

ENHANCING SOCIAL AND ENVIRONMENTAL ACCOUNTING DISCLOSURE QUALITY: EXPLORING THE ROLES OF BOARD AND AUDIT GOVERNANCE STRUCTURE IN NIGERIAN NON-SERVICE LISTED COMPANIES.

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Abstract

The Nigerian corporate sector needs to improve social and environmental accounting disclosure because stakeholders require enhanced transparency and accountability from the sector. Despite regulatory efforts, disclosure quality remains weak, reflecting deficiencies in governance mechanisms and reporting practices. This study examines influence of board and audit governance structures on Social and Environmental Accounting Disclosure Quality (SEADQ) among listed non-service companies in Nigeria. The research began with 74 non-service companies from the list but 23 companies were excluded because they lacked essential data for 2018–2022 so the study used 51 companies for analysis. Secondary data were sourced from corporate annual reports obtained through the Nigerian Exchange Group and official websites of participating companies during the five-year study period. The research uses SEADQ as its dependent variable while Audit Firm Choice, Board Meetings and Directors' Shareholdings function as independent variables. The model includes Firm Age and Performance as control variables to remove firm-specific influences from the analysis. The hypotheses were tested using Generalised Least Squares (GLS) estimation technique. The findings shows that board meetings and audit firm choice have a positive and significant relationship with SEADQ. The research results show non-service companies need suitable governance frameworks to obtain enhanced sustainability disclosure performance. It recommends that the Financial Reporting Council of Nigeria and other regulators needs to update Principle 21 through implementation of international sustainability reporting standards. The research helps Nigeria achieve Sustainable Development Goals 12, 13, 16 and 17 by enhancing corporate disclosure, institutional oversight and sustainable business operations.

Keywords: Social, Environmental, Board and Audit Governance

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1. Introduction

Companies operating in today's business environment face mounting expectations to achieve profit generation while fulfilling stakeholder demands for social and environmental responsibility. The increasing stakeholder interest in business social and environmental performance has created a need for better social and environmental accounting disclosure quality (SEADQ) ((Association of Chartered Certified Accountants, [ACCA], 2018). Companies need to disclose information beyond legal requirements because these reports help them build better stakeholder relationships, demonstrate corporate responsibility and achieve sustainability (Bamenda et al., 2024). Companies that achieve high SEADQ standards create transparent systems which lead to better corporate reputation, trust development and sustainable business operations (ACCA, 2018; Global Sustainability Standards Board [GSSB], 2021).

Regulatory bodies worldwide have established stricter disclosure requirements to fulfill the expanding stakeholder needs. Multiple regions now require businesses to use international sustainability frameworks including Global Reporting Initiative (GRI) and Sustainability Accounting Standards Board (SASB) for their reporting needs. The worldwide effort to achieve Sustainable Development Goals (SDGs) receives support from this emerging trend because it helps achieve SDG 16 (Which advocates for strong institutions and accountability) and SDG 17(Focused on fostering partnerships for global progress) (UN, 2015). Companies must show social and environmental transparency to their investors, consumers and regulators because these groups demand it which makes SEADQ essential (Bamenda et al., 2024).

The worldwide trend toward better social and environmental disclosure quality (SEADQ) does not produce uniform results among different countries. The United Kingdom and South Africa require businesses to disclose social and environmental information in detail but Nigeria maintains a voluntary disclosure system (ACCA, 2019). The different governance systems and market expectations among countries create substantial differences in disclosure quality (Bamenda et al., 2024).

Research shows that board and audit governance structures especially board meetings , audit firm choice and director ownership directly affect the accuracy and completeness of social and environmental disclosure reports (Eriabie & Odia, 2016; Yunusa, 2017). The governance mechanisms help companies achieve transparency while maintaining accountability and sustainability goal alignment. Companies that maintain effective board oversight, work with reputable audit firms and directors who hold appropriate shareholdings will achieve better social and environmental disclosure quality.

The main function of corporate governance involves board meetings which serve as the platform for making essential decisions about companies' performance including social and environmental responsibilities. Companies that schedule regular board meetings with proper organisation will achieve better sustainability issue management, monitoring and discussion capabilities. Boards that maintain continuous involvement with environmental and social performance metrics will create better conditions for making decisions that support sustainability (Younas et al. 2021). The governance system supports SDG 9 (Industry, Innovation, and Infrastructure) and SDG 16 (Peace, Justice, and Strong Institutions) by building effective institutions which support sustainable business operations.

