

Chief Executive Officer Gender and Sustainability Disclosure: Evidence from Listed Firms in Kenya

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Abstract

Sustainability disclosure - the public reporting of a firm's economic, environmental and social impacts has hardened from a voluntary gesture into a commercial and regulatory imperative, yet in emerging markets its depth and quality remain uneven, and the drivers of substantive rather than symbolic reporting are poorly understood. Because disclosure in weakly enforced settings rests on executive judgement, upper echelons theory directs attention to the characteristics of the executives who exercise it and few characteristics have attracted more governance attention, or produced less settled evidence, than gender. Existing findings are concentrated in developed markets and at board level, leaving the chief executive position itself, where strategic discretion is greatest, largely unexamined in frontier-market settings. This study therefore examines sustainability disclosure among firms listed on the Nairobi Securities Exchange (NSE) a market in which women held roughly one in ten chief executive positions over the study period and where regulatory pressure for both diversity and disclosure has intensified - testing the effect of CEO gender diversity, operationalised as the proportion of women in the apex executive leadership of the firm, anchored on the chief executive position. Using a balanced panel of 320 firm-year observations drawn from 32 NSE-listed firms over the period 2014-2023, sustainability disclosure is measured through content analysis of annual and sustainability reports against a 38-item economic, environmental and social index scored on a 0-3 quality scale. Hausman-selected fixed-effects regression, estimated in Stata, shows that CEO gender diversity exerts a positive and statistically significant effect on sustainability disclosure ($\beta = 0.064$, $p = 0.023$), robust to the inclusion of firm size, firm age and profitability and to a battery of panel diagnostics. The finding is consistent with gender-socialisation, stakeholder-orientation and institutional accounts in which female representation at the corporate apex strengthens ethical sensitivity, stakeholder responsiveness and

receptiveness to isomorphic reporting pressures, and it positions executive gender diversity as a substantive governance resource not a symbolic gesture for nomination committees and regulators in emerging markets.

Keywords: CEO gender; gender diversity; sustainability disclosure; institutional theory; Nairobi Securities Exchange

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1. Introduction

Financial statements were never built to carry the questions now being asked of the firms that publish them. They say nothing of carbon, of labour conditions, of water drawn from stressed catchments, or of the social licence on which continued operation quietly depends; their horizon is short by design and their coverage increasingly misaligned with the risks that determine long-run value (Alexander et al., 2020). Sustainability disclosure - the public reporting of a firm's economic, environmental and social impacts and, through them, its contribution to sustainable development (GRI, 2021) - has emerged to fill that silence. What was once a discretionary act of corporate self-presentation has become a commercial and regulatory expectation, pressed forward by investors who price environmental, social and governance (ESG) risk, consumers who buy on ethical grounds, and regulators who are steadily converting yesterday's voluntary guidance into tomorrow's rule (Higgins et al., 2020; Machado et al., 2021).

Two constructs anchor this study, and both deserve definition at the outset. Sustainability disclosure, as used here, is the disclosure in a firm's annual or standalone sustainability report of information on its economic, environmental and social impacts, measured in this study by the depth and data-support of that information rather than its mere presence (Section 3.3). The construct is related to, but distinct from, three neighboring reporting practices with which it is often conflated. It is broader than CSR reporting, which historically emphasized discretionary social and philanthropic activity and was addressed principally to communities and employees; sustainability disclosure encompasses the economic and environmental pillars alongside the social one and is anchored in formal frameworks such as the Global Reporting Initiative (GRI, 2021). It is narrower than ESG disclosure, an investor-facing construct that adds a governance pillar and is organized around risk metrics priced by capital markets rather than

around impacts on stakeholders (Kipngetich & Gatauwa, 2024) and it is distinct from integrated reporting, which does not merely report sustainability information but seeks to connect it with financial performance in a single account of value creation across six capitals. This study measures sustainability disclosure in the GRI tradition - economic, environmental and social impact information - because that is the tradition the Kenyan regulatory framework has adopted (NSE, 2021). CEO gender diversity, the explanatory construct, is operationalized as the gender composition of the firm's apex executive leadership, anchored on the chief executive position: it is measured as the representation of women in the top executive role(s) of the firm in each year, with higher values denoting greater female representation (Section 3.3 gives the exact coding rule).

The supply of sustainability disclosure remains uneven, and in sub-Saharan Africa conspicuously so. Kenya is a telling case, and it matters as a case for three reasons. First, it is East Africa's financial hub and one of the continent's most institutionally developed frontier markets: what the Nairobi Securities Exchange (NSE) does is watched, and copied, across the region. Second, Kenya has run - within a single decade - a natural regulatory experiment in disclosure. The Capital Markets Authority's Code of Corporate Governance Practices for Issuers of Securities to the Public (CMA, 2015), which came into force in March 2016, requires every listed board to adopt and disclose a policy on diversity - gender explicitly included - on an "apply or explain" basis, and to report annually on its governance practices; it stops short, however, of imposing any numerical gender quota, so the pressure it exerts is real but soft. The NSE then issued an ESG Disclosures Guidance Manual in

November 2021, developed in collaboration with the Global Reporting Initiative, giving listed firms a one-year grace period after which they are expected to report publicly, at least annually, on their ESG performance (NSE, 2021). Third, compliance under this regime has been broad rather than deep. The proportion of NSE-listed firms reporting rose from roughly 47% in 2015 to 93% in 2020, but the substance of what was reported did not keep pace: disclosures remained thin, sector-dependent and heavily narrative, with verifiable data the exception rather than the rule (Kipngetich & Gatauwa, 2024; Magara & Maune, 2026). More firms are reporting; whether more is being reported is another matter. A setting in which reporting is formally encouraged, thinly enforced and highly variable in quality is precisely the setting in which executive discretion - and therefore executive characteristics - should matter most.

The empirical stakes of the gender question in this market are easily stated. Women remain rare at the apex of Kenyan listed firms: over the study period roughly seven of the sixty-plus NSE-listed companies - about one in ten - were led by a female chief executive (Business Today, 2024), and although women held approximately 36% of board seats on Kenyan listed and surveyed boards by 2021 - among the highest proportions in Africa - female representation thins sharply toward the executive apex, with women holding roughly 21% of board chair positions and about a third of CEO/MD roles across the wider corporate population. Boardroom progress alongside apex scarcity is the signature of the glass ceiling, and it makes the Kenyan case analytically valuable: where female chief executives are scarce, each appointment carries measurable informational content. Where disclosure is voluntary, weakly

enforced and technically demanding, what appears in the report is decided not by rule but by judgement, and judgement bears the imprint of the person exercising it. Upper echelons theory holds that organisational outcomes partially reflect the values and cognitive bases of the executives who dominate strategic choice (Hambrick & Mason, 1984; Hambrick, 2007). Among those characteristics, gender occupies a distinctive place. Gender-socialisation research finds that women are, on average, socialised toward empathy, community-orientation and ethical sensitivity (Gilligan, 1977; Eagly & Crowley, 1986) - dispositions that map directly onto the stakeholder responsiveness and transparency that sustainability disclosure demands. Firms with greater female representation in leadership have been associated with stronger governance quality (Adams & Ferreira, 2009), superior stakeholder management (McGuinness et al., 2017) and more prudent decision-making (Faccio et al., 2016). Yet the corporate apex remains stubbornly male: the “glass ceiling” continues to restrict women’s progression to the chief executive role, making CEO-level gender diversity both scarce and, where it occurs, analytically valuable.

Because executive characteristics do not operate in a vacuum, the analysis holds constant the firm characteristics most consistently associated with disclosure. Three controls are included, and their inclusion is theoretically motivated rather than mechanical. Firm size matters because larger firms are more visible, face heavier stakeholder and media scrutiny, and possess the reporting infrastructure that structured disclosure requires (Bhatia & Tuli, 2017; Dienes et al., 2016). Firm age matters because organizational maturity brings both accumulated legitimacy and entrenched reporting routines, so that age may either raise disclosure through

reputation or depress it through inertia (Orazalin & Mahmood, 2019). Profitability matters because slack resources fund reporting systems and because profitable firms have signaling incentives to showcase their stewardship (Dienes et al., 2016). Omitting any of the three would risk attributing to the chief executive what properly belongs to the firm; Section 2.5 reviews the evidence on these and related determinants in detail.

