Journal DOI: 10.36713/epra1013 | SJIF Impact Factor (2025): 8.619 ISSN: 2347-4378
EPRA International Journal of Economics, Business and Management Studies (EBMS)
Volume: 12 | Issue: 2 | February 2025 -Peer-Reviewed Journal

THE RELATIONSHIP BETWEEN INTERNAL CONTROLS AND ENVIRONMENTAL SUSTAINABILITY DISCLOSURE AMONG THE LISTED NSE FIRMS IN KENYA

Gichuki King'ori
Department of Finance and Accounting, University of Kabianga, Kenya

ABSTRACT

*The study examines the relationship between internal controls and environmental sustainability disclosure on the firms listed at the Nairobi Securities Exchange. The study period was (5) years (from 2013 to 2017). It employed a correlational survey research design covering the period of five (5) years (2013 - 2017). The target population was sixty-five (65) firms listed at the NSE, with a sample size of 56 firms. Data was utilised from firms' annual reports, stand-alone reports, and website. Pearson's correlation, Ordinary Least Square regression model and Environmental Disclosure Index were used in analysis. The study findings indicated that $R^2 = 0.64$ with audit committee independence ($\beta = .12$, $p < .05$) having a positive and significant effect on envirnonmental sustainability disclosure. More findings showed that financial strength strengthen the relationship between environmental sustainability disclosure and audit committee independence ($\beta = .13$, $\rho < .01$). The inclusion of the interaction term resulted in an R^2 change of 0.09 (internal controls*financial strength). The study concluded that, overall, financial strength has significant moderating effect on the relationship between corporate governance and environmental sustainability disclosure. It recommends;enactment of policies addressing corporate environmental reporting by firms as a result of different asset base, establishment of corporate environmental committee to spearhead ecological issues, and implementation of mandatory disclosures.*

KEYWORDS: *Internal controls, environmental sustainability disclosures, financial strength, listed firms, stakeholder theory, agency theory.*

LITERATURE REVIEW

Proper systems of internal controls have been associated with value creation towards environmental sustainability disclosures. There has been witnessed pressure from various stakeholders demanding for an adequate internal control system that is an all-round (economically, socially and ecologically sensitive). The internal controls measures applied in the current study were the audit committee independence and number of the audit committee meetings in a year. Leng and Ding (2011) asserted that most of the corporate governance scandals in organizations are attributed to the weak internal control systems such as director's remuneration, and level of education, and was largely driven by legitimacy concerns reported a close positive relationship between internal management systems and environmental management system (EMS), Burritt and Welch (1997), Ahmed and Nicolls (1994), Mohammed and Tamoi (2006). For Healy and Palepu (1995), it observed that leverage may be the cause of ecological disclosure, and as an organization, it might require getting solution towards irregular data and principal-agent challenges with its interested parties.

Barako, Hancock and Izan (2006) evaluated the influence of private sector administration practices, control framework and organization features on environmental reporting by all listed companies (54) at the Nairobi Securities Exchange (NSE), for a nine years period (1992 to 2001), with the findings indicating that the three predictor attributes influenced environmental disclosure. The presence of an audit committee, level of institution and foreign ownership, had a positive significant relationship with the extent of environmental reporting, while degree of non-executive directors had negative significant relationship with environmental disclosure level. Grüning and Ernstberger (2010) on the association between corporate administration and exposure in 6,580 sampled USA firms listed at New York Securities Exchange indicated a strong positive significant relationship between private sector governance (for the review, country of formation, control concentration, continuous best practices) and the disclosures. However, for the executive and director compensation, there was an inverse association with the extent of reporting. On the moderating variables, a 3SLS modeling revealing a direct

association between private entity governance and reporting towards increasing the value of the firm based on Tobin's q.

Peters and Romi (2011) on factors influencing corporate governance greenhouse gas (GHG) emission disclosure through non-mandatory reporting by USA firms in the FT50 indicated a high positive association between "sustainability-concerned" private entity governance practices (environmental committees and corporate sustainability officers) and non-mandatory GHG emission accounting disclosures. Adams (2002) findings revealed significant internal contextual variables that may have an effect on the extensiveness, quality, quantity, and completeness of corporate social and moral disclosure. In New South Wales (NSW) Australia local governments, Qian and Burritt (2007) investigated environmental accounting practices on internal controls measured by waste management efficiency with the findings revealing that by and large, the level of direct waste stream and action bookkeeping is much more than the level of cover-up and outer ecological cost bookkeeping, however county governments have a tendency to recognize and utilize more physical data related with squander streams and exercises than pertinent fiscal data. Also a positive relationship between waste management services and environmental accounting (t = 7.133, p <.00) with an adjusted R^2 for the model at .454.