The selection of an audit firm stands as a critical element which determines the quality of social and environmental disclosure. Companies that select audit firms specialising in sustainability will achieve disclosure standards that match international requirements. The implementation of AI-based auditing tools brings multiple benefits to auditing operations because they perform

automated tasks and minimise human mistakes while ensuring sustainability reporting compliance. The implementation of new technologies enables businesses to deliver precise and detailed disclosures which supports SDG 12 (Responsible Consumption and Production) (Bamenda et al., 2024).

The number of shares directors own in a company determines their ability to influence corporate decisions. Directors who possess major company shares tend to support decisions which create enduring shareholder value through sustainable practices. Directors who share financial interests with the company tend to back sustainability initiatives which improve social and environmental disclosure quality. The financial connection between directors and shareholders leads them to support sustainability initiatives which result in better corporate transparency and responsible business practices (Ashfaq & Rui, 2019). The Nigerian non-service companies face challenges to adhere to international disclosure standards despite recognizing their value. The lack of proper disclosure methods creates multiple negative effects which damage business operations, customer relationships and break down worldwide sustainability targets. The inadequate disclosure of SEADQ information prevents companies from reaching their environmental targets which blocks their ability to fulfill SDG 12 (Responsible Consumption and Production) and other relevant SDGs. The worsening environmental disasters including deforestation, pollution and climate change risks demonstrate why businesses need to enhance their social and environmental disclosure practices to protect their corporate image and business stability.

Research about Board and Audit Governance Structure effects on SEADQ in Nigerian non-service sectors lacks sufficient data. The current literature lacks uniformity because it fails to apply the GRI index for evaluating board and audit governance structure effects on disclosure quality. The research conducted by Hassan et al. (2020) and Yunusa (2017) contained essential information about how governance systems influence social and environmental disclosure practices.

The board meetings represent a fundamental element among the board and audit governance structure. Sustainability issues become less important than financial matters when boards fail to meet regularly which results in poor SEADQ performance. Research by Jizi and Dah (2018) and Younas et al. (2021) demonstrates that regular board meetings lead to better corporate social responsibility but additional studies are needed to understand this pattern in Nigerian non-service businesses.

The relationship between director shareholding and sustainability goals becomes complicated because directors must manage their financial interests against their environmental and social responsibilities. Directors who hold substantial equity positions in the company tend to pursue financial optimisation yet they understand that sustainability initiatives protect and grow shareholder value. The dual focus of directors demonstrates why companies need to link their governance systems to environmental and social targets but current research has not fully examined this relationship (Ashfaq & Rui, 2019).

The choice of audit firm by companies determines the quality of their social and environmental accounting disclosures (SEADQ). The Big Four audit firms together with their larger counterparts provide enhanced disclosure quality because they deliver more stringent review services which boost corporate disclosure accuracy (Dzankovic et al., 2022). Their worldwide recognition along with deep knowledge and commitment to international auditing standards enables them to deliver robust assurance systems.

The Nigerian non-service sectors face substantial challenges when it comes to social and environmental disclosure practices despite their growing importance. Research about

governance practices has focused mainly on established methods while ignoring new developments and their effects on sustainability reporting.

This research examined how board and audit governance structures composed of board meetings and audit firm choice and director ownership influence SEADQ in Nigerian non-service listed companies. The research examined these governance elements to support Nigeria's worldwide sustainability targets under SDG 12 (Responsible Consumption and Production) and SDG 13 (Climate Action) and SDG 15 (Life on Land). The corporate sector needs to develop these governance systems because they create better transparency and build stakeholder trust which drives sustainable development for the long term.

2. Literature Review and Hypotheses Development

The research examined how board and audit governance systems affect Social and Environmental Accounting Disclosure Quality (SEADQ) through three core theories which include agency theory, stakeholder theory and legitimacy theory. Agency theory established that choosing audit firms properly resolves management-shareholder conflicts which leads to better SEADQ results (Jensen & Meckling, 1976). Stakeholder theory, as put forward by Freeman (1984), asserts that when diverse stakeholder interests are taken into account especially through board members' shareholdings it leads to better SEADQ. Legitimacy theory, originating in 1975, maintains that organisations strengthen their reputation and transparency by holding frequent board meetings, which subsequently enhances SEADQ (Dowling & Pfeffer 1975).