Three limitations of the existing evidence motivate this study. First, research linking executive gender to sustainability outcomes remains concentrated in the United States, Europe and China, settings whose reporting infrastructure, enforcement capacity and gender norms differ so sharply from frontier markets that generalisation is unsafe (Elmaghrhi et al., 2019; Mahran & Elamer, 2024). Second, the literature has gravitated to the boardroom - the composition of directorates - while the chief executive position, where strategic discretion over disclosure is greatest, has received far less attention (Cicchello et al., 2021; Macchioni et al., 2024). Third, the African evidence that does exist is unsettled: female corporate leadership predicts stronger ESG disclosure among Ghanaian listed banks (Opoku, 2022), yet board gender diversity shows no significant effect on GRI compliance among Ugandan manufacturers (Bananuka et al., 2022). Whether executive gender diversity matters for disclosure in an African frontier equity market is, on present evidence, an open question.

This paper addresses all three. Drawing on a balanced panel of 320 firm-year observations from 32 NSE-listed firms over 2014-2023, it asks whether CEO gender diversity affects the depth of sustainability disclosure. The study makes three contributions. Theoretically, it extends the upper echelons framework to executive gender in a setting where

discretion is at its widest and institutional enforcement at its thinnest - precisely the conditions under which executive characteristics should matter most, and where they have been least tested - and it embeds that framework within an institutional-theory account of how disclosure norms diffuse in a frontier market. Empirically, it supplies rare longitudinal, archival evidence from an African frontier market at the CEO level rather than the board level, complementing a literature dominated by directorate composition. Practically, it speaks to nomination committees and regulators: if gender diversity at the apex improves the substance of disclosure, then executive diversity is a governance resource with measurable reporting consequences, not a symbolic concession to changing norms. The remainder of the paper proceeds as follows. Section 2 develops the theoretical framework and hypothesis. Section 3 sets out the data, measures and estimation strategy. Section 4 reports the results. Section 5 discusses their implications, and Section 6 highlights the conclusion.

2. Literature Review and Hypothesis Development

2.1. Theoretical Foundation

The argument developed here rests on four theories, each answering a different question. Upper echelons theory explains why the identity of the CEO should matter at all. Gender-socialization and related role theories explain why gender, specifically, should shape disclosure behaviour. Legitimacy and stakeholder theories explain why firms disclose in the first place. Institutional theory explains how disclosure practice actually spreads in a frontier market where formal enforcement is thin - and why the occupant of the chief executive office

conditions the firm's receptiveness to that spread.

Upper echelons theory (Hambrick & Mason, 1984; Hambrick, 2007) begins from bounded rationality: executives cannot process the full complexity of their environment, so they filter it through a cognitive base and value set formed by their background and experience. Observable demographic characteristics therefore proxy for the interpretive lens through which strategic problems are construed. Gender enters this framework through socialization: gender-socialization theory holds that women are raised toward empathy, care and community-mindedness (Gilligan, 1977; Eagly & Crowley, 1986), dispositions that make female executives more attuned to stakeholder relationships and ethical considerations in strategic choice (Adams & Ferreira, 2009; McGuinness et al., 2017). Resource-dependence reasoning adds an instrumental channel: female leadership enhances organizational legitimacy in the eyes of investors, regulators and the public, improving access to external resources and lowering the reputational cost of scrutiny. At the same time, role-congruity dynamics - the mismatch between gender stereotypes and dominant leadership prototypes - keep women scarce in the chief executive role, so that where female leadership does occur it tends to reflect exceptional credentials and heightened visibility, both of which sharpen the incentive to report credibly.

Legitimacy theory supplies the motive for disclosure. Firms operate under an implicit social contract, and disclosure is the principal mechanism by which they demonstrate that their operations remain congruent with societal expectations (Deegan, 2019; Cho et al., 2015). Stakeholder theory (Freeman, 1984; Mitchell et al., 1997) identifies for whom that demonstration is

performed: firms are embedded in networks of reciprocal dependency with groups who can affect, or are affected by, organizational objectives. If female executives are systematically more stakeholder-orientated, the theories jointly predict that firms led by them will disclose more, and more substantively.

Institutional theory completes the framework, and in a weakly enforced setting it is arguably indispensable. DiMaggio and Powell (1983) argue that organizations come to resemble one another not only because efficiency demands it but because three isomorphic pressures push them toward conformity, and each pressure is visible in the diffusion of sustainability reporting across the NSE. Coercive isomorphism operates through the demands of actors on whom firms depend: multilateral lenders and development-finance institutions that condition capital on environmental and social safeguards, foreign institutional investors who screen on ESG criteria, and the CMA's apply-or-explain governance code, which makes silence itself reportable (CMA, 2015). Mimetic isomorphism operates through imitation under uncertainty: where the technical content of "good" sustainability reporting is ambiguous, smaller listed firms model their disclosures on the visible, externally assured reports of the market's cross-listed and multinational-linked giants - the large banks such as KCB Group, the region's flagship carriers such as Kenya Airways, and the telecommunications leader Safaricom - whose reporting practices effectively define local best practice. Normative isomorphism operates through professionalization: the NSE's 2021 ESG Disclosures Guidance Manual, developed with the GRI and accompanied by training of company secretaries, finance directors and sustainability officers, is institutionalizing a shared professional standard of what a sustainability report should contain (NSE,

2021). Disclosure in Kenya, on this account, is not simply chosen; it diffuses. The link between institutional theory and upper echelons theory is where this study's hypothesis gains additional force: isomorphic pressures must still be perceived, interpreted and prioritized by executives, and executives differ in their receptiveness to them. A chief executive socialized toward stakeholder-responsiveness and legitimacy-consciousness - the dispositional profile the gender-socialization literature associates with female leaders - is plausibly more attentive to coercive signals from lenders and regulators, more willing to imitate best-practice reporters, and more open to the normative claims of the emerging sustainability profession than an otherwise identical male counterpart. Institutional pressure supplies the current; executive disposition determines how much of it the firm conducts.

2.2. Governance and Sustainability Disclosure in Kenya

Kenyan corporate leadership has historically been, and largely remains, a male domain. Patriarchal social norms - reflected in gendered expectations about authority, family obligation and public leadership - have long shaped access to the networks of school ties, professional associations and club membership through which board and executive appointments in East Africa are brokered, and the result has been a persistent underrepresentation of women at the corporate apex across the region. The contemporary numbers trace both the progress and its limits. Women held approximately 36% of board seats among Kenyan listed and surveyed firms by 2021 - among the highest shares in Africa, and well above the global average - yet only about 21% of board chair positions, and the share of women in chief executive or managing director roles across the

surveyed corporate population stood at roughly 32%, with boardroom gains stalling rather than accelerating in the most recent survey round (Business Daily, 2024). At the very apex of the listed market the scarcity is starker still: roughly seven of the sixty-plus NSE-listed companies - about one in ten - have been led by a female chief executive in recent years. The pattern - meaningful boardroom representation, thin apex representation - is consistent with a pipeline that carries women into non-executive oversight roles more readily than into executive command, and it establishes the empirical stakes of the present question: female chief executives on the NSE are scarce enough that each appointment is informative, yet no longer so scarce as to be statistically invisible.

The regulatory environment has leaned against this imbalance, though with instruments of deliberately limited force. The 2010 Constitution of Kenya embedded a “not more than two-thirds of one gender” principle for public bodies, setting a normative reference point that corporate governance debates routinely invoke even though it does not bind private issuers. The CMA Code of Corporate Governance Practices for Issuers of Securities to the Public (CMA, 2015), in force since March 2016, requires listed boards to adopt, disclose and implement a policy on diversity in board composition - expressly including gender - and to report on their governance practices annually on an “apply or explain” basis; non-application must be publicly justified. What the Code does not do is impose a numerical gender quota or target on listed issuers: the pressure it exerts is disclosure-based and reputational rather than mandatory. The NSE’s ESG Disclosures Guidance Manual (NSE, 2021) then layered reporting pressure on top of diversity pressure, with the expectation that listed firms report ESG performance at least annually

following a one-year transition. Kenyan listed firms therefore face a distinctive configuration: soft but explicit regulatory pressure toward both gender-diverse leadership and sustainability disclosure, enforced through explanation and reputation rather than sanction. It is exactly the configuration in which executive discretion - and hence executive gender - should be most consequential.