Stanny and Ely (2008) examined climatic change factors associated with corporate environmental disclosures in the US through Carbon Disclosure Project (CDP). The 500 companies sample study was guided by the non-mandatory disclosure theory, with the predictor variables applied to be; corporate size, sector, external turnover, resource age, long-term assets commitments, leverage, Tobin's Q, earnings, previous disclosure, as well as entity internal controls. The logit model on a two-tailed test was carried out with the results indicating no significant relationship between entity control, Tobin's Q, earnings, gearing, industry, and resource age with environmental disclosure.

Therefore, the following hypotheses were derived:

H_{01a} : *There is no significant relationship between the environmental sustainability disclosure and audit committee meetings*

H_{01b} : *There is no significant relationship between the environmental sustainability disclosure and audit committee independence*

Financial Strength

The financial strength, in form of firm size has varied effects on the business such as patronage, goodwill, customer loyalty and responsiveness towards its stakeholders. Previous research have indicated the connection between firm size with corporate social responsibility (Anazonwu, Egbunike, and Gunardi, 2018; Habbash, 2016; Khan, 2010), as bigger companies tend to be more salient, therefore, tend to attract more attention from the stakeholders, whomay compel them to appear good (Hyun, Yang, Jung, and Hong, 2016).Small firms as asserted by Obigbemi, Iyoha and Ojeka (2015) in most cases do not publish their end year reports and when they do so, is as a result of the statutory requirements. On the other hand, large firms due to their expansive shareholders base as well as their diverse background, they are compelled to disclose all the requisite information in order to not only retain but also enhance its reputation, investment and attract other prospective investors to the firm. Firm size was preferred as it significantly influenced the quantity of overall ecological disclosure of the sampled companies (Odoemelam and Okafor, 2018).

Thus, the following hypothesis was derived:

H_{01c} : *There is no significant moderating effect of financial strength on the relationship between the environmental sustainability disclosure and internal controls*

Stakeholder theory

Stakeholder theory observes that corporate governance must incorporate an all-inclusive approach that appreciates as well as ensures the members' and stakeholders' rights are taken care of (Bokpin, Isshaq and Nyarko, 2015). The theory is an extension of the agency perspective as it supports improvements on corporate reporting policies, implementation of CSR practices as well as the establishment of risk administration policies towards managing the conflicting interest of different stakeholders. With the increased awareness on the need to protect the ever degrading environment, this has resulted to pressure by the stakeholders towards firm's being compliant more especially on their activities. A firm's goals and objectives can be realised by ensuring a balance towards the 'conflicting interests' of all interested stakeholders (Mahmood and Orazalin, 2017).

Agency Theory

Agency theory is alluded by Zahra and Peace II (1989) as the most appreciated as well as prominent perspective which has guided studies on corporate boards. It suggests that within the framework of CG mechanisms, managers

have a high likelihood of emphasizing on corporate social and ecological issues than stockholders since they have no salvage claim on an entity's generations. The assumptions underlying corporate governance and ecological reporting are agency theory (Jensen and Meckling, 1976) that creates the framework for the connection between the variables (Odoemelam and Okafor, 2018; Kabir and Thai, 2017; Allegrini and Greco, 2013; Ienciu, Popa and Ienciu, 2012).

RESEARCH METHODOLOGY

Pragmatic philosophical approach was applied, premised on the assumption that research commences with a gap, and it is geared towards contributing hands on solutions which may inform future operations (Saunders, 2016). A correlational survey design on a panel data over 5 years (2013-2017) period was employed, for displaying the association between variables through for instance correlations and cross-tabulation techniques, (Chepkwony, 2017) and thereafter deriving a regression model meant to predict about the population. Further, it is deemed suitable in ascertaining the direction and level of relationship between the variables (Onuorah, Egbunike and Gunardi, 2018).

The study population involved all the 65 Nairobi Securities Exchange (NSE) listed firms in the financial period 2017/2018 (Nairobi Securities Exchange, 2018; Cheruiyot, 2017), with a sample size of 56 firms purposively determined based on firms' disclosure of environmental information. Secondary data comprised firms' annual reports, stand-alone reports, as well as firm's website. Inferential statistical test techniques such as Jarque-Bera tests, Shapiro Wilk tests were applied towards test of data normality. Pearson correlation was utilized in testing collinearity. Further, Hausman test was employed in ascertaining the regression model applicable.

