positive effects on the quality of corporate sustainability information. Multinational and large firms are more likely to disclose better-quality information from the results of the control variables, while foreign government ownerships are negatively related to sustainability reporting quality. Nigerian firms should design sustainability-linked compensation packages as well as promote more gender diversity in managerial positions to enhance information disclosure quality. In addition, multiple directorships foster reporting quality, and this should be encouraged while regulatory governance structure should be placed for potential busyness concerns and conflict of interest. Conversely, CEO reputation and share ownership often divert attention away from sustainability communication with their image while prioritizing other reporting areas. Previous studies suggest that this behaviour may stem from overconfidence, highlighting the need for strengthened board oversight. In the event of CEO replacement, an appropriate training programme should be implemented to ensure the new CEO is introduced to the culture and practices of the firm.

The study integrates the upper echelons and legitimacy theories. It aligns with the upper echelons theory, confirming the influence of CEOs traits on strategic information disclosure. CEO characteristics influence their values, strategic priorities, and cognitive framework, impacting reporting quality. The result of sustainability reporting quality suggests that firms disclose sustainability information for legitimacy and regulatory adherence to avoid scrutiny over strategic intent; the reporting quality was poor at many firms. This study's results aligns with previous studies in Nigeria and other emerging countries on the influence of CEO characteristics on sustainability performance and reporting quality of firms [14; 52; 56; 69; 70; 78; 84; 96; 100]. The study is significant to shareholders and potential investors as they need relevant and reliable information in the decision-making process, hence, the need for more quality information disclosure, particularly in non-financial information reports. Stakeholders also use non-financial information in evaluating firm operations and governance practices. Moreover, policymakers and regulatory bodies can set minimum requirements for sustainability reports to ensure transparent, comparable and better information. The study's limitation includes the use of CEO's personal attributes while suggesting that psychological traits of CEOs can be explored in future studies. Moreover, the sustainability reporting quality index uses a binary scoring method which focuses on observable quality dimensions considering Nigeria's voluntary reporting environment. In addition, the scope of the study excluded financial firms, while focusing only on non-financial companies.

References

1. Kolk A. The social responsibility of international business: From ethics and the environment to CSR and sustainable development. *Journal of World Business*. 2016;51(1):23-34. <https://doi.org/10.1016/j.jwb.2015.08.010>
2. In S.Y., Schumacher K. Carbonwashing: A new type of carbon data-related ESG greenwashing. Working Paper. 2021. <https://doi.org/10.2139/ssrn.3901278>
3. Treepongkaruna S., Yong H.H.A., Thomsen S., et al. Greenwashing, carbon emission, and ESG. *Business Strategy and the Environment*. 2024;33(8):8526-8539. <https://doi.org/10.1002/bse.3929>
4. Zimon G., Arianpoor A., Salehi M. Sustainability reporting and corporate reputation: the moderating effect of CEO opportunistic behavior. *Sustainability*. 2022;14(3):1257. <https://doi.org/10.3390/su14031257>
5. Kolk A., Levy D., Pinske J. Corporate responses in an emerging climate regime: the institutionalization and commensuration of carbon disclosure. *European Accounting Review*. 2008;17(4):719-745. <https://doi.org/10.1080/09638180802489121>
6. Houqe M.N., Khan H.Z. What determines the quality of carbon reporting? A system-oriented theories and corporate governance perspective. *Business Strategy and the Environment*. 2023;32(6):3197-3216. <https://doi.org/10.1002/bse.3295>
7. Chen A.J., Wong T.J. Institutional factors: political economy, legal systems, and social norms. In: *Handbook on the Financial Reporting Environment*. Edward Elgar Publishing Ltd.; 2025. <https://doi.org/10.4337/9781800888685.00027>