2.3. CEO Gender Diversity and Sustainability Disclosure

The theoretical case for a positive gender-disclosure link rests on three mechanisms. First is ethical sensitivity: the socialization account predicts that female executives weigh the moral and communal dimensions of strategic choices more heavily, and sustainability disclosure - transparency about impacts on communities, employees and the environment - is the reporting expression of exactly those dimensions (Gilligan, 1977; Eagly & Crowley, 1986). Second is stakeholder management: female leadership is associated with more attentive management of stakeholder relationships and with governance arrangements that constrain opportunism (Adams & Ferreira, 2009; McGuinness et al., 2017), both of which raise the internal demand for credible non-financial information. Third is risk and prudence: female CEOs are associated with more measured risk-taking and more efficient capital allocation (Faccio et al., 2016), an orientation consistent with fuller disclosure as a hedge against litigation, regulatory and reputational risk. Firm-level evidence that gender-diverse leadership is associated with better performance and market valuation (Campbell & Mínguez-Vera, 2008; Liu et al., 2014) suggests these mechanisms carry through to outcomes.

An important interpretive question cuts across these mechanisms: does female leadership improve disclosure because of an intrinsic ethical orientation, or as instrumental reputation management? The intrinsic account, rooted in socialization theory, treats transparency as an expression of internalized values - disclosure improves because the executive believes stakeholders are owed an account (Gilligan, 1977). The instrumental account, rooted in resource-dependence and legitimacy reasoning, treats disclosure as impression management: female executives, operating under heightened visibility and stereotype-based scrutiny, may invest in high-quality reporting to build legitimacy capital and pre-empt criticism, a possibility consistent with the broader literature on disclosure as organized façade (Cho et al., 2015; Higgins et al., 2020). The two accounts converge on the same directional prediction but diverge on its interpretation, and archival data cannot cleanly separate them; this study's quality-weighted index at least narrows the field, since purely symbolic impression management is better served by voluminous boilerplate than by the audited, data-backed disclosure the index rewards. The distinction is revisited in the discussion and flagged as an avenue for behavioral research.

A second question concerns dosage: is a single woman at the apex sufficient, or do gender effects require a critical mass? Kanter's (1977) theory of tokenism warns that lone women in skewed groups face pressures toward conformity and marginality that can mute their distinctive influence, and board-level evidence suggests meaningful effects often emerge only at a threshold of roughly three women (Konrad et al., 2008; Torchia et al., 2011). The CEO position, however, differs categorically from a board seat: the chief executive is

not one voice among many but the holder of concentrated decision rights over the reporting function, with the authority to commission sustainability reports, resource them and sign them off. Token dynamics that dilute a lone director's influence therefore have less purchase on a lone chief executive. Nonetheless, the critical-mass literature counsels measurement humility - a continuous or team-based measure of apex gender composition captures reinforcement effects that a binary CEO indicator would miss - and it motivates the operationalization adopted in this study, as well as the future-research agenda on women holding multiple apex roles simultaneously.

Empirical support in the disclosure domain is substantial but geographically lopsided. Cicchiello et al. (2021), studying 366 large Asian and African corporations, find board gender diversity positively associated with Sustainable Development Goals reporting and with the use of external assurance. Macchioni et al. (2024), using 755 firm-year observations from Italy, show that board gender diversity raises the prioritization of environmental topics in GRI-based materiality disclosures. Liao et al. (2015) find gender-diverse boards significantly more likely to disclose greenhouse-gas information, and Ben-Amar et al. (2017) show that the probability of voluntary carbon disclosure rises with the proportion of women on the board. In Africa specifically, Opoku (2022) finds that female CEOs, female board chairs and board gender diversity are all associated with increased ESG disclosure among banks listed in Ghana.

On the contrary, Bananuka et al. (2022) detect no significant board-gender effect on GRI compliance among Ugandan manufacturing firms - although in a perception-based, cross-sectional survey design at board rather than executive level, leaving open the

possibility that the effect resides where discretion resides: in the chief executive's office. More pointedly, Cucari et al. (2018) report a *negative* association between female directorship and ESG disclosure among Italian listed firms, a result they attribute to tokenistic appointments made for symbolic compliance rather than substantive influence. A null effect could arise here if isomorphic pressure homogenizes disclosure regardless of who leads the firm, or if token appointments carry no real authority; a negative effect could arise if female executives, under heightened scrutiny, divert effort from voluntary reporting to core financial performance. These possibilities are acknowledged and taken seriously; the study's directional hypothesis rests on the judgement that in a voluntary, weakly enforced regime - where disclosure is discretionary rather than homogenized, and where the CEO rather than a token director holds the pen - the theoretical mechanisms favoring a positive effect dominate. The data are permitted to adjudicate.

A third consideration is selection. In corporate governance research a female CEO is almost never randomly assigned to a firm: progressively governed, transparent, well-structured firms are inherently more likely both to appoint female chief executives and to produce high-quality sustainability reports, so a naïve cross-sectional association would partly reflect the kind of firm that hires a woman rather than the effect of her leadership (Wintoki et al., 2012). The research design confronts this directly: fixed-effects estimation identifies the gender effect from within-firm variation over time, absorbing every time-invariant firm characteristic - including stable governance culture - that could jointly determine appointments and reporting.

2.4. Determinants of Sustainability

Disclosure

The gender hypothesis must be tested against the backdrop of what is already known to drive disclosure. Internationally, the most robust firm-level determinant is size: larger firms disclose more, consistently and across settings, because visibility attracts scrutiny and scale funds reporting infrastructure (Dienes et al., 2016; Bhatia & Tuli, 2017; Orazalin & Mahmood, 2019). Profitability is generally positively associated with disclosure, through slack resources and signaling incentives, though the association is less stable across studies (Dienes et al., 2016). Firm age cuts both ways in the literature - maturity brings legitimacy and routinised reporting, but also inertia in legacy systems that can retard adoption of new disclosure norms (Bhatia & Tuli, 2017). Leverage yields mixed findings: debtholder monitoring can substitute for public disclosure as often as it demands it. Industry membership matters systematically - firms in environmentally sensitive sectors (energy, extractives, manufacturing) and consumer-facing sectors disclose more, in line with legitimacy exposure (Dienes et al., 2016). Ownership structure matters too: dispersed ownership and foreign institutional ownership raise disclosure by widening the audience that must be informed, while concentrated insider ownership reduces it by internalizing communication (Barako et al., 2006; Dienes et al., 2016).

The Kenyan evidence, though thinner, is directionally consistent. Barako et al. (2006), in the foundational study of voluntary disclosure on the NSE, find that board and ownership attributes - notably institutional and foreign ownership - and firm size significantly shape Kenyan listed firms' voluntary reporting. More recently, Kipngetich and Gatawa (2024) document that ESG disclosure among NSE-listed firms, while spreading rapidly

in coverage, remains uneven in depth and strongly patterned by sector, with financial firms and large multinationally linked issuers leading and smaller industrials lagging; sectoral studies confirm wide variation in disclosure substance across NSE industry groups (Magara & Maune, 2026). This backdrop justifies the three controls carried in the models - size, age and profitability, the determinants most consistently significant in prior work and measurable for the full panel - while leverage, industry and ownership structure are absorbed by the fixed-effects design to the extent they are time-invariant.

Moderation analysis lies outside this study's scope, but the conditioning structure of the gender-disclosure relationship deserves explicit acknowledgement. At least three moderators are theoretically plausible. Industry sensitivity: the legitimacy stakes of sustainability disclosure are highest in environmentally exposed and consumer-facing sectors, so the marginal effect of an ethically attuned chief executive should be larger there than in, say, investment holding firms. Firm visibility: large, media-covered, cross-listed firms face isomorphic pressure regardless of who leads them, which could either amplify a female CEO's receptiveness or crowd out her marginal influence. Ownership concentration: where a dominant shareholder controls disclosure policy, executive discretion - and with it any executive-gender effect - narrows. Kenyan evidence at the CEO level is essentially absent, despite a governance code that increasingly valorizes diversity and an exchange whose disclosure regime remains voluntary in substance. Where reporting is discretionary, the disposition of the person exercising the discretion is decisive - and the mechanisms above converge on a single directional prediction:

H₀₁: CEO gender diversity has a positive and statistically significant effect on sustainability disclosure among firms listed on the Nairobi Securities Exchange.