Findings

Table 1 illustrates the summary statistics for internal control during the 2013 to 2017 study period. The focus was on audit committee independence and audit committee meetings. From the findings, audit committee independence in 2013 was at 45%. In 2014, there was a slight increase in audit committee independence to 48% but it later declined to 46% in 2015. However, in 2016, audit committee independence increased to 53% and exhibited no change in 2017. The change in audit committee independence over the years was not statistically significant ($F= 1.28$, $\rho=.28>.05$). With reference to the audit committee meetings, the audit committee had 3 members in 2013, 2014 and 2015.However, the number of audit committee members increased to 4 in 2016 and 2017. There was a statistically significant difference in audit committee meetings between 2013 to 2017 for the firms listed in NSE ($F= 4.11$, $\rho=.00<.05$).

Table 1
Internal Controls

Year	Stat	Audit Committee Independence	Audit Committee Meetings
2013	Obs	56	56
	Min	0	0
	Max	1	11
	Mean	**.45**	**3.13**
	p50	.44	3.50
	Skewness	.02	.80
	Kurtosis	2.32	3.98
2014	Obs	56	56
	Min	0	0
	Max	1	11
	Mean	**.48**	**3.18**
	p50	.50	4.00
	Skewness	-.10	.42
	Kurtosis	2.42	3.63
2015	Obs	56	56
	Min	0	0
	Max	1.33	10

Journal DOI: 10.36713/epra1013 | SJIF Impact Factor (2025): 8.619 ISSN: 2347-4378
EPRA International Journal of Economics, Business and Management Studies (EBMS)
Volume: 12 | Issue: 2 | February 2025 -Peer-Reviewed Journal

	Mean	**.46**	**3.07**
	p50	.44	3.00
	Skewness	.29	.31
	Kurtosis	3.34	3.33
2016	Obs	56	56
	Min	0	0
	Max	1.33	10
	Mean	**.53**	**3.91**
	p50	.50	4.00
	Skewness	.53	.03
	Kurtosis	4.25	4.00
2017	Obs	56	49
	Min	0	2
	Max	1.33	10
	Mean	**.53**	**4.47**
	p50	.50	4.00
	Skewness	.53	1.46
	Kurtosis	4.25	5.96
ANOVA	F	1.28	4.11
	Prob>F	.28	.00

Source: Research data (2019)

Environmental Disclosure

There has been an increase in the number of firms disclosing environmental information in their annual financial reports to achieve the desires of investors and other stakeholders. It is against this backdrop that the study deemed it important to establish the environmental disclosure of firms listed in NSE. Basing on the findings in Table 2, between 2013 to 2015 environmental disclosure was at 43%. In 2016 there was an increase in disclosure to 47%. As of 2017, environmental disclosure of firms listed in NSE was at 48%.

Table 2
Environmental Disclosure

Year	**Obs**	**Min**	**Max**	**Mean**	**Sd**	**p50**	**skewness**	**Kurtosis**
2013	56	0.11	0.7	0.43	0.15	0.46	-0.76	2.57
2014	56	0.1	0.71	0.43	0.15	0.44	-0.64	2.49
2015	56	0.1	0.64	0.43	0.14	0.45	-0.88	2.92
2016	56	0.11	0.73	0.47	0.12	0.52	-1.03	4.38
2017	56	0.22	0.64	0.48	0.1	0.51	-0.79	2.9
F	*1.95*							
Prob>F	*0.1032*							

Source: Research data (2019)

Descriptive Statistics for Exogenous Endogenous and Control Variables

Findings from Table 3, it showed that the environmental disclosure was at 47% among listed firms in NSE (Mean=.45, SD=.23). Results also showed that on average there are 54 audit committee meetings were held (M=3.53, SD=2.24) with 49% of them being non-executive audit committee members.

Journal DOI: 10.36713/epra1013 | SJIF Impact Factor (2025): 8.619 ISSN: 2347-4378
EPRA International Journal of Economics, Business and Management Studies (EBMS)
Volume: 12 | Issue: 2 | February 2025 -Peer-Reviewed Journal

Table 3
Descriptive Statistics for Exogenous Endogenous and Control Variables

Obs	N	Min	Max	Mean	p50	Sd	skewness	Kurtosis
esd	280	0.1	0.73	0.45	0.47	0.13	-0.92	3.23
aci	280	0	1.33	0.49	0.5	0.27	0.13	3.21
acm	273	0	11	3.53	4	2.24	0.31	3.81
fs	280	0	8.81	6.49	6.83	1.47	-1.73	8.07

esd = Environmental sustainability disclosure aci = audit committee independence, acm = audit committee meetings, fs = financial strength

Source: Research data (2019)

Correlation Results

Audit committee independence is positively related to environmental sustainability disclosure, with a coefficient of r = .349 which is also significant at p<.01. Moreover, audit committee meetings are positively related to environmental sustainability disclosure, with a coefficient of r = .279 which is also significant at p<.01.

