



## IMPACT OF ENVIRONMENTAL DISCLOSURES QUALITY ON THE INFORMED DECISION OF RELEVANT STAKEHOLDERS IN NIGERIA

AKINLABI, Akinjide Gideon<sup>1</sup>  
AUDU, Solomon Ibrahim<sup>2</sup>  
AKINRINOLA, Olalekan Oladipo<sup>3</sup>

### Abstract

*This study investigates the impact of environmental disclosure quality on the informed decision of users of corporate reports based on the assumptions of the decision usefulness theory. The survey design was adopted in this study using a questionnaire that was administered to preparers and users of corporate reports. A combination of t-test and regression was used to test the hypotheses of the study. The findings confirm the low level of voluntary environmental disclosure mechanisms practiced in Nigeria. Finally, preparers are aware of the information need of users. In conclusion, the study shows that much priority is not given to environmental reports. It is recommended from this study that firms should ensure that the level of their EDQ is continuously improved to aid user decisions and secure a positive impression of stakeholders about the firms. Government and standard setters should gear efforts towards standardization of environmental disclosures of firms in Nigeria through legislation and issuance of standards to improve the quality of disclosures.*

**Keywords:** *Corporate reporting, decision usefulness, environmental disclosure quality*

### 1. Introduction

Corporate reporting derives its essence from the relevance of information disclosed for decision-making, otherwise, it becomes meaningless, irrelevant and a waste of resources (Georgiou, Mantzari & Mundy, 2021). The International