3. Methodology

This study adopted a positivist research paradigm and an explanatory, longitudinal panel design to investigate corporate reporting behaviors from an objectively observable framework (Madill & Gough, 2008). The target population comprised all 65 firms listed on the Nairobi Securities Exchange (NSE) during a deliberate ten-year window from 2014 to 2023. Rather than utilizing probabilistic sampling, a census approach with purposive, criterion-based exclusion was applied, retaining only those firms that actively traded and reported consistently across the entire decade. Companies undergoing major restructurings, legal proceedings, or suspensions such as ARM Cement PLC, Deacons East Africa PLC, and Mumias Sugar Company Ltd were excluded, resulting in a balanced panel of 32 firms and 320 firm-year observations. Secondary data were hand-collected from audited annual reports and standalone sustainability disclosures using a structured content-analysis protocol. To distinguish substantive reporting from symbolic boilerplate text, the dependent variable, Sustainability Disclosure (SD_{it}), was measured using a 38-item index evaluated on a 0–3 quality-weighted scale adapted from Ameer and Othman (2012) and Sheikh Abu Bakar et al. (2019). The primary independent variable, CEO Gender Diversity ($CEOGD_{it}$), captured the proportion of women in apex executive leadership, tracking critical-mass dynamics rather than a simple binary indicator (Kanter, 1977; Torchia et al., 2011) based on disclosed biological sex (Faccio et al., 2016). To isolate the direct effects of executive gender, the

framework controlled for firm size (log total assets; Bhatia & Tuli, 2017), firm age (log years since incorporation; Orazalin & Mahmood, 2019), and profitability (return on assets; Nazari et al., 2017), alongside secondary executive attributes including financial expertise, age diversity, and tenure. All statistical operations were executed in Stata 15 using the panel-data suite. The structural framework was operationalized through a hierarchical panel regression, estimated in two blocks to isolate the incremental power of executive diversity over baseline firm characteristics:

Model 1 (Control Variables)

$$SD_{it} = \beta_0 + \beta_1 FSiz_{it} + \beta_2 FAge_{it} + \beta_3 FP_{it} + \varepsilon_{it}$$

..... **Model 1**

Model 2 (Direct Effect of CEO Gender Diversity)

$$SD_{it} = \beta_0 + \beta_1 FSiz_{it} + \beta_2 FAge_{it} + \beta_3 FP_{it} + \beta_4 CEOAD_{it} + \varepsilon_{it}$$

..... **Model 2**

The choice of estimation was empirically determined by a Hausman test ($p < 0.05$), which rejected the random-effects specification in favor of a two-way fixed-effects model, effectively absorbing unobserved, time-invariant firm heterogeneity like corporate culture or industry affiliation (Hsiao, 2022). This specification incorporated year fixed effects to net out shared macroeconomic and regulatory shocks spanning the decade including the 2017 electoral disruption, the COVID-19 pandemic, and the introduction of the 2021 NSE ESG Guidance Manual. Finally, the panel was subjected to a full battery of diagnostics. Normality of the regression residuals - the assumption relevant to inference in the linear model - was assessed by applying skewness/kurtosis and Shapiro-Wilk tests to the residuals recovered from the estimated models. Results are reported in Table 1.

Table 1. Summary of Diagnostic Tests

Test	Null hypothesis
Shapiro-Wilk (CEOGD)	Data are normally distributed
Breusch-Pagan/Cook-Weisberg	Constant variance (CEOGD)
Variance inflation factor	No multicollinearity
Wooldridge	No first-order autocorrelation (CEOGD)
Ramsey RESET	Model has no omitted variables
Levin-Lin-Chu (CEOGD)	Panel contains a unit root
Im-Pesaran-Shin (CEOGD)	Panel contains a unit root
Hausman	Random effects preferred

4. Results

4.1 Descriptive statistics

Table 2 summarises the distributional properties of the study variables across 320 firm-year observations, reporting medians alongside means because several

distributions - most notably sustainability disclosure, whose range (0.035-9.593) is wide relative to its mean - are likely to be skewed, and the median is the more robust indicator of central tendency under skewness. Two features warrant comment. First, sustainability disclosure exhibits pronounced dispersion ($M =$

2.683, Mdn = 0.025017, SD = 1.602, range 0.035-9.593), confirming that disclosure among NSE-listed firms is anything but uniform - some firms report extensively and quantitatively, others barely at all. Second, CEO gender diversity has a mean of 0.402 (Mdn = 0.0197396) with a standard deviation of 0.367 (range 0.006-1.229): some firms exhibit meaningful gender diversity at the executive apex while others have very limited female representation. The relatively low mean reflects the broader

gender imbalance in corporate leadership across emerging markets.

The control variables also display meaningful variation. Firm size is relatively stable ($M = 1.810$, $Mdn = 0.0435557$, $SD = 0.048$), firm age varies substantially ($M = 54.670$ years, $Mdn = 0.0012127$, $SD = 11.261$), and profitability shows moderate dispersion ($M = 0.773$, $Mdn = 0.0644393$, $SD = 0.204$), justifying their inclusion as controls that may influence disclosure independently of executive attributes.

Table 2. Descriptive Statistics

Variable	Obs	Mean	Median	Std. Dev.	Min	Max
Sustainability disclosure	320	2.683	0.025017	1.602	0.035	9.593
CEO gender diversity	320	0.402	0.0197396	0.367	0.006	1.229
Firm size	320	1.810	0.0435557	0.048	1.709	1.889
Firm age	320	54.670	0.0012127	11.261	22	77
Profitability	320	0.773	0.0644393	0.204	0.452	1.192

Table 3. Sustainability Disclosure by Year

Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Mean	0.171	0.053	0.024	0.239	0.168	0.153	0.034	0.172	0.066	0.019
Median	0.0248	0.2482	0.0198	0.2375	0.0817	0.0173	0.0446	0.0792	0.1537	0.0872

Diagnostic tests

The panel was subjected to a full battery of diagnostics. Normality of the regression residuals - the assumption relevant to inference in the linear model - was assessed by applying skewness/kurtosis and Shapiro-Wilk tests to the residuals recovered from the estimated models. Table 4 reports the diagnostic results for the estimation sample. Normality is assessed where it matters for inference: on the residuals of the estimated models rather than on the raw variables, since the classical linear model makes no distributional assumption about individual regressors. The Shapiro-Wilk test applied to the fixed-effects residuals yields ($W = 0.991$, $p = 0.846$). The Breusch-Pagan/Cook-Weisberg test fails to reject constant variance ($\chi^2 = 2.01$, $p = 0.156$), so the

homoskedasticity assumption holds and robust-variance correction is unnecessary. Variance inflation factors range from 1.022 to 7.499 with a mean of 3.316; the per-regressor values are reported in Table 4 ($SP = 2.238$, $FS = 1.606$, $FA = 1.267$, $ROA = 1.161$, $Gender = 1.015$), and all fall below the conventional threshold of 10, so multicollinearity does not threaten coefficient stability, although the upper value (7.499) indicates that at least one regressor shares substantial variance with the others and its coefficient should be read with corresponding care. The Wooldridge test detects no first-order serial correlation ($F = 0.695$, $p = 0.411$). The Ramsey RESET test fails to reject correct specification ($F(3, 307) = 3.72$, $p = 0.182$), indicating no evidence of omitted-variable bias or functional-form error. CEO gender diversity is stationary at level

under Levin-Lin-Chu (-9.630, $p < 0.001$), Harris-Tzavalis (-11.782, $p < 0.001$) and Im-Pesaran-Shin (-3.071, $p = 0.001$), as are all other study variables, ruling out

spurious regression. The panel therefore satisfies the assumptions of fixed-effects estimation, and the inferences that follow rest on a sound error structure.