The maximum coefficient of correlation matrix is 0.449 via association between audit committee meeting and financial strength. This correlation do not represent a harmful multicollinearity problem since it is less than 60%. Bryan, Liv and Tiras (2004), and Guajarati and Porter (2009) posit that correlation between independent variables of more than 80% can be considered to be a serious multicollinearity problem.

Table 4
Pearson Correlation between Environmental Sustainability Disclosure and Corporate Governance

	Esd	aci	acm	fs
esd	1			
aci	.349**	1		
acm	.279**	.272**	1	
fs	.445**	.184**	.449**	1

*Note:*** Correlation is significant at the .01 level (2-tailed).* Correlation is significant at the .05 level (2-tailed).

N=56; Dependent variable, *esd = Environmental sustainability disclosure, aci = audit committee independence, acm = audit committee meetings,fs = financial strength,*

Source: Research data (2019)

Random Effect Model

Audit committee independence showed a positive and significant effect on environmental sustainability disclosure (β= .13, ρ<.05). Specifically, an increase in audit committee independence by .13 units leads to an increase in environmental sustainability disclosure by the same unit.

Table 5
Random effect Model

			Number of obs	**=**	**272**	
Random-effects GLS regression			**Number of groups**	**=**	**56**	
Group variable: firmID			**Obs per group: min**	**=**	**4**	
R-sq: within = .6355			**Avg**	**=**	**4.9**	
between = .4377			**Max**	**=**	**5**	
overall = .5132			**Wald chi2(9)**	**=**	**398.77**	
corr(u_i, X) = 0 (assumed)			**Prob > chi2**	**=**	**0**	
Esd	**Coef.**	**Std. Err.**	**Z**	**P>z**	**[95% Conf.**	**Interval]**
Aci	.13	.02	5.78	.00	.09	.18

Journal DOI: 10.36713/epra1013 | SJIF Impact Factor (2025): 8.619 ISSN: 2347-4378
EPRA International Journal of Economics, Business and Management Studies (EBMS)
Volume: 12 | Issue: 2 | February 2025 -Peer-Reviewed Journal

Acm	.00	.00	-1.13	.26	-.01	.00
_cons	.13	.03	4.70	.00	.08	.18
sigma_u	.07					
sigma_e	.06					
Rho	.57	(fraction of variance due to u_i)				

aci = audit committee independence, acm = audit committee meetings

Source: Research data (2019)

Table 6
Hausman Test

	---- Coefficients ----			
	(b)	**(B)**	**(b-B)**	**sqrt(diag(V_b-V_B))**
Esd	**Fe**	**Re**	**Difference**	**S.E.**
aci	.121	.134	-.013	.009
Acm	.000	-.003	.003	.001
bs	.008	.008	.000	.002

b = consistent under Ho and Ha; obtained from xtreg

B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

chi2(9) = (b-B)'[(V_b-V_B)^(-1)](b-B)

= 23.67

Prob>chi2 = .0049

aci = audit committee independence, acm = audit committee meetings

Source: Research data (2019)

Fixed Effect Model

Moreover, audit committee independence showed a positive and significant effect on environmental sustainability disclosure (β= .12, ρ<.05). Specifically, an increase in audit committee independence by .12 units leads to an increase in environmental sustainability disclosure by the same unit. The t-value = 4.85 which implies that it is more than the standard error. The interclass correlation (abbreviated as 'rho') is 65%, implying that 65% of the variance is as a result of differences across panels.

Hypothesis Testing

Hypothesis 1(H_{o1a}) stated that audit committee meetings had no significant effect on ecological sustainability. Findings showed that audit committee meetings had coefficients of estimate which was insignificant basing on β=.00 (p-value = .98 which is more than α = .000 hence audit committee meetings had no significant effect on environmental sustainability disclosure. Other than the audit committee meetings, Ntim, Soobaroyen and Broad (2017) audit committee quality was associated with the level of environmental sustainability disclosure. As well, Barako *et al.* (2006) established that the presence of an audit committee, level of institution and foreign ownership, had positive significant relationship with the extent of environmental reporting. Further, Akhtaruddin and Haron (2010) study in Malaysia found that the ration of audit committee members to the total members on the firm board not associated with the voluntary sustainability reporting.