8. Singhania M., Saini N. Institutional framework of ESG disclosures: comparative analysis of developed and developing countries. *Journal of Sustainable Finance & Investment*. 2023;13(1):516-559. <https://doi.org/10.1080/20430795.2021.1964810>
9. Igwe M.N., Khatib S.F.A., Bazhair A.H. Sustainability reporting in Africa: A systematic review and agenda for future research. *Corporate Social Responsibility and Environmental Management*. 2023;30(5):2081-2100. <https://doi.org/10.1002/csr.2494>
10. Oloo C. ISSB's SASB refresh signals Africa's next leap in sustainable finance. *Africa Sustainability Matters*. 2025. (In Russ.) Accessed on 02.11.2026. URL: <https://africasustainabilitymatters.com/issbs-sasb-refresh-signals-africas-next-leap-in-sustainable-finance/>
11. Okwuosa I. Making Nigeria's voice heard in IFRS S1 & S2 sustainability standards. *The Guardian*. 2025. Accessed on 02.11.2026. URL: <https://guardian.ng/opinion/making-nigerias-voice-heard-in-ifrs-s1-s2-sustainability-standards/>
12. Idawati W., Prabowo H.S., Pratiwi A.R., et al. Influencing factors on sustainability reporting quality based on Sustainable Development Goals (SDGs) considering COVID-19. *Business: Theory &*

- Practice*. 2024;25(2):509-522. <https://doi.org/10.3846/btp.2024.19579>
13. Mei F., Ge W., Luo S., et al. Why do CFOs become involved in material accounting manipulations? *Journal of Accounting and Economics*. 2011;51(1-2):21-36. <https://doi.org/10.1016/j.jacceco.2010.09.005>
 14. Adeoye E.T., Akinkoye E.O., Tajudeen A., et al. Executive compensation and financial reporting quality of Nigerian financial service industry. *International Journal of Accounting & Finance*. 2021;7(1):130-147. <https://doi.org/10.46281/ijaf.v7i1.1310>
 15. Ali A., Zhang W. CEO tenure and earnings management. *Journal of Accounting and Economics*. 2015;59(1):60-79. <https://doi.org/10.1016/j.jacceco.2014.11.004>
 16. Garcia-Meca E., Garcia-Sanchez I. Does managerial ability influence the quality of financial reporting? *European Management Journal*. 2018;36(4):544-557. <https://doi.org/10.1016/j.emj.2017.07.010>
 17. Habib A., Hossain M. CEO/CFO characteristics and financial reporting quality: a review. *Research in Accounting Regulation*. 2013;25(1):88-100. <https://doi.org/10.1016/j.racreg.2012.11.002>
 18. Harymawan I., Nasih M., Rahayu N.K., et al. Busy CEOs and financial reporting quality: evidence from Indonesia. *Asian Review of Accounting*. 2022;30(3):314-337. <https://doi.org/10.1108/ARA-11-2021-0203>
 19. Seifzadeh M., Salehi M., Abedini B., et al. The relationship between management characteristics and financial statement readability. *EuroMed Journal of Business*. 2020;16(1):108-126. <https://doi.org/10.1108/EMJB-12-2019-0146>
 20. Zavertiaeva M., Ershova T. Rule with an iron hand: powerful CEOs, influential shareholders and corporate performance in Russia. *European Journal of Management and Business Economics*. 2022;34(2):211-228. <https://doi.org/10.1108/EJMBE-08-2021-0228>
 21. Lazareva E. Do CEO Behavior Biases and Personal Traits Influence ESG Performance? The Evidence from Emerging Capital Market of Russia. *Journal of Corporate Finance Research = Korporativnye Finansy*. 2022;16(4):72-92. <https://doi.org/10.17323/j.jcfr.2073-0438.16.4.2022.72-92>
 22. Hamza S., Jarboui A. CSR or social impression management? Tone management in CSR reports *Journal of Financial Reporting and Accounting*. 2022;20934):599-617. <https://doi.org/10.1108/JFRA-04-2020-0115>
 23. Clarkson P.M., Ponn J., Richardson G.D., et al. A textual analysis of US corporate social responsibility reports. *Abacus*. 2020;56(1):3-34. <https://doi.org/10.1111/abac.12182>
 24. Huang X., Teoh S.H., Zhang Y. Tone management. *The Accounting Review*. 2014;89(3):1083-1113. <https://doi.org/10.2308/accr-50684>
 25. Kanbaty M., Hellmann A., He L. Infographics in corporate sustainability reports: providing useful information or used for impression management? *Journal of Behavioral and Experimental Finance*. 2020;26:100309. <https://doi.org/10.1016/j.jbef.2020.100309>