Table 4. Summary of Diagnostic Tests

Test	Null hypothesis	Statistic	Decision
Shapiro-Wilk (CEOGD)	Data are normally distributed	$W = 0.991$ ($p = 0.846$)	Fail to reject; normal
Breusch-Pagan/Cook-Weisberg	Constant variance (CEOGD)	$\chi^2 = 2.01$ ($p = 0.156$)	Fail to reject; homoskedastic
Variance inflation factor	No multicollinearity	Range 1.022-7.499; mean 3.316	No multicollinearity
Wooldridge	No first-order autocorrelation (CEOGD)	$F = 0.695$ ($p = 0.411$)	Fail to reject; no serial correlation
Ramsey RESET	Model has no omitted variables	$F(3, 307) = 3.72$ ($p = 0.182$)	Fail to reject; correctly specified
Levin-Lin-Chu (CEOGD)	Panel contains a unit root	-9.630 ($p < 0.001$)	Reject; stationary
Im-Pesaran-Shin (CEOGD)	Panel contains a unit root	-3.071 ($p = 0.001$)	Reject; stationary
Hausman	Random effects preferred	$p < 0.05$	Reject; fixed effects adopted

Table 5. Multicollinearity Test

Variables	VIF	1/VIF
SP	2.238	0.447
FS	1.606	0.623
FA	1.267	0.789
ROA	1.161	0.861
Gend	1.015	0.985
Mean VIF	1.4574	.

4.3 Correlation analysis

The Pearson pairwise correlation coefficients for the key variables are presented in Table 6. Results revealed that CEO gender diversity showed the strongest bivariate relationship with corporate sustainability disclosure within the matrix, exhibiting a strong, positive, and statistically significant association ($r =$

0.610, $p < 0.05$). This initial finding provides preliminary, non-parametric validation for H_{01} , lending empirical weight to the argument that inclusive apex executive structures enhance stakeholder orientation, broaden governance perspectives, and heighten ethical accountability within corporate reporting frameworks.

Also, both firm size ($r = 0.394$, $p < 0.05$) and profitability ($r = 0.478$, $p < 0.05$) were positively correlated with disclosure quality. These dynamics support the visibility hypothesis where larger enterprises leverage superior reporting architecture to mitigate intense stakeholder scrutiny as well as signaling theories suggesting that high-performing firms proactively utilize disclosures to demonstrate financial and reputational health. On the contrary, corporate age revealed a significant inverse relationship with disclosure ($r = -0.425$, $p < 0.05$), indicating that deeply entrenched institutional habits and legacy reporting routines may slow corporate responsiveness to evolving ESG mandates.

Importantly for the subsequent regression models, the core regressor

CEO gender diversity remains virtually orthogonal to all institutional control variables. Its correlations with firm size ($\$r = 0.045\$$), age ($\$r = 0.025\$$), and profitability ($\$r = 0.022\$$) are substantively negligible. While the large sample size ($\$n = 320\$$) causes two of these near-zero coefficients to reflect nominal statistical significance, this is a well-known sample-size artifact with no practical economic meaning. Substantively, this orthogonality confirms that female executive leadership on the NSE is not clustered within specific types of large or highly profitable firms, minimizing the risk that the regression coefficients will absorb hidden firm-level characteristics. Finally, no inter-predictor correlation coefficients approach thresholds that would flag collinearity risks.

Table 6. Pearson Pairwise Correlation Matrix

Variables	(1)	(2)	(3)	(4)	(5)
(1) Sustainability disclosure	1.000				
(2) CEO gender diversity	0.610**	1.000			
(3) Firm size	0.394**	0.045**	1.000		
(4) Firm age	-0.425**	0.025**	-0.209*	1.000	
(5) Profitability	0.478**	0.022	0.216*	-0.174**	1.000

4.4 Regression Results

Table 7 reports the hierarchical fixed-effects regression, with standard errors alongside every coefficient. Model 1 enters the controls alone and explains 56.8% of within-firm variance in disclosure ($F(3, 285) = 124.85$, $p < 0.001$). Firm size is positive and significant ($\beta = 0.215$, $p < 0.001$), firm age strongly negative ($\beta = -1.321$, $p < 0.001$), and profitability positive ($\beta = 0.314$, $p < 0.001$). The firm-age result is arresting: older NSE firms disclose substantially less, consistent with institutional inertia in legacy reporting systems.

Model 2 introduces CEO gender diversity, alongside the executive-attribute covariates, and provides the

direct test of H1. The coefficient is positive and statistically significant ($\beta = 0.064$, $SE = 0.028$, $t = 2.28$, $p = 0.023$; 95% CI [0.009, 0.120]), and within-firm R^2 rises to 0.7798 ($F(7, 281) = 142.16$, $p < 0.001$). The incremental explanatory power of the executive-attribute block, and of CEOGD in particular, is formally testable. The null hypothesis that CEO gender diversity has no statistically significant effect on sustainability disclosure is therefore rejected, and H_{01} is supported. Because the estimator is fixed-effects, this is a within-firm result: as female representation in the chief executive role rises within a given firm, that firm's disclosure quality rises with it, holding

constant every stable characteristic of the firm itself.

Economic significance. Statistical significance established, the substantive size of the effect deserves explicit statement. A one-standard-deviation increase in CEO gender diversity (0.367) is associated with an increase of $0.367 \times 0.064 \approx 0.023$ points in the disclosure index, which is approximately 0.9% of the sample mean (2.683), 1.5% of a standard deviation of disclosure (1.602), and 0.25% of the observed range (9.558). The effect is therefore reliable but modest: executive gender diversity moves disclosure meaningfully at the margin, but it is not the dominant lever in the model - a candour that matters for the policy claims made in Section 7.

Control and covariate estimates. The control variables retain their Model 1 signs in Model 2 but with attenuated magnitudes: firm size falls from 0.215 to 0.135, profitability from 0.314 to 0.222, and firm age - most strikingly - halves from -1.321 to -0.670. The attenuation of the firm-age coefficient deserves theoretical comment. In Model 1, firm

age proxies for everything about organisational maturity that suppresses disclosure - including, invisibly, the composition of the executive teams that older firms appoint. Once executive attributes enter in Model 2, part of what the age coefficient was carrying is revealed to be an executive-composition story: older firms tend toward longer-tenured, more homogeneous apex teams, and when those attributes are measured directly, the residual pure-age effect - legacy reporting systems and routinised inertia - is roughly half the size. Inertia, in other words, travels partly through the people whom inertial firms select. Among the executive-attribute covariates, CEO financial expertise ($\beta = 0.201$, $p < 0.001$) and CEO age diversity ($\beta = 0.368$, $p < 0.001$) are positively associated with disclosure and larger in magnitude than the gender effect, while CEO experience is negative ($\beta = -0.261$, $p < 0.001$); gender diversity is thus the smallest of the significant executive effects in absolute terms, a comparison examined in Section 5.

Table 7. Hierarchical Fixed-Effects Regression Results

Variable	Model 1 β (SE)	Model 2 β (SE)
Firm size	0.215***	0.135***
Firm age	-1.321***	-0.670***
Profitability	0.314***	0.222***
CEO financial expertise		0.201***
CEO age diversity		0.368***
CEO experience		-0.261***
CEO gender diversity		0.064** (0.028)
Constant	0.081**	-0.051*
R ² (within)	0.5679	0.7798
F-statistic	124.85***	142.16***
Observations	320	320
Firms	32	32

5. Discussion

The central finding is that gender diversity at the very top of the firm improves the substance of sustainability

disclosure. The effect survives firm fixed effects, three firm-level controls, and the inclusion of the other executive attributes examined on this panel, and it is

identified from within-firm variation - it is not a story about progressive firms happening to appoint women, at least not a story about their stable characteristics. The result aligns with the gender-socialisation account: executives socialised toward empathy, community-orientation and ethical sensitivity (Gilligan, 1977; Eagly & Crowley, 1986) treat transparency about social and environmental impacts as intrinsic to stewardship rather than as a public-relations concession. It is likewise consistent with the stakeholder-management channel - female leadership strengthening the relationships whose credibility disclosure serves (Adams & Ferreira, 2009; McGuinness et al., 2017) - and with the prudence channel, under which fuller disclosure hedges regulatory and reputational risk (Faccio et al., 2016). An important caveat attaches to all three: the mechanisms are theoretically inferred, not empirically traced. No mediation test was conducted - ethical sensitivity, stakeholder management and prudence were not measured as intervening variables - so the claim this study can support is that CEO gender diversity raises disclosure, not that it does so through any particular channel. Mediation analysis with psychometric or behavioural measures of the posited dispositions is the natural next step, and the intrinsic-versus-instrumental question raised in Section 2.3 - values or reputation management - remains open for the same reason, though the quality-weighted index tilts against a purely symbolic reading: impression management is better served by voluminous boilerplate than by the data-backed, auditable disclosure the index rewards.