Hypothesis 1(H_{o1b}) stated that audit committee independence has no significant effect on environmental sustainability disclosure. Findings showed that audit committee independencehad coefficients of estimate which was significant basing on β= .12 (p-value = .00 which is less than α = .05 hence it was concluded that audit committee independence had a positive and significant effect on environmental sustainability disclosure. This suggested that there was up to .12 unit increase in environmental sustainability disclosure for each unit increase in audit committee independence. In agreement to the findings, Mgbame and Onoyase (2015) examination of corporate governance (audit committee independence) on ecological reporting indicated a positive and significant association. Further, institutional investors have strong incentives to oversight corporate reporting practices as well as influence corporate values because of their large ownership stake (Barako *et al*., 2006). In addition, they might take into account ecological matters to be paramount as a means of longterm value creation (Prado-Lorenzo *et al*., 2009; Welford, 2007).

Journal DOI: 10.36713/epra1013 | SJIF Impact Factor (2025): 8.619 ISSN: 2347-4378
EPRA International Journal of Economics, Business and Management Studies (EBMS)
Volume: 12 | Issue: 2 | February 2025 -Peer-Reviewed Journal

From an agency theory perspective, the audit committee represents one of the functional methods that can be appliedtowards attenuating agency costs (Forker 1992), as it acts as a monitoring mechanism which aims to enhance the quality of information provided to stakeholders as well as the auditing process (Collier, 1993). Contrally to the findings was Aburaya (2012) of an insignificant association towards overall ecological reporting quality that was due to deficiency of ecological audit carried out by firms and, consequently, the duty of autonomous non-executive directors on the audit committee may not be evident. Further, the study attributed the study findings to possible existence of "grey directors" whose real autonomy may be put into question.

Table 7
Fixed Effect Model

			Number of obs	**=**	**272**	
Fixed-effects (within) regression			**Number of groups**	**=**	**56**	
Group variable: firmID			**Obs per group: min**	**=**	**4**	
R-sq: within = .6399			**Avg**	**=**	**4.9**	
between = .3940			**Max**	**=**	**5**	
overall = .4872			**F(9,207)**	**=**	**4.87**	
corr(u_i, Xb) = -.0775			**Prob > F**	**=**	**.000**	
Esd	**Coef.**	**Std. Err.**	**T**	**P>t**	**[95% Conf.**	**Interval]**
Aci	.12	.03	4.85	.00	.07	.17
Acm	.00	.00	-.02	.98	-.01	.01
_cons	.11	.03	3.74	.00	.05	.17
sigma_u	.08					
sigma_e	.06					
Rho	.65	(fraction of variance due to u_i)				

F test that all u_i=0: F(55, 207) = 7.67 Prob > F = .0000

aci = audit committee independence, acm = audit committee meetings, bs = board size

Source: Research data (2019)

Moderation effect of Financial Strength on the relationship between Internal Controls and Environmental Sustainability Disclosure

Table 7 illustrates the results of the moderation effect of financial strength on the relationship between internal controls and environmental disclosure. From the findings, financial strength has a negative but insignificant moderating effect on the relationship between the audit committee meetings and environmental disclosure (β= -.06). However, there is a positive and significant moderating effect of financial strength on the relationship between audit committee independence and environmental sustainability disclosure (β = .13, ρ<.01).

For the model 2, R^2 = 0.23. This R^2 means that 23% of the variance in environmental sustainability disclosure is explained by internal controls and financial strength. Model 5 indicates the results after the interactionterm (internal controls *financial strength) was included in the equation. The inclusion of the interactionterm resulted in an R^2 change of 0.09. The results indicate a significant presence of moderating effect. The moderating effect of financial strength explains 9% variance in environmental sustainability disclosure above and beyond the variance by internal controls and financial strength. Thus, the null hypothesis was rejected and therefore financial strengthmoderates the association between environmental sustainability disclosure and internal controls.

Table 7
Moderation effect of Financial Strength on the relationship between Internal Controls and Environmental Sustainability Disclosure

Zesd	**Model 1 Coef.(Std. Err.)**	**Model 2 Coef.(Std. Err.)**	**Model 3 Coef.(Std. Err.)**	**Model 4 Coef.(Std. Err.)**	**Model 5 Coef.(Std. Err.)**
_cons	((-.00)(.06)	(-.01(.05)	(-.01(.05)	(-.00(.05)	(-.00)(.05)
Zbs	.26(.06)**	.30(.06)**	.18(.06)**	.19(.06)**	.17(.06)*
Zacm		.06(.06)	(-.02(.06)	(-.02(.07)	(-.01(.07)
Zaci		.38(.06)**	.33(.06)**	.32(.06)**	.31(.06)**