 26. Merkl-Davies D.M., Brennan N.M. A conceptual framework of impression management: new insights from psychology, sociology and critical perspectives. *Accounting and Business Research*. 2011;41(5):415-437. <https://doi.org/10.1080/00014788.2011.574222>
 27. Lozano M.B., Martinez-Ferrero J. Do emerging and developed countries differ in terms of sustainable performance? Analysis of board, ownership and country-level factors. *Research in International Business and Finance*. 2022;62:101688. <https://doi.org/10.1016/j.ribaf.2022.101688>
 28. Miras-Rodríguez M.M., Martínez-Martínez D., Escobar-Perez B. Which corporate governance mechanisms drive CSR disclosure practices in emerging countries? *Sustainability*. 2019;11(1):61. <https://doi.org/10.3390/su11010061>
 29. Strekalina A., Zakirova R., Shinkarenko A., et al. The Impact of ESG Ratings on Financial Performance of the Companies: Evidence from BRICS Countries. *Journal of Corporate Finance Research = Korporativnye Finansy*. 2023;17(4):93-113. (In Russ.) <https://doi.org/10.17323/j.jcfr.2073-0438.17.4.2023.93-113>
 30. Rajawat S., Mahajan R. Trends and determinants of quality of sustainability reporting: an analysis of Indian banks. *Discover Sustainability*. 2024;5:452. <https://doi.org/10.1007/s43621-024-00634-3>
 31. Le B.T.H., Nguyen N.Q., Nguyen C.V. Assessment of the quality of non-financial information disclosure: empirical evidence from listed companies in Vietnam. *The Journal of Asian Finance, Economics and Business*. 2022;9(5):111-118. <https://doi.org/10.13106/JAFEB.2022.VOL9.NO5.0111>
 32. Dong Y., Fu R., Gao F., et al. Determinants of economic consequences of non-financial disclosure quality. *European Accounting Review*. 2015;25(2):287-317. <https://doi.org/10.1080/09638180.2015.1013049>
 33. Drobetz W., El Ghouli S., Guedhami O., et al. Beyond ownership: the role of institutional investors in International Corporate Governance. *Corporate Governance: An International Review*. 2025;33(5):1024-1038. <https://doi.org/10.1111/corg.12635>

34. Cicchiello A.F., Marrazza F., Perdichizzi S. Non-financial disclosure regulation and environmental, social, and governance (ESG) performance; The case of EU and US firms. *Corporate Social Responsibility and Environmental Management*. 2022;30(3):1121-1128. <https://doi.org/10.1002/csr.2408>
35. Milena P., Lahorka H. Exploring the quality of social information disclosed in non-financial reports of Croatian companies. *Economic Research-Ekonomska Istraživanja*. 2018;31(1):2024-2043. <https://doi.org/10.1080/1331677X.2018.1480968>
36. Santamaria R., Paolone F., Cucari N., et al. Non-financial strategy disclosure and environmental, social and governance score: Insight from a configurational approach. *Business Strategy and the Environment*. 2021;30(9):1993-2007. <https://doi.org/10.1002/bse.2728>
37. Sierra-Garcia L., Garcia-Benau M.A., Bolas-Araya M. Empirical analysis of non-financial reporting by Spanish companies. *Administrative Sciences*. 2018;8(3):29. <https://doi.org/10.3390/admsci8030029>
38. Kiliç M., Kuzey C. The effect of corporate governance on carbon emission disclosures. Evidence from Turkey. *International Journal of Climate Change Strategies and Management*. 2019;11(1):35-53. <https://doi.org/10.1108/IJCCSM-07-2017-0144>
39. Sethi S., Martell T., Demir M. An evaluation of the quality of corporate social responsibility reports by some of the world's largest financial institutions. *Journal of Business Ethics*. 2017;140(4):787-805. <https://doi.org/10.1007/s10551-015-2878-8>
40. Lopez M.V., Garcia A., Rodriguez L. Sustainable development and corporate performance: a study based on the Dow Jones sustainability index. *Journal of Business Ethics*. 2007;75(3):285-300. <https://doi.org/10.1007/s10551-006-9253-8>
41. Schroder P. Mandatory non-financial reporting in the banking industry: assessing reporting quality and determinants. *Cogent Business & Management*. 2022;9(1):2073628. <https://doi.org/10.1080/23311975.2022.2073628>
42. Muslu V., Mutlu S., Radhakrishnan S., et al. Corporate social responsibility report narratives and analyst forecast accuracy. *Journal of Business Ethics*. 2019;154(4):1119-1142. <https://doi.org/10.1007/s10551-016-3429-7>
43. Faria M., Monterio S., Roque V. The impact of the quality of sustainability reporting on the financial performance of large companies operating in Portugal. *Journal of Business, Economics and Finance*. 2024;13(2):80-87. <https://doi.org/10.17261/Pressacademia.2024.1942>