Businesses now implement environmentally friendly practices because stakeholders continue to raise their concerns about society and the environment. Research by Abubakar and Moses (2020), and Ajibolade and Uwugbe (2013) shows that SEADQ is affected by board and audit governance structures because strong governance systems in these areas lead to better social and environmental performance. The Agency theory links board and audit governance structures to SEADQ by recognising them as fundamental oversight systems. Organisations that have influential board members achieve better performance results through their decisions about social and environmental accountability. In light of these considerations, this study explores the interplay between board and audit governance structure and SEADQ.

2.1 Board Meetings and Social and Environmental Accounting Disclosure Quality

The total number of board meetings throughout a year serves as a measure to evaluate how well the board handles organisational challenges according to Majumder et al. (2017). All stakeholders now focus on achieving high standards of social and environmental accounting disclosures (SEADQ). The board ought to handle social and environmental responsibility matters during their meetings to safeguard stakeholder interests. The following section reviews research that examines the relationship between board meetings and SEADQ.

Yunusa (2017) identified a negative and significant relationship between board meeting frequency and SEADQ in Nigerian publicly listed non service companies. The research conducted by him established non-executive director ownership as a moderating element to explain the different results found in earlier studies. On the other hand, (Issa et al., 2021), in his analysis of determinants affecting SEADQ, concluded that board meetings had no meaningful effect on SEADQ. In contrast, Bamenda et al. (2024) observed a positive and significant relationship between board meetings and SEADQ. Based on these findings, this study hypothesises that board meetings could positively influence SEADQ.

H₁: There is no significant relationship between board meetings and social and environmental disclosure quality among listed non-service companies in Nigeria

2.2 Audit Firm Choice and Social and Environmental Accounting Disclosure Quality

Eriabie and Odia (2016) studied how corporate governance affects social and environmental accounting disclosure quality (SEADQ) in Nigeria and discovered that audit firm selection directly impacts SEADQ positively. Similarly, research by Bamenda et al. (2024) reported a positive and significant relationship between audit firm choice and SEADQ. The research findings from Orazalin (2019) showed that SEADQ did not receive any influence from the selection of audit firms. However, Jamil and Mardawi (2021) observed a significant positive relationship between audit firm choice and SEADQ in their analysis of how board characteristics, among other factors, affect SEADQ among companies listed on the Palestine Exchange (PEX).

According to Bamenda et al. (2024), the selection of audit firm plays a critical role in producing trustworthy corporate disclosures which include SEADQ. Audit firms with kin interest on sustainability generates extensive social and environmental disclosures. This premise aligns with the principles of agency theory and supports the expectation that the choice of audit firm will influence SEADQ.

H₂: There is no significant relationship between audit firm choice and social and environmental accounting disclosure quality among listed non-service companies in Nigeria.

2.3 Director Shareholding and Social and Environmental Accounting Disclosure Quality

Directors' ownership of company shares can influence social and environmental accounting disclosure quality (SEADQ), as highlighted by (Noorhayati & Hamzeh Adel 2018). The agency theory shows that director shareholding creates a connection between director interests and shareholder interests which reduces agency conflicts (Masum et al., 2019). The existing research on SED and director share ownership shows limited findings but Amosh & Mansor (2020) and (Noorhayati & Hamzeh Adel 2018) present valuable findings. In their study of corporate governance among S&P Europe 350 companies, found a positive and significant impact of director shareholding on SEADQ. The improved SEADQ model provided various benefits that enhanced corporate reputation and attracted financial backing and helped organisations sustain their employee base. In light of these findings, it is recommended that businesses form corporate social responsibility (CSR) committees to effectively manage and implement SED policies. The research by Noorhayati et al., (2016) however, it is important to note that Adel et al. 's research is limited to cross-sectional data from 2016.