Journal DOI: 10.36713/epra1013 | SJIF Impact Factor (2025): 8.619 ISSN: 2347-4378
EPRA International Journal of Economics, Business and Management Studies (EBMS)
Volume: 12 | Issue: 2 | February 2025 -Peer-Reviewed Journal

Zfs			.31(.00)**	.32(.06)**	.32(.06)**
zacm_fs				(-.06(.05)	(-.10(.05)
zaci_fs					.13(.06)**
R-sq:					
Within	.01	.14	.22	.20	.23
Between	.45	.58	.54	.59	.56
Overall	.07	.23	.30	.30	.32
R-sq Δ	.07	.16	.07	.00	.02
Waldchi2(9)	2.74	81.38	113.20	113.77	121.17
Prob> chi2	.00	.00	.00	.00	.00
sigma_u	.00	.00	.00	.00	.00
sigma_e	.94	.88	.84	.85	.84
Rho	.00	.00	.00	.00	.00

bs = board size, acm = audit committee meetings, aci = audit committee independence, fs = financial strength
**p<.01, *p<.05

Source: Research data (2019)

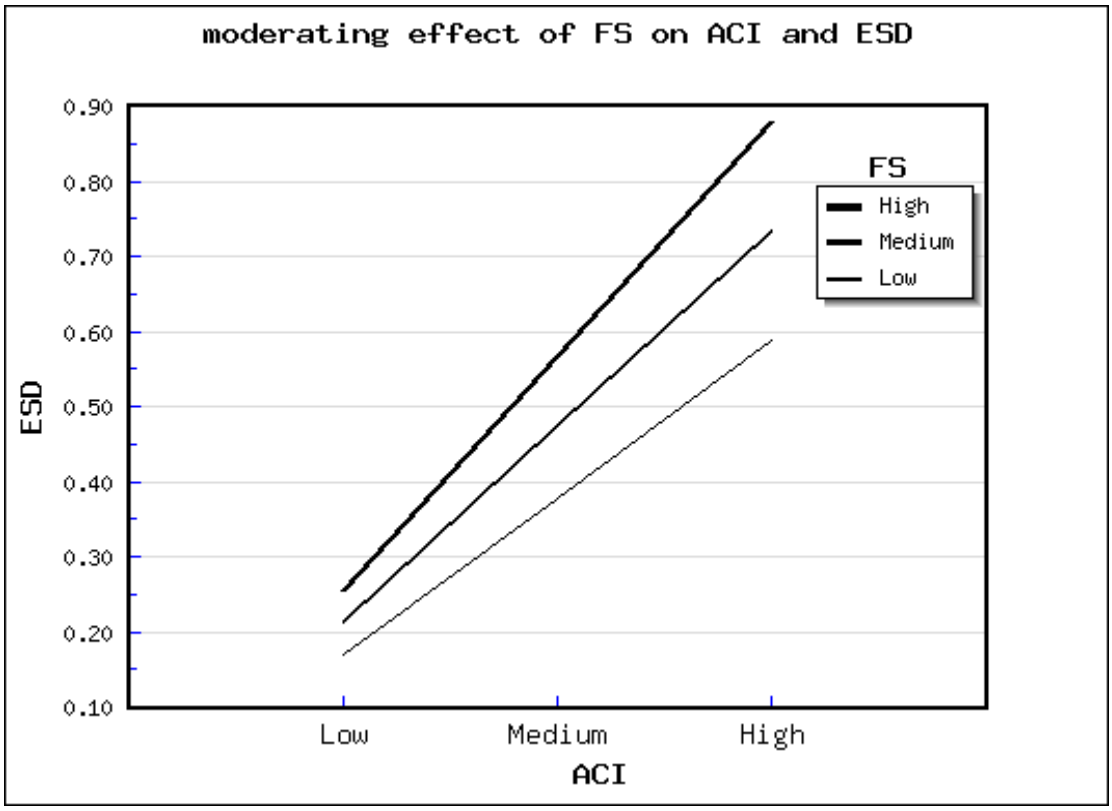

Figure 1 Modgraph for Moderating Effect of Financial Strength on Audit Committee Independence and Environmental Sustainability Disclosure

Source: Research data (2019)

An enhancing moderating effect is indicated in Fig. 1 implying that at high levels of financial strength, environmental sustainable disclosure increases with an increase in audit committee independence than in medium and low levels of board independence. More so, the figure demonstrates a stronger relationship between environmental sustainable disclosure and financial strength as result of steep slope, an indication that firms with high financial strength are likely to experience increases in environmental sustainable disclosure as a result of a more independent audit committee (majority being non-executive directors).