44. Al-Shaer H., Albitar K., Hussainey K. Creating sustainability reports that matter: an investigation of factors behind the narratives. *Journal of Applied Accounting Research*. 2021;23(3):738-763. <https://doi.org/10.1108/JAAR-05-2021-0136>
45. Erin O., Adegboye A., Bamigboye O.A. Corporate governance and sustainability reporting quality: evidence from Nigeria. *Sustainability Accounting, Management and Policy Journal*. 2022;13(3):680-707. <https://doi.org/10.1108/SAMPJ-06-2020-0185>
46. Oyerogba E.O., Oladele F., Kolawole P.E., et al. Corporate governance practices and sustainability reporting quality: evidence from the Nigerian listed financial institution. *Cogent Business & Management*. 2024;11(1):2325111. <https://doi.org/10.1080/23311975.2024.2325111>
47. Sebrina N., Taqwa S., Afriyenti M., et al. Analysis of sustainability reporting quality and corporate social responsibility on companies listed on the Indonesia stock exchange. *Cogent Business & Management*. 2023;10(1):2157975. <https://doi.org/10.1080/23311975.2022.2157975>
48. Azman M.I.K.B.K., Rashid A.B.A. Board composition and characteristics' effect on the quality of sustainability reporting among companies in Malaysia. *Global Business and Management Research*. 2020;12(4):278-296. Accessed on 02.11.2026. URL: <https://www.gbmrjournal.com/pdf/v12n4/V12N4-26.pdf>
49. Olagunju A., Oloredo T.E., Aderemi A.A., et al. Influence of firm attributes and governance on the quality of sustainability reports of Nigerian deposit money banks. *Istanbul Business Research*. 2025;54(1):23-37. <https://doi.org/10.26650/ibr.2025.54.1351667>
50. Michelon G. Sustainability disclosure and reputation: a comparative study. *Corporate Reputation Review*. 2011;14:79-96. <https://doi.org/10.1057/crr.2011.10>
51. Ullmann A. Data in search of a theory: a critical examination of the relationship among social performance, social disclosure, and economic performance. *The Academy of Management Review*. 1985;10(3):540-577. <https://doi.org/10.2307/258135>
52. Al-Shaer H., Zaman M. CEO compensation and sustainability reporting assurance: Evidence from the UK. *Journal of Business Ethics*. 2019;158(1):233-252. <https://doi.org/10.1007/s10551-017-3735-8>
53. Erin O., Bamigboye O.A., Oyewo B. Sustainable development goals (SDG) reporting: an analysis of disclosure. *Journal of Accounting in Emerging Economies*. 2022;12(5):761-789. <https://doi.org/10.1108/JAEE-02-2020-0037>
54. Hidayah N., Nugroho L., Prihanto H. The determinant factors of sustainability report quality and corporate performance: an empirical study. *International Journal of Finance, Insurance and*

- Risk Management*. 2021;11(1):24-37. <https://doi.org/10.35808/ijfirm/247>
55. Hambrick D.C., Mason P.A. Upper echelons: the organization as a reflection of its top managers. *The Academy of Management Review*. 1984;9(2):193-206. <https://doi.org/10.2307/258434>
 56. Farrakhova I. How CEO affects ESG and the financial performance of companies. *Journal of Corporate Finance Research*. 2022;16(4):93-118. <https://doi.org/10.17323/j.jcfr.2073-0438.16.4.2022.93-118>
 57. Kurdyukov N. CEO personal traits and company performance: Evidence from Russia. *Journal of Corporate Finance Research = Korporativnye Finansy*. 2023;17(3):5-27. (In Russ.) <https://doi.org/10.17323/j.jcfr.2073-0438.17.3.2023.5-27>
 58. Hambrick D.C. Upper echelons theory. In: Augier M., Teece D., eds. *The Palgrave Encyclopedia of Strategic Management*. London: Palgrave Macmillan; 2016. https://doi.org/10.1057/978-1-349-94848-2_785-1
 59. Endiana D.M., Sudana P., Ariyanto D., et al. Sustainability reporting quality on corporate reputation: the role of political and military connections. *Economics and Environment*. 2025;92(1):918. <https://doi.org/10.34659/eis.2025.92.1.918>
 60. Popli M., Ahsan F.M., Mukherjee D. Upper echelons and firm internationalization: A critical review and future directions. *Journal of Business Research*. 2022;152:505-521. <https://doi.org/10.1016/j.jbusres.2022.07.048>
 61. Onwuka G. Determinants of sustainability reporting: a review of literature. *Journal of Social and Administrative Sciences Studies*. 2021;5(1):89-105.