Contrary findings are presented in studies from different regions. (Nurleni et al., (2018) found that director shareholding had a negative impact on CSR disclosure in Indonesian manufacturing companies listed on the stock exchange from 2011 to 2015. The research used Partial Least Squares (PLS) analysis to study organisations with high environmental exposure but it failed to provide thorough evaluations of SED topics. Meanwhile, Masum et al. (2020) and Amosh and Mansor (2020) also reported insignificant relationships between director shareholding and SEADQ in Bangladesh and Jordan, respectively. Ika et al. (2021) in their study found a positive relationship between director ownership and environmental reporting in Indonesian companies, particularly when profitability was also high. The research focuses on environmental disclosure aspects but the overall pattern indicates that companies with major director ownership tend to enhance their SEADQ. This research anticipates that director shareholding will have a positive and significant impact on SEADQ, drawing from these varied global perspectives. As a result, director shareholding plays a critical role in the distribution of reliable as well as credible company disclosures, such as SEADQ. Director shareholding may

likely lead to publication of more extensive SEADQ in order to reduce market knowledge asymmetry. This is based on the idea of agency theory, as well as what was discussed above. Hence, it is expected that director shareholding will have impact on SEDQ.

3.0 Methodology

This research explores the role of board and audit governance structure in improving of social and environmental accounting disclosures quality (SEADQ) by analysing how board and audit governance structures impact Nigerian non-service listed companies. The study used a correlational method to determine the relations between variables. The study targeted all 74 non-service companies listed on the Nigerian Exchange Group as of December 31, 2023. The analysis excluded 23 companies because their complete data and annual reports were unavailable for the 2018 to 2022 period thus resulting in 51 non-service companies for the final assessment. A census method was used to collect information from the remaining entities. To measure Social and Environmental Accounting Disclosure Quality (SEADQ), a three-stage procedure was adopted in line with the Global Reporting Initiative (GRI) sustainability reporting standards. The framework established a systematic approach to create high-quality disclosure indicators. The researchers used binary scoring to evaluate disclosure by marking items as '1' for disclosure and '0' for nondisclosure. The researcher applied content analysis to determine the total disclosure quality score through an unweighted average calculation of all disclosure items (Bamenda et al., 2024).

$$SEADQ = \sum \frac{SEI}{HPDQ}$$

Where:

SEADQ = represents the Social and Environmental Accounting Disclosure Quality.

SEI = Social and Environmental Indicators.

HPDQ = Highest possible disclosure quality score

The research conducts an evaluation of individual explanatory variable effects through its analysis. Board Meetings was assessed by the number of times the board of directors convenes during a given accounting period (Bamenda et al., 2024; Hu & Loh, 2018; Jizi & Dah, 2018; Younas et al., 2021; Yunusa, 2017). The variable for Audit Firm Choice was treated as a binary variable where companies that used one of the "Big 4" audit firms EY, Deloitte, KPMG, or PWC received a "1" and all other companies received a "0" not (Bamenda et al., 2024; Bani-khalid et al., 2017; Eriabie & Odia, 2016; Ramadhini et al., 2020) while Director Shareholding was measured as the quantity of shares directly owned by directors divided by the total number of shares issued by the company during an accounting period (Bamenda, 2024). Firm Leverage was used as the control variable which is calculated by dividing total liabilities by total assets (Chams & García-Blandón, 2019; Shuaibu, 2020). The researcher used Return on Assets (ROA) as a control variable which was calculated by dividing profit after tax by total assets (Abu Qa'dan & Suwaidan, 2019).

These variables were integrated into the regression model adopted from Bamenda et al. (2024), which serves as the analytical framework for deriving the study's empirical results.

Social and Environmental Disclosure Quality Model

$$SEADQ_{it} = \beta_0 + \beta_1 BM_{it} + \beta_2 AFC_{it} + \beta_3 DS_{it} + \beta_4 FA_{it} + \beta_5 ROA_{it} + \varepsilon_{it}$$

Source: The model was adapted by the researcher from the study conducted by Bamenda et al. (2024).

Where:

SEADQ = Social and Environmental Accounting Disclosure Quality;

it = Longitudinal data indicator;

β_0 = Intercept;

β_1 to β_3 = The coefficients of independent variables

β_4 and β_5 = Coefficient of control variables;

ε = Error terms;

BM = Board Meetings;

AFC = Audit Firm Choice;

DS = Directors Shareholding

FS = Firm Size;

ROA = Stands as the financial performance indicator which measures Return on Assets.