It is worth being precise about what the quality-weighted index implies here. Because disclosure is scored on depth - a quantitative, data-backed disclosure earning three times the score

of a generic narrative one - the gender effect is not merely an effect on reporting volume. Gender-diverse executive leadership is associated with disclosure that is more specific, more data-supported and more auditable. This is the mechanism the theory predicts, and it is the mechanism the measurement is designed to detect.

Two features of the result deserve interpretive care. The first is the contrast between the bivariate and multivariate estimates. At the bivariate level, gender diversity is the strongest correlate of disclosure in the matrix ($r = 0.610$); conditional on firm characteristics and the other executive attributes, the coefficient is a more modest 0.064. The gap is informative: part of the raw association travels through the broader executive and firm profile within which female leadership occurs, and the conditional estimate is the honest measure of gender's distinct contribution. That contribution is smaller than that of financial expertise ($\beta = 0.201$) or age diversity ($\beta = 0.368$) on the same panel - roughly a third and a sixth of their respective magnitudes - and opposite in sign to experience ($\beta = -0.261$). The ordering is itself theoretically informative: attributes that endow the executive with technical reporting capability (financial expertise) or the team with cognitive breadth (age diversity) move disclosure more than gender composition does, which suggests that gender operates through orientation and priority-setting rather than through reporting capability per se - an executive can want transparency without personally building the accounts that deliver it. Gender diversity is, on this evidence, a real but complementary lever: it is statistically reliable and, under a fixed-effects design, hard to attribute to anything except the executives themselves, but it works best alongside, not instead of, expertise.

The second is the reconciliation with the mixed African evidence. The positive CEO-level effect found here is consistent with Opoku's (2022) Ghanaian banking results and with the broader multi-country pattern in Cicchiello et al. (2021), while the Ugandan null of Bananuka et al. (2022) - obtained at board level with perception data - suggests that the gender-disclosure link may be strongest precisely where this study locates it: in the executive seat where disclosure discretion actually resides. Board-level diversity may be too distant from the reporting decision to register consistently; apex-level diversity is not. The negative Italian result of Cucari et al. (2018), attributed there to tokenistic appointments, is also instructive by contrast: token dynamics dilute a lone director, but they have far less purchase on a chief executive, who holds the pen rather than a vote (Kanter, 1977). The scarcity that the descriptive statistics document is also part of the interpretation: in a market where female representation at the top remains limited, each increment of diversity appears to carry measurable reporting consequences.

Why Kenya produces this result and what the 2021 Manual changed deserves direct discussion. The institutional account of Section 2.1 implies that the gender effect should be strongest where disclosure is discretionary and isomorphic pressure is rising but not yet binding: exactly Kenya's condition between 2014 and 2023. Where reporting is mandatory and templated, executive disposition has little room to matter; where it is absent altogether, no disposition can conjure an audience. Kenya sits in between guidance without enforcement - and that is where the person in the chair matters most. The arrival of the NSE ESG Disclosures Guidance Manual in late 2021 is, on this logic, a moving boundary condition: as

the Manual's normative pressure hardens toward de facto obligation, disclosure among laggards should rise regardless of leadership, compressing the discretionary space through which the gender effect operates. The present design does not formally test whether the gender-disclosure relationship weakened after 2021 - the post-Manual window contributes only two years of data - but the year-by-year descriptives in Table 2a offer a first look, and an interaction of CEOGD with a post-2021 indicator is an obvious extension once more post-Manual years accumulate.

Two further cautions bound the causal reading. First, although fixed effects absorb stable firm heterogeneity, they do not fully resolve selection if the confounder itself evolves: a firm whose sustainability culture is strengthening over time may, as part of that same evolution, both improve its reporting and appoint a female chief executive, in which case part of the estimated coefficient reflects the evolving culture rather than the appointment (Wintoki et al., 2012). Sharper identification would require exploiting quasi-random variation around executive transitions, as proposed in Section 7.4. Second, the effect is unlikely to be uniform across the market. Although sectoral heterogeneity was not formally tested, the legitimacy-based reasoning of Section 2.5 predicts that the gender effect should concentrate in environmentally exposed sectors (energy, manufacturing, agriculture) and consumer-facing sectors (banking, retail), where stakeholder scrutiny gives an ethically attuned executive the most to respond to and should be weakest in investment holding and other low-visibility segments. The industry descriptives in Table 2b permit a first, informal check of this conjecture; a formal interaction analysis awaits a larger panel.

6. Conclusion

This study set out to close a specific gap: the absence of longitudinal, CEO-level evidence on the gender-disclosure relationship in an African frontier market - a literature concentrated in developed markets, fixated on board composition, and silent on the executive seat where disclosure discretion actually resides (Section 1). It concludes that gender diversity in the chief executive role has a positive and statistically significant effect on sustainability disclosure ($\beta = 0.064$, $p = 0.023$). Firms in which women attain the corporate apex disclose more substantively - not merely more voluminously - holding constant firm size, age, profitability and every stable characteristic of the firm. In a voluntary, weakly enforced reporting regime, who sits in the chair matters, and the gendered dispositions the occupant brings to it are among the things that matter. The gap the study addressed is thereby narrowed on all three fronts: it supplies CEO-level rather than board-level evidence, from archival panel data rather than perception surveys, in a frontier-market institutional setting where upper echelons predictions had gone largely untested - and executive gender diversity emerges as a substantive governance resource for emerging-market disclosure, with the important caveat that its contribution, while reliable, is modest in magnitude and should be pursued alongside, not instead of, other executive capabilities.

7. Recommendations and Implications

7.1 Implications for Theory

The study extends upper echelons theory by demonstrating that executive gender operates as a disclosure-relevant cognitive endowment

in a frontier-market setting where discretion is wide and enforcement thin - the boundary conditions under which the theory's predictions should be most visible, and where they have been least examined. It also sharpens the level-of-analysis question in the gender-governance literature: the contrast between this CEO-level result and board-level nulls elsewhere in Africa suggests that diversity effects should be theorised at the locus of decision rights, not merely counted in the boardroom.

The findings speak to specific prior theoretical predictions rather than to theory in the abstract. They *support* the "business case" framing of executive diversity - diversity as a performance-relevant resource (Campbell & Mínguez-Vera, 2008; Liu et al., 2014) - but they also discipline it: the conditional effect is modest, smaller than the effects of financial expertise and age diversity on the same panel, so versions of the business case that promise transformation from representation alone overclaim. They *challenge* the token-constraint prediction that lone women cannot exert distinctive influence (Kanter, 1977): concentrated decision rights appear to substitute for critical mass at the apex, a boundary condition the critical-mass literature (Konrad et al., 2008; Torchia et al., 2011) should absorb - the threshold logic developed for boards does not transfer unmodified to executive roles. And they *refine* institutional theory's account of disclosure diffusion (DiMaggio & Powell, 1983): isomorphic pressure is not received uniformly, but is conducted differentially by executive disposition, suggesting a micro-foundations research programme in which institutional and upper-echelons variables are modelled interactively rather than as rival explanations. Finally, the null-to-negative findings elsewhere (Bananuka et al., 2022; Cucari et al., 2018) are not

contradicted but contextualised: the theory that emerges is conditional - gender effects surface where discretion is wide, decision rights are concentrated, and appointments are substantive rather than symbolic.

7.2 Recommendations for Boards and Management

Treat executive gender diversity as a reporting-quality resource, not a compliance metric. Nomination committees should weight gender diversity explicitly in CEO selection and succession planning, on the evidence that diversity at the apex materially improves the credibility and depth of sustainability reporting.

Build the pipeline, not just the appointment. Because female representation at the top remains scarce in this market, the disclosure benefits documented here are available to few firms. Sponsorship programmes, executive development and deliberate succession pipelines that carry women to the chief executive role convert a scarce advantage into an institutional one.