 62. Deegan C., Blomquist C. Stakeholder influence on corporate reporting: an exploration of the interaction between WWF-Australia and the Australian minerals industry. *Accounting, Organizations and Society*. 2006;31(4/5):343-372. <https://doi.org/10.1016/j.aos.2005.04.001>
 63. Aras G., Crowther D. Corporate sustainability reporting: a study in disingenuity? *Journal of Business Ethics*. 2014;87(1):279-288. <https://doi.org/10.1007/s10551-008-9806-0>
 64. Gray R., Kouhy R., Lavers S. Corporate social and environmental reporting: a review of the literature and a longitudinal study of UK disclosure. *Accounting, Auditing and Accountability*. 1995;8(2):47-77. <https://doi.org/10.1108/09513579510146996>
 65. Sridhar S.S. Managerial reputation and internal reporting. *The Accounting Review*. 1994;69(2):343-363. Accessed on 02.11.2026. URL: <https://www.jstor.org/stable/248591>
 66. Chen J., Chen J. Does managerial ability affect the quality of environmental financial disclosure? *Sustainability Accounting, Management and Policy Journal*. 2019;11(6):1055-1073. <https://doi.org/10.1108/SAMPJ-09-2018-0248>
 67. Malmendier U., Tate G. Superstar CEOs. *The Quarterly Journal of Economics*. 2009;124(4):1593-1638. Accessed on 02.11.2026. URL: <https://www.jstor.org/stable/40506267>
 68. Francis J., Huang A.H., Rajgopal S., et al. CEO reputation and earnings quality. *Contemporary Accounting Research*. 2008;25(1):109-147. <https://doi.org/10.1506/car.25.1.4>
 69. Olorede T.E., Abogun S., Olowookere J.K. Executive compensation, corporate governance and financial reporting quality: Evidence from listed firms in Nigeria. *Istanbul Management Journal*. 2022;(93):1-19. <https://doi.org/10.26650/imj.2022.93.001>
 70. Oyerogba E.O., Riro G.K., Memba F. The perceived relationship between executive compensation package and profitability of listed companies in Nigeria. *European Journal of Business, Economics and Accountancy*. 2016;4(3):11-22. Accessed on 02.11.2026. URL: <https://www.idpublications.org/wp-content/uploads/2016/02/Full-Paper-THE-PERCEIVED-RELATIONSHIP-BETWEEN-EXECUTIVE-COMPENSATION-PACKAGE.pdf>
 71. Brown-Liburd H., Zamora V.L. The role of corporate social responsibility (CSR) assurance in investors' judgments when managerial pay is explicitly tied to CSR performance. *Auditing: A Journal of Practice and Theory*. 2014;34(1):75-96. <https://doi.org/10.2308/ajpt-50813>
 72. Lafond R, Roychowdhury S. Managerial ownership and accounting conservatism. *Journal of Accounting Research*. 2008;46(1):101-135. <https://doi.org/10.1111/j.1475-679X.2008.00268.x>
 73. Saidu S. CEO characteristics and firm performance: focus on origin, education and ownership. *Journal of Global Entrepreneurship Research*. 2019;9:29. <https://doi.org/10.1186/s40497-019-0153-7>
 74. Tan R.S.K., Chng P., Tan T. CEO share ownership and firm value. *Asia Pacific Journal of Management*. 2001;18(3):355-371. <https://doi.org/10.1023/A:1010601912422>
 75. Rose J.M., Mazza C.R., Norman C.S., et al. The influence of director stock ownership and board discussion transparency on financial reporting quality. *Accounting, Organizations and Society*. 2013;38(5):397-405. <https://doi.org/10.1016/j.aos.2013.07.003>
 76. Huson M.R., Malatesta P.H., Parrino R. Managerial succession and firm performance. *Journal of Financial Economics*. 2004;74(2):237-275. <https://doi.org/10.1016/j.jfineco.2003.08.002>

77. Rachinsky. A. Self-enforced mechanisms of corporate governance: evidence from managerial turnover in Russia. *CEFIR*. 2005:Working Paper w0051. Accessed on 02.11.2026. URL: <https://ideas.repec.org/p/cfr/cefir/w0051.html>
78. Iveland I.N.S., Moe T.A.W. *The effect of CEO turnover on ESG disclosure. A study of listed US firms' ESG disclosure in the Management's Discussion and Analysis section of 10-K filings and CEO turnover in the period 2011-2019*. Master thesis, Norwegian School of Economics, Bergen. 2020.