4. Result and Discussion

The research section expands on the previous methodology to enhance social and environmental accounting disclosures quality (SEADQ) through the roles played by board and audit governance structures within Nigerian non-service listed companies. The methodology involves showing descriptive statistics which include minimum values, mean values, maximum values and standard deviation values and correlation analysis. The analysis includes diagnostic tests to check for multicollinearity, normality and heteroskedasticity. The final stage involves Generalised Least Squares (GLS) regression analysis to establish the relationship between board and audit governance and SEADQ. The evaluation of the study's main goal becomes possible through each of these analytical steps.

4.1 Descriptive Statistics

The data in Table 1 shows descriptive statistics which include mean, standard deviations, minimum and maximum values for both dependent and independent variables. The analysis evaluates data distribution patterns and spread to determine how each data point differs from its mean value. The evaluation process verifies that collected data meets all relevant legal standards which impact business operations and non-service company frameworks.

Table 1: Descriptive Statistics

Variables	Obs	Mean	Std. Dev.	Min	Max
SEADQ	255	0.19	0.20	0	0.86
BM	255	4.96	1.77	1	13
AFC	255	0.60		0	1
DS	255	3.22	8.88	0	56.56
FL	255	0.63	0.34	0.07	2.43
ROA	255	2.79	0.14	-0.78	76.58

Source: Authors' computation using STATA 15, 2025.

The analysis of Social and Environmental Accounting Disclosure Quality (SEADQ) in this study is based on 255 observations from the annual reports of 52 non-service companies over a five-year period. The SEADQ average score amounts to 0.19 which indicates disclosure quality at 19%. The SEADQ values span from 0 to 0.86 which shows wide differences between companies and demonstrates the requirement for better corporate reporting transparency and accountability.

The research examined three corporate governance variables which include Board Meetings (BM), Audit Firm Choice (AFC) and Directors' Shareholding (DS) to determine their effect on SEADQ. The board of at least one company convened 13 times during an accounting year while the board of at least another company convened only once. The meeting frequency changed because of the COVID-19 pandemic in 2020 and other factors. The annual minimum meeting requirement shows that some non-service companies did not adhere to Principle 10 of the Nigerian Code of Corporate Governance (NCCG) because it requires regular board meetings for effective oversight.

The majority of companies selected Big Four audit firms for their services because these firms maintained high audit credibility according to 60% average. The audit quality assessment revealed that some organisations used non-Big Four auditors which could indicate variations in their audit performance. The Directors' Shareholding percentage spanned between 0% and 56.56% with an average of 3.22% and a standard deviation of 8.88.

The research shows that SEADQ in Nigeria exists mostly as an optional practice with inconsistent implementation. The disclosure behavior of companies depends on three main factors which include board activity, auditor selection and ownership structure. The implementation of better governance systems would lead to improved disclosure standards which would help companies achieve United Nations Sustainable Development Goals (SDGs) 12 (Responsible Consumption and Production) and 13 (Climate Action) and 16 (Peace, Justice and Strong Institutions). The non-service sector of Nigeria will achieve sustainable economic expansion through enhanced social and environmental disclosure practices which will also establish stakeholder trust and support ethical business conduct.

4.2 Correlation between Social and Environmental Disclosure Quality and Independent Variables

The research examined Social and Environmental Disclosure Quality association with Independent Variables through correlation test. The correlation matrix in Table 2 shows all possible association among the research variables.

Table 2: Correlation Matrix

	SEADQ	BM	AFC	DS	FL	ROA
SEADQ	1.0000					
BM	0.3649	1.0000				
AFC	0.3350	0.4070	1.0000			
DS	-0.1592	-0.2443	-0.3333	1.0000		
FL	-0.1642	-0.1449	-0.2752	0.0158	1.0000	
ROA	0.2507	0.0240	0.1633	-0.0050	-0.1872	1.0000

Source: Author's computation using STATA 15, 2025.

The diagonal values in Table 4.2 show complete correlations of 1 because each variable matches itself perfectly. The SEADQ variable shows a weak negative correlation of -0.16 with Directors' Shareholding (DS) but it shows positive relationships with Board Meetings (BM) and Audit Firm Choice (AFC). The research examined how governance systems affect

disclosure practices because these practices need improvement to achieve SDG 12 (Responsible Consumption and Production) and SDG 13 (Climate Action) through environmental and social impact disclosure.