CONCLUSION

In terms of internal controls, financial strength has a positive and significant moderating effect on the relationship between institutional ownership and environmental disclosure. However, financial strength weakens the relationship between ownership concentration and environmental disclosure. Regarding the ownership structure, financial strength has a negative and significant moderating effect on the relationship between the audit committee meetings and environmental disclosure. Finally, there is a positive and significant moderating effect of financial strength on the relationship between audit committee independence and environmental sustainability disclosure. Financial Strength as interacting term has a significant influence on the relationship between corporate governance (measured by board characteristics, ownership structures and internal controls) and environmental sustainability disclosutres, therefore advancing theory.

RECOMMENDATIONS

Since the findings indicated that audit committee independence results in better environmental sustainability disclosure, firms listed in NSE need to have audit committees with a majority of independent directors so as to elicit high environmental disclosure levels. Also, the composition of independent audit committee members needs to be increased since they are likely to make independent decisions to improve environmental disclosures of firms listed in NSE without being manipulated.

REFERENCES

1. *AbuRaya, K. R. (2012). The relationship between corporate governance and environmental disclosure: UK Evidence. (Doctoral dissertation). Durham University.*
2. *Adams, C.A. (2002). Internal organisational factors influencing corporate social and ethical reporting: Beyond current theorizing, Accounting, Auditing and Accountability Journal, 15(2), 223-25.*
3. *Ahmed, K., & Nicholls, D. (1994). The impact of non-financial company characteristics on mandatory disclosure compliance in developing countries: The case of Bangladesh. The International Journal of Accounting, 29(1), 62-77.*
4. *Akhtaruddin, M. and Abdur Rouf, M. (2011), Corporate Governance, Cultural Factors And Voluntary Disclosure: Evidence From Selected Companies In Bangladesh, Working Paper, 2011 BAASANA International Conference, Bloomsburg University of Pennsylvania, USA.*
5. *Allegrini,M., & Greco, G. (2013). Corporate boards, audit committees and voluntary disclosure: Evidence fromItalian listed companies. Journal of Management & Governance, 17(1), 187–216.*
6. *Anazonwu, H. O., Egbunike, F. C., & Gunardi, A. (2018). Corporate board diversity and sustainability reporting: A study of selected listed manufacturing firms in Nigeria. Indonesian Journal of Sustainability Accounting and management, 2(1), 65–78.*
7. *Barako, D. G., Hancock, P., & Izan, H. Y. (2006). Factors influencing non-mandatory corporate disclosure by Kenyan companies. Corporate Governance, 14(2), 107-125.*
8. *Bokpin, A. G., Isshaq, Z., &Nyarko, E. S. (2015). Corporate disclosure and foreign share ownership: Empirical evidence from African countries. International Journal of Law and Management,57(5), 417-444. Retrieved on 23.11.2017 from https://doi.org/1.1108/IJLMA-01-2014-0004*
9. *Bryan, D., Liv, M. H. C., & Tiras, S. L. (2004). The influence of independent and effective audit committee on earnings quality. Working Paper, State University of New York, Buffalo.*
10. *Chepkwony, P. C. (2017). Entrepreneurial orientation and firm performance: The mediating role of marketing communication in micro-enterprises in Kericho County, Kenya. (Doctoral dissertation). Department of Business Administration, School of Business and Economics, Maseno University.*
11. *Cheruiyot, H. (2017). Implementation of the corporate governance code and the role of governance auditors. Capital Market Authority (CMA), Kenya. Retrieved on 03/04/2017 from https://www.cma.or.ke/index.php/regulatoryframework/corporate-governance-for-issuers*
12. *Collier, D., The Comparative Method (1993). Political science: The state of discipline. In Ada W. Finifter, ed., American Political Science Association. Retrieved on 13/04/2018 from https://ssrn.com/abstract=1540884*
13. *Forker, J. J. (1992). Corporate governance and disclosure quality. Accounting & Business Research, 22(86), 111-124.*
14. *Grüning, M., & Ernstberger, J. (2010). The association between disclosure and corporate governance. Working Paper, European University Viadrina Frankfurt (Oder) and Ruhr-University Bochum.*
15. *Guajarati, D. N. & Porter, D. C. (2009). Basic Econometrics (5th edition) New York. McGraw-Hill.*
16. *Habbash, M. (2016). Corporate governance and corporate social responsibility disclosure: Evidence from Saudi Arabia. Social Responsibility Journal, 12(4), 740–754.*
17. *Healy, P., & Palepu, K. (1995). The challenges of investor communications: The case of CUC International, Inc. Journal of Financial Economics, 38, 111-141.*
18. *Hyun, E., Yang, D., Jung, H., & Hong, K. (2016). Women on boards and corporate social responsibility. Sustainability, 8(4).*