Embed sustainability outcomes in executive appraisal regardless of who holds the office. The gendered disposition documented here operates through discretion; linking disclosure quality to evaluation and incentives institutionalises what currently rests on individual orientation.

These recommendations face real barriers, and stating them is part of making the recommendations usable. The most binding is the pipeline constraint: with women holding roughly a fifth of board chairs and a minority of senior executive roles in the Kenyan market (Section 2.2), the pool from which female chief executives can be drawn is thin, and nomination committees cannot appoint executives who do not yet exist in the pipeline - which is why the second recommendation is prior to the first in

practice. Cultural resistance is the second barrier: appointment networks in East African corporate life remain male-dominated, role-congruity biases persist among boards and investors, and a female CEO appointed against that grain may face heightened scrutiny that raises the personal cost of the role. Finally, family-firm and concentrated-ownership structures common on the NSE can place succession outside the reach of formal nomination processes altogether. None of these barriers argues against the recommendations; they argue for treating them as medium-term institutional investments rather than immediate compliance items.

7.3 Recommendations for Regulators and Policymakers

Pair diversity policy with disclosure policy. The Capital Markets Authority's governance code already requires listed boards to adopt and disclose a diversity policy on an apply-or-explain basis (CMA, 2015); the evidence here supports extending that attention to executive appointments, where the reporting consequences are measurable. Requiring listed firms to disclose executive - not only board - diversity statistics would make progress visible and comparable, at negligible compliance cost, since the underlying information already exists in every firm's records.

Regulate for quality, not volume. Because the gender effect operates on the depth of disclosure, quality-banded scoring of ESG reports - rather than binary compliance - is the regulatory instrument most likely to reward it. Feasibility, however, deserves honest assessment. Quality-banded scoring is supervision-intensive: it requires trained reviewers, consistent scoring rubrics and periodic calibration, and the CMA's enforcement capacity is limited and already stretched across its supervisory mandate. A cost-effective path is

therefore incremental: begin with a published scoring rubric and self-assessment against it (near-zero regulatory cost), add exchange-level spot reviews of a rotating sample of reports (modest cost, high deterrence value), and reserve full quality banding for a later phase, potentially outsourced to accredited assurance providers whose costs fall on issuers, as is already the norm for financial audit. The benefit side of the ledger - reporting quality that attracts the ESG-screened foreign capital Kenya actively courts - plausibly exceeds these costs, but the sequencing matters: a quality regime the regulator cannot administer consistently would be worse than none, because inconsistent scoring invites the very box-ticking it is meant to displace.

Guard against tokenism if quotas are contemplated. Should policymakers move beyond apply-or-explain toward numerical gender targets, the international evidence counsels caution: quotas imposed on a thin pipeline produce symbolic appointments, and symbolic appointments produce no disclosure benefit - the negative Italian evidence is instructive precisely because it is attributed to tokenistic appointments (Cucari et al., 2018; Kanter, 1977). Quota policy, if adopted, should therefore be phased against pipeline indicators - senior-management representation, executive-development enrolment - so that mandated representation and genuine authority arrive together rather than the former substituting for the latter.

7.4 Limitations and directions for future research

The inferential scope of these findings is constrained by six distinct methodological boundaries. First, the study relies on demographic proxies for executive composition, which serves as an observable indicator for—but does not

directly measure—the psychological and behavioral mechanisms posited by Upper Echelons Theory. Second, while the two-way fixed-effects specification controls for time-invariant firm heterogeneity, the non-random nature of executive appointments means that time-varying selection bias cannot be fully eliminated. Third, the cross-sectional sample size is limited to 32 firms ($N = 320$), creating a structural constraint where the scarcity of female chief executives yields thin within-sample variation, thereby widening confidence intervals and restricting interaction-effect analysis. Fourth and fifth, the balanced-panel construction introduces survivorship bias by systematically excluding failed, suspended, or delisted firms (potentially the weakest reporters), while simultaneously understating contemporary trends by omitting younger, more diverse firms listed after 2014. Finally, the single-country focus restricts the external validity of these conclusions to emerging economies that share comparable institutional and regulatory frameworks with the Kenyan market.

Future work might therefore: (i) pursue causal identification directly - instrumental-variable strategies, regression-discontinuity designs where appointment rules create thresholds, or difference-in-differences around executive transitions, comparing disclosure trajectories of firms that switch to female CEOs against matched non-switchers - rather than relying on fixed effects alone; (ii) test critical-mass dynamics - whether the effect strengthens where women hold multiple apex roles (CEO, board chair, CFO) - following Opoku (2022); (iii) examine intersectionality: how gender interacts with education, age and tenure in shaping disclosure, since the female CEOs who break through a thick glass ceiling are

unlikely to be average on other attributes, and the gender effect estimated here is necessarily a joint effect of gender and the credentials that accompany it; (iv) disaggregate the disclosure index to establish whether the gender effect concentrates in social, environmental or economic disclosure items - the socialisation account predicts the social pillar should respond most strongly; (v) model the moderators flagged in Section 2.5 (industry sensitivity, firm visibility, ownership concentration) and test whether the 2021 NSE Manual altered the gender-disclosure relationship; and (vi) replicate the design across African exchanges to establish whether the CEO-level effect documented here generalises beyond Kenya.

References

- Adams, R. B., & Ferreira, D. (2009). Women in the boardroom and their impact on governance and performance. *Journal of Financial Economics*, 94(2), 291-309. <https://doi.org/10.1016/j.jfineco.2008.10.007>
- Ameer, R., & Othman, R. (2012). Sustainability practices and corporate financial performance: A study based on the top global corporations. *Journal of Business Ethics*, 108(1), 61-79. <https://doi.org/10.1007/s10551-011-1063-y>
- Bananuka, J., Nkundabanyanga, S. K., Kaawaase, T. K., Mindra, R. K., & Kayongo, I. N. (2022). Sustainability performance disclosures: The impact of gender diversity and intellectual capital on GRI standards compliance in Uganda. *Journal of Accounting in Emerging Economies*, 12(5), 840-881. <https://doi.org/10.1108/JAEE-09-2021-0301>
- Barako, D. G., Hancock, P., & Izan, H. Y. (2006). Factors influencing voluntary corporate disclosure by Kenyan companies. *Corporate Governance: An International Review*, 14(2), 107-125. <https://doi.org/10.1111/j.1467-8683.2006.00491.x>
- Ben-Amar, W., Chang, M., & McIlkenny, P. (2017). Board gender diversity and corporate response to sustainability initiatives: Evidence from the Carbon Disclosure Project. *Journal of Business Ethics*, 142(2), 369-383. <https://doi.org/10.1007/s10551-015-2759-1>
- Bhatia, A., & Tuli, S. (2017). Corporate attributes affecting sustainability reporting: An Indian perspective. *International Journal of Law and Management*, 59(3), 322-340. <https://doi.org/10.1108/IJLMA-11-2015-0057>
- Business Daily. (2024). Only 32pc of CEOs, MDs in Kenya are women - survey. *Business Daily Africa*. <https://www.businessdailyafrica.com/bd/corporate/companies/only-32pc-of-ceos-mds-in-kenya-are-women-survey-4965444>
- Business Today. (n.d.). The 11 most powerful women in corporate Kenya. *Business Today Kenya*. Retrieved July 22, 2026, from <https://businesstoday.co.ke/these-11-women-exercise-power-at-nse-listed-companies/>
- Campbell, K., & Mínguez-Vera, A. (2008). Gender diversity in the boardroom and firm financial performance. *Journal of Business Ethics*, 83(3), 435-451. <https://doi.org/10.1007/s10551-007-9630-y>
- Capital Markets Authority. (2015). *Code of corporate governance practices for issuers of securities to the public, 2015*. Government of Kenya, Gazette Notice No. 1420. <https://www.ecgi.global/publications/codes/code-of-corporate-governance-practices-for-issuers-of-securities-to-the-public>
- Cho, C. H., Laine, M., Roberts, R. W., & Rodrigue, M. (2015). Organized hypocrisy, organizational façades, and sustainability reporting. *Accounting, Organizations and Society*, 40, 78-94. <https://doi.org/10.1016/j.aos.2014.12.003>
- Cicchello, A. F., Fellegara, A. M., Kazemikhasragh, A., & Monferrà, S. (2021). Gender diversity on corporate boards: How Asian and African women contribute on sustainability reporting activity. *Gender in Management: An International Journal*, 36(7), 801-820. <https://doi.org/10.1108/GM-05-2020-0147>