The research shows that Board Meetings (BM) and Social and Environmental Accounting Disclosure Quality (SEADQ) have a 0.36 moderate positive association. Better social and environmental disclosure practices result from improved oversight which occurs when board meetings become more frequent. SDG 16 (Peace, Justice and Strong Institutions) reaches transparency and accountability through its governance framework which establishes powerful institutions. The positive association between AFC and SEADQ shows that companies using big four audit firms achieve better disclosure standards which enhances SDG 12 sustainability information reliability.

The governance dynamics between AFC, BM and DS produce different results because AFC shows moderate positive association with BM but maintains negative association with DS. The disclosure quality improves when directors own more shares of the company because this ownership structure creates negative association with BM and AFC and SEADQ. The research shows that DS, BM, AFC and SEADQ have negative association because directors who own more than a specific amount of stock create less transparency which damages SDG institutional integrity and responsible business practices.

The governance indicators and SEADQ show different levels of correlation with FL and ROA but none exceed 0.7. The study can perform reliable interpretations of the relationships because multicollinearity issues remain below the 0.7 threshold. The positive link between ROA and SEADQ supports sustainability studies because organisations with solid financial results achieve better disclosure practices which helps them meet SDG 8 (Decent Work and Economic Growth) and SDG 9 (Industry, Innovation and Infrastructure) through sustainable business operations.

The research data shows that governance systems have direct links to SEADQ which confirms the study's conclusion that proper board and audit governance systems lead to better social and environmental disclosure for sustainable development goals.

4.3 Regression Result

The Generalised Least Squares (GLS) analysis results are presented in Table 4.8 below..

Table 3: Generalised Least Square Regression

SEADQ	Coefficients	Std. Error	Z-statistics	P-values
BM	0.2793	0.0038	7.35	0.000
AFC	0.06951	0.0109	6.40	0.000
DS	-0.0002	0.0002	-0.80	0.425
FL	-0.0228	0.0139	-1.64	0.101
ROA	0.0025	0.0004	6.69	0.000
CONSTANT	0.0019	0.0216	-4.05	0.932
Wald chi2 (7)	= 256.92			
Prob>chi2	= 0.0000			
R-Squared	= 0.22			
Adjusted R-Squared	= 0.20			
Number of Observations	= 255			

Source: Authors' computation using STATA 15, 2025.

The analysis, in Table 3. examined a dataset of 255 observations that covered five years for 51 listed non-service companies. The analysis shows how the independent variables affect the

SEADQ. It also considered differences across companies and, over time. The Wald chi-squared test evaluated the model in the analysis. The Wald chi-squared test produced a p-value of 0.0000, where the test result confirms that the model is fitted. The R-squared value is 0.22, which means that the five variables together explain 22 percent of the variance in SEADQ. The R-squared value also tells us that 78 percent of the variance, in SEADQ are explained by the variables not captured in the study. The coefficients and the standard errors show the size, direction and precision of the relationships between each variable and SEADQ. All independent variables except DS are statistically significant, at the 1% level.

The study highlights the overall significance of the model and provides a detailed view of how each independent variable influences SEADQ. This analysis is important for understanding the factors that contribute to variations in SEADQ within the studied context, offering a comprehensive insight into the underlying dynamics.

4.4 Hypotheses Testing, Discussion of findings and Implication of findings

The research examined whether board meetings affect Social and Environmental Accounting Disclosure Quality (SEADQ) of Nigerian non-service companies through H_{01} which stated that board meetings do not impact SEADQ. The research data indicates that SEADQ shows a statistically significant relationship with the number of times boards meet. The study shows that board meeting frequency directly affects disclosure quality because each meeting increase results in a 2.79% better disclosure quality according to the 0.2793 coefficient and the p-value of 0.000 which supports the rejection of the null hypothesis. The research shows that board meetings serve as governance instruments which improve corporate transparency and accountability through NCCG-compliant reporting practices. The research results match worldwide sustainability goals which include SDG 12 (Responsible Consumption and Production) and SDG 16 (Peace, Justice and Strong Institutions) and SDG 13 (Climate Action) and SDG 8 (Decent Work and Economic Growth). The research indicates that boards need to meet regularly because these meetings serve as critical tools for handling new social and environmental challenges. The research results contradict (Salehi et al., 2018; Younas et al., 2021), but support the findings of (Aliyu, 2019, and Odoemelam & Okafor, 2018). Research shows that boards which conduct regular meetings will boost SEADQ while building stakeholder trust and enhancing corporate reputation according to both domestic governance standards and international sustainability criteria.