19. *Ienciu, I.-A., Popa, I. E., & Ienciu, N. M. (2012). environmental Reporting and Good Practice of CorporateGovernance: Petroleum industry case study. Procedia Economics and Finance, 3, 961–967.*
20. *Jensen,M. C., & Meckling,W. H. (1976). Theory of the firm:Managerial behavior, agency costs and ownershipstructure. Journal of Financial Economics, 3(4), 305–360.*
21. *Kabir, R., & Thai, H. M. (2017). Does corporate governance shape the relationship between corporate socialresponsibility and financial performance? Pacific Accounting Review, 29(2), 227–258.*
22. *Khan, H. (2010). The Effect of corporate governance elements on corporate social responsibility (CSR) Reporting: Empirical evidence from private commercial banks of Bangladesh. International Journal of Law and Management, 52(2), 82–109.*
23. *Leng, J., & Ding, Y. (2011). Internal control disclosure and corporate governance: empirical research from Chinese listed companies. Scientific Research, 2, 286-294. doi:1.4236/ti.2011.24029*
24. *Mahmood, M., & Orazalin, N. (2017). Green governance and sustainability reporting in Kazakhstan's oil, gas, and mining sector: Evidence from a former USSR emerging economy. Journal of Cleaner Production, 164, 389-397. Retrieved on 18/08/2018 from www.elsevier.com/ locate/jclepro*
25. *Mgbame, C. O., & Onoyase, O. J. (2015). The effect of corporate governance on the extent of environmental reporting in the Nigerian oil industry. International Journal of Business and Social Science, 6(10), 203–210.*
26. *Mohammed, Z., & Tamoi, J. (2006). Corporate social disclosure of construction companies in Malaysia. Malaysian Accounting Review, 5(1), 85-114.*
27. *Nairobi Securities Exchange (2018). NSE Handbook (2017-2018). Nairobi, Kenya.*
28. *Ntim, G. C., Soobaroyen, T., & Broad, J. M. (2017). Governance structures, voluntary disclosures and public accountability: The case of UK higher education institutions. Accounting, Auditing & Accountability Journal, 30(1), 65-118. Retrieved on 04/08/2018 from https://doi.org/1.1108/AAAJ-10-2014-1842*
29. *Obigbemi, I. F., Iyoha F. O., & Ojeka S., A. (2015). Firm size and financial performance: A determinant of corporate governance disclosure practices of Nigerian companies. Journal of Accounting and Auditing: Research & Practice, 2015, DOI: 1.5171/2015.467294*
30. *Odoemelam, N., & Okafor, R. G. (2018). The influence of corporate governance on environmental disclosure of listed non-financial firms in Nigeria. Indonesian Journal of Sustainability Accounting and Management, 2(1), 25–49.*
31. *Onuorah, O. A., Egbunike, F. C., & Gunardi, A. (2018). The influence of corporate board attributes on voluntary social disclosure of selected quoted manufacturing firms in Nigeria. Indonesian Journal of Applied Business and Economic Research, 1(1), 20–33.*
32. *Peters, G. F., & Romi, A. M. (2011). Greenhouse gas emission accounting: The effect of corporate governance on non-mandatory disclosure. Working Paper, University of Arkansas and Indiana University, USA.*
33. *Prado-Lorenzo, J., Gallego-Alvarez, I., Garcia- Sanchez, I., & Rodriguez-Dominguez, L. (2009). Social responsibility in Spain: Practices and motivation in firms. Management Decisions, 46, 1247-1271.*
34. *Qian, W., & Burritt, R. (2007). Environmental accounting for waste management: A study of local governments in Australia, 27, 143–154*
35. *Saunders, M. (2016). Understanding research philosophies and approaches. University of Birmingham*
36. *Stanny, E., & Ely, K. (2008). Corporate Environmental Disclosures about the Effects of Climate Change. Corporate Social Responsibility and Environmental Management Corp.,15, 338–348.*
37. *Welford, R. (2007), "Corporate Governance And Corporate Social Responsibility: Issues For Asia", Corporate Social Responsibility and Environmental Management, 14(1): 42-51.*
38. *Zahra, S.A. and Pearce II, J.A. (1989). Board of directors and corporate financial performance: A review and integrative model. Journal of Management, 15(2): 291-334.*