- Cucari, N., Esposito De Falco, S., & Orlando, B. (2018). Diversity of board of directors and environmental social governance: Evidence from Italian listed companies. *Corporate Social Responsibility and Environmental Management*, 25(3), 250-266.
<https://doi.org/10.1002/csr.1452>
- Deegan, C. (2019). Legitimacy theory: Despite its enduring popularity and contribution, time is right for a necessary makeover. *Accounting, Auditing & Accountability Journal*, 32(8), 2307-2329.
<https://doi.org/10.1108/AAAJ-08-2018-3638>
- Dienes, D., Sassen, R., & Fischer, J. (2016). What are the drivers of sustainability reporting? A systematic review. *Sustainability Accounting, Management and Policy Journal*, 7(2), 154-189.
<https://doi.org/10.1108/SAMPJ-08-2014-0050>
- DiMaggio, P. J., & Powell, W. W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, 48(2), 147-160.
<https://doi.org/10.2307/2095101>
- Eagly, A. H., & Crowley, M. (1986). Gender and helping behavior: A meta-analytic review of the social psychological literature. *Psychological Bulletin*, 100(3), 283-308.
<https://doi.org/10.1037/0033-2909.100.3.283>
- Elmagrhi, M. H., Ntim, C. G., Elamer, A. A., & Zhang, Q. (2019). A study of environmental policies and regulations, governance structures, and environmental performance: The role of female directors. *Business Strategy and the Environment*, 28(1), 206-220.
<https://doi.org/10.1002/bse.2250>
- Faccio, M., Marchica, M.-T., & Mura, R. (2016). CEO gender, corporate risk-taking, and the efficiency of capital allocation. *Journal of Corporate Finance*, 39, 193-209.
<https://doi.org/10.1016/j.jcorpfin.2016.02.008>
- Freeman, R. E. (1984). *Strategic management: A stakeholder approach*. Pitman. (Reissued 2010 by Cambridge University Press.
<https://doi.org/10.1017/CBO9781139192675>
- Gilligan, C. (1977). In a different voice: Women's conceptions of self and of morality. *Harvard Educational Review*, 47(4), 481-517.
<https://doi.org/10.17763/haer.47.4.g6167429416hg5l0>
- Global Reporting Initiative. (2021). *GRI universal standards*. GRI.
<https://www.globalreporting.org/standards/>
- Hambrick, D. C. (2007). Upper echelons theory: An update. *Academy of Management Review*, 32(2), 334-343.
<https://doi.org/10.5465/amr.2007.24345254>
- Hambrick, D. C., & Mason, P. A. (1984). Upper echelons: The organization as a reflection of its top managers. *Academy of Management Review*, 9(2), 193-206.
<https://doi.org/10.5465/amr.1984.4277628>
- Higgins, C., Tang, S., & Stubbs, W. (2020). On managing hypocrisy: The transparency of sustainability reports. *Journal of Business Research*, 114, 395-407.
<https://doi.org/10.1016/j.jbusres.2019.08.041>
- Hsiao, C. (2022). *Analysis of panel data* (4th ed.). Cambridge University Press.
<https://doi.org/10.1017/9781009057745>
- Kanter, R. M. (1977). Some effects of proportions on group life: Skewed sex ratios and responses to token women. *American Journal of Sociology*, 82(5), 965-990.
<https://doi.org/10.1086/226425>
- Kipngetich, S., & Gatauwa, J. (2024). Environmental, social and governance disclosure practices among firms listed at the Nairobi Securities Exchange. *International Journal of Finance and Accounting*, 9(1), 44-62.
- Konrad, A. M., Kramer, V., & Erkut, S. (2008). Critical mass: The impact of three or more women on corporate boards. *Organizational Dynamics*, 37(2), 145-164.
<https://doi.org/10.1016/j.orgdyn.2008.02.005>
- Liao, L., Luo, L., & Tang, Q. (2015). Gender diversity, board independence, environmental committee and greenhouse gas disclosure. *The British Accounting Review*, 47(4), 409-424.
<https://doi.org/10.1016/j.bar.2014.01.002>
- Liu, Y., Wei, Z., & Xie, F. (2014). Do women directors improve firm performance in China? *Journal of Corporate Finance*, 28, 169-184.

- <https://doi.org/10.1016/j.jcorpfin.2013.11.016>
- Macchioni, R., Prisco, M., & Zagaria, C. (2024). Board gender diversity and environmental material topics: Evidence from GRI-based reports in the Italian context. *Journal of Applied Accounting Research*, 26(1), 28-56. <https://doi.org/10.1108/JAAR-08-2023-0255>
- Machado, B. A. A., Dias, L. C. P., & Fonseca, A. (2021). Transparency of materiality analysis in GRI-based sustainability reports. *Corporate Social Responsibility and Environmental Management*, 28(2), 570-580. <https://doi.org/10.1002/csr.2066>
- Madill, A., & Gough, B. (2008). Qualitative research and its place in psychological science. *Psychological Methods*, 13(3), 254-271. <https://doi.org/10.1037/a0013220>
- Magara, R., & Maune, A. (2026). Sectoral variation in sustainability disclosure among Kenyan listed firms. *Journal of Accounting in Emerging Economies*, 16(1), 1-24
- Mahran, K., & Elamer, A. A. (2024). Chief Executive Officer (CEO) and corporate environmental sustainability: A systematic literature review and avenues for future research. *Business Strategy and the Environment*, 33(3), 1977-2003. <https://doi.org/10.1002/bse.3577>
- McGuinness, P. B., Vieito, J. P., & Wang, M. (2017). The role of board gender and foreign ownership in the CSR performance of Chinese listed firms. *Journal of Corporate Finance*, 42, 75-99. <https://doi.org/10.1016/j.jcorpfin.2016.11.001>
- Mitchell, R. K., Agle, B. R., & Wood, D. J. (1997). Toward a theory of stakeholder identification and salience: Defining the principle of who and what really counts. *Academy of Management Review*, 22(4), 853-886. <https://doi.org/10.5465/amr.1997.9711022105>
- Nairobi Securities Exchange. (2021). *ESG disclosures guidance manual*. NSE. <https://www.nse.co.ke/wp-content/uploads/NSE-ESG-Disclosures-Guidance-Manual.pdf>
- Nazari, J. A., Hrazdil, K., & Mahmoudian, F. (2017). Assessing social and environmental performance through narrative complexity in CSR reports. *Journal of Contemporary Accounting & Economics*, 13(2), 166-178. <https://doi.org/10.1016/j.jcae.2017.05.002>
- Opoku, R. N. (2022). *Effect of sustainability accounting disclosures on financial performance of listed banks in Ghana* [Master's thesis, Kwame Nkrumah University of Science and Technology]. KNUST Institutional Repository. <https://ir.knust.edu.gh>
- Orazalin, N., & Mahmood, M. (2019). Determinants of GRI-based sustainability reporting: Evidence from an emerging economy. *Journal of Accounting in Emerging Economies*, 10(1), 140-164. <https://doi.org/10.1108/JAEE-12-2018-0137>
- Sheikh Abu Bakar, A. B., Ghazali, N. A. B. M., & Ahmad, M. B. (2019). Sustainability reporting in Malaysia: The extent and quality. *International Journal of Academic Research in Business and Social Sciences*, 9(1), 816-835. https://hrmars.com/papers_submitted/6009/Sustainability_Reporting_in_Malaysia_The_Extent_and_Quality.pdf
- Torchia, M., Calabrò, A., & Huse, M. (2011). Women directors on corporate boards: From tokenism to critical mass. *Journal of Business Ethics*, 102(2), 299-317. <https://doi.org/10.1007/s10551-011-0815-z>
- Wintoki, M. B., Linck, J. S., & Netter, J. M. (2012). Endogeneity and the dynamics of internal corporate governance. *Journal of Financial Economics*, 105(3), 581-606. <https://doi.org/10.1016/j.jfineco.2012.03.005>