The research hypothesis H_{02} stated that audit firm choice does not affect Social and Environmental Accounting Disclosure Quality (SEADQ) of Nigerian listed non-service companies. The selection of audit firms with established non-financial reporting expertise enables non-service companies to enhance their environmental and social disclosure quality, transparency and overall disclosure quality. The p-value of 0.000 shows that the null hypothesis should be rejected because it is less than the 1% significance level which confirms audit firm choice produces better disclosure quality. The empirical results show that audit firm choice (AFC) has a positive effect on SEADQ because companies that choose audit firms with social and environmental reporting expertise will achieve a 6.95% better SEADQ. The research supports agency theory because external auditors help listed non-service companies achieve better accountability through their work to reduce information gaps. The research validates three fundamental Sustainable Development Goals (SDGs) which enable SDG 16 governance transparency, SDG 12 sustainable consumption and production reporting and SDG 13 climate action through environmental assurance and reliable climate risk disclosure. The results from

this study confirm previous findings by Eriabie and Odia (2016). The research results demonstrate listed non-service companies need to evaluate their audit firm choices because these decisions affect SEADQ performance while proposing new regulatory standards which focus on disclosure practices and transparency.

The research hypothesis Three stated that Directors' shareholding does not affect the Social and Environmental Accounting Disclosure Quality (SEADQ) of listed non-service companies. The p-value from Table 4.8 reached 0.425 which shows directors' share ownership lacks statistical significance at 1%, 5% and 10% levels. The DS coefficient in the analysis showed a negative value of -0.0002 which indicates directors' equity ownership has no effect on SEADQ. The study failed to reject the null hypothesis because directors' financial involvement does not seem to influence social and environmental disclosure practices at the sampled companies. The study supports Yunusa (2017) findings because it shows no significant relationship between directors' share ownership and SEADQ. While the study contradicts the research finding conducted by Eriabie & Odia (2016) The absence of significant director share ownership makes it difficult to achieve SDG 16 (Peace, Justice and Strong Institutions) because listed non-service companies need to establish clear governance systems which prevent conflicts of interest. Research shows that director financial ownership does not directly lead to better control over sustainability reporting operations. The research supports SDG 12 (Responsible Consumption and Production) because SDG 12 needs active governance monitoring to achieve better accountability and disclosure practices instead of depending on directors' passive ownership. The research indicates that Nigerian non-service companies experience no improvement in SEADQ through director share ownership yet their SEADQ performance depends on board member involvement and audit firm expertise.

5. Conclusion and Recommendations

The research aimed to enhance social and environmental accounting disclosure quality (SEADQ) through examination of board and audit governance systems in Nigerian non-service listed companies. The research examined social and environmental issues because these problems remain unaddressed and there is insufficient research about SEADQ measurement in the Nigerian market. The research received additional support from increasing stakeholder activism which included community demonstrations and pressure about environmental damage and corporate responsibility.

The research examined how SEADQ disclosure quality responds to different board and audit governance systems. The research evaluated disclosure information from four categories which included human resource management, community outreach, employee development and environmental sustainability reporting. The research applied agency theory to determine which governance mechanisms would enhance disclosure quality.

The research tested three hypotheses which demonstrated that board and audit governance systems affect SEADQ quality but one hypothesis failed to show any significant relationship. The research findings suggest that boards should evaluate candidates based on new selection methods and audit firms should prove their ability to enhance SEADQ through their work and boards should meet more frequently for better results.

The research findings offer multiple reference points which regulatory institutions, professional bodies and government institutions can utilise. Non-service companies need to create governance systems with complete disclosure practices to achieve better corporate

accountability according to the research. The study supports using the Global Reporting Initiative (GRI) checklist as a standardised framework to evaluate SEADQ performance in Nigerian non-service listed companies.

The research results validate three Sustainable Development Goals because it supports SDG 12 (Responsible Consumption and Production) through disclosure practices, SDG 13 (Climate Action) through environmental accountability and SDG 16 (Peace, Justice, and Strong Institutions) through improved corporate governance systems. The research provides vital information which enables stakeholders to improve governance and sustainability standards in Nigerian business operations.

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