79. Bernard Y., Godard L., Zouaoui M. The effect of CEOs' turnover on the corporate sustainability performance of French firms. *Journal of Business Ethics*. 2018;150(4):1049-1069. <https://doi.org/10.1007/s10551-016-3178-7>
80. Altunbas Y., Thornton J., Uymaz Y. CEO tenure and corporate misconduct: Evidence from US banks. *Finance Research Letters*. 2018;26:1-8. <https://doi.org/10.1016/j.frl.2017.11.003>
81. Desai H., Hogan C.E., Wilkins W.S. The reputational penalty for aggressive accounting: earnings restatements and management turnover. *The Accounting Review*. 2006;81(1):83-112. Accessed on 02.11.2026. URL: <https://www.jstor.org/stable/4093129>
82. Land J.K. CEO turnover around earnings restatements and fraud. *Pacific Accounting Review*. 2010;22(3):180-198. <https://doi.org/10.1108/01140581011091666>
83. Yoo J.S., Song W.J., Ku J.E. CEO turnover, ESG-washing, and firm value. *Managerial and Decision Economics*. 2024;45(5):2801-2819. <https://doi.org/10.1002/mde.4123>
84. Niu Z., Zhu Y., Wang Y., CEO turnover and ESG greenwashing: evidence from China. *Applied Economics Letters*. 2024;32(19):2778-2782. <https://doi.org/10.1080/13504851.2024.2345317>
85. Abd Alhadi S., Senik R., Johari J., et al. Multiple directorships and earnings quality: does investor protection matter? *Journal of Asia Business Studies*. 2020;15(4):605-624. <https://doi.org/10.1108/JABS-08-2019-0254>
86. Ferris S.P., Jayaraman N., Liao M. Better directors or distracted directors? An international analysis of busy boards. *Global Finance Journal*. 2020;44:100437. <https://doi.org/10.1016/j.gfj.2018.05.006>
87. Kawakami A. Multiple job holding as a strategy for skills development. *Japan & the World Economy*. 2019;49:73-83. <https://doi.org/10.1016/j.japwor.2018.09.004>
88. Shu P., Yeh Y., Chiu S., et al. Board external connectedness and earnings management. *Asia Pacific Management Review*. 2015;20(4):265-274. <https://doi.org/10.1016/j.apmr.2015.03.003>
89. Cooper E.W., Uzun H. Busy outside directors and ESG performance. *Journal of Sustainable Finance & Investment*. 2022:1-20. <https://doi.org/10.1080/20430795.2022.2122687>
90. Al-Haddad L.M., Gerged A.M., Saidat Z., et al. Do multiple directorships stimulate or inhibit firm value? Evidence from an emerging economy. *International Journal of Accounting and Information Management*. 2022;30(4):546-562. <https://doi.org/10.1108/IJAIM-05-2022-0094>
91. Mendez C.F., Garcia R.A., Pathan S. Monitoring by busy and overlap directors: an examination of executive remuneration and financial reporting quality. *Spanish Journal of Finance and Accounting/Revista Española de Financiación y Contabilidad*. 2017;46(1):28-62. <https://doi.org/10.1080/02102412.2016.1250345>
92. Saleh M.W., Shurafa R., Shukeri S.N., et al. The effect of board multiple directorships and CEO characteristics on firm performance: evidence from Palestine. *Journal of Accounting in Emerging Economies*. 2020;10(4):637-654. <https://doi.org/10.1108/JAEE-12-2019-0231>
93. Perry Y.Z., Srinidhi B., Yang Z. Gender diversity and audit quality: Evidence from the pairing of audit partners. *Auditing: A Journal of Practice & Theory*. 2023;42(4):81-104. <https://doi.org/10.2308/AJPT-2021-031>
94. Davis J.G., Garcia-Cestona M. Financial reporting quality and the effects of CFO gender and board gender diversity. *Journal of Financial Reporting and Accounting*. 2023;21(2):384-400. <https://doi.org/10.1108/JFRA-12-2020-0360>
95. Ye K., Zhang R., Rezaee Z. Does top executive gender diversity affect earnings quality? A large sample analysis of Chinese listed firms. *Advances in Accounting*. 2010;26(1):47-54. <https://doi.org/10.1016/j.adiac.2010.02.008>
96. Al-Shaer H., Zaman M. Board gender diversity and sustainability reporting quality. *Journal of Contemporary Accounting & Economics*. 2016;12(3):210-222. <https://doi.org/10.1016/j.jcae.2016.09.001>
97. Garcia-Sanchez I.M., Martínez-Ferrero J., García-Meca E. Gender diversity, financial expertise and its effects on accounting quality. *Management Decision*. 2017;55(2):347-382. <https://doi.org/10.1108/MD-02-2016-0090>
98. Dyck A., Lins K.V., Roth L., et al. Insider entrenchment and corporate sustainability around the world. 2019. Accessed on 02.11.2026. URL: https://iwfsas.org/iwfsas2019/wp-content/uploads/2017/02/S1_P1.pdf

99. Singhania S., Singh J., Aggrawal D., et al. Board gender diversity and sustainability reporting quality: a generalized ordered logit approach. *Kybernetes*. 2024;53(8):2679-2699. <https://doi.org/10.1108/K-07-2022-0963>
100. Das S.K., Khalilur Rahman M., Roy S. Does ownership type affect sustainability reporting disclosure? Evidence from an emerging market. *International Journal of Disclosure and Governance*. 2024;21(1):52-68. <https://doi.org/10.1057/s41310-023-00180-w>
101. Kumar K., Kumari R., Nandy M., et al. Do ownership structures and governance attributes matter for corporate sustainability reporting? An examination in the Indian context. *Management of Environmental Quality: An International Journal*. 2022;33(5):1077-1096. <https://doi.org/10.1108/MEQ-08-2021-0196>
102. Kim J.H. Multicollinearity and misleading statistical results. *Korean Journal of Anesthesiology*. 2019;72(6):558-569. <https://doi.org/10.4097/kja.19087>
103. Torres-Reyna O. *Panel data analysis fixed and random effects using Stata (v. 4.2)*. Princeton University. 2007. Accessed on 02.11.2026. URL: <http://dss.princeton.edu/training/>
104. Lee Y.R., Pustejovsky J.E. Comparing random effects models, ordinary least squares, or fixed effects with cluster robust standard errors for cross-classified data. *Psychological Methods*, 2024;29(6):1084–1099. <https://doi.org/10.1037/met0000538>
105. Al Amosh H., Khatib S.F.A. Ownership structure and environmental, social and governance performance disclosure: The moderating role of the board independence. *Journal of Business and Socio-Economic Development*. 2021;2(1):49-66. <https://doi.org/10.1108/JBSED-07-2021-0094>
106. Iyoha A.I., Ohiokha G. Firm attributes and environmental accounting disclosure of listed firms in high and low environmentally sensitive industries in Nigeria. *International Journal of Innovative Research in Accounting and Sustainability*. 2023;8(1):1-13. Accessed on 02.11.2026. URL: <https://ijiras.org/article/ART1675635039>
107. Amidjaya P.G., Widagdo A.K. Sustainability reporting in Indonesian listed banks: do corporate governance, ownership structure and digital banking matter? *Journal of Applied Accounting Research*. 2020;21(2):231-247. <https://doi.org/10.1108/JAAR-09-2018-0149>
108. Sumarta N.H., Rahardjo M., Satriya K.K.T., et al. Bank ownership structure and reputation through sustainability reporting in Indonesia. *Social Responsibility Journal*. 2023;19(6):989-1002. <https://doi.org/10.1108/SRJ-01-2021-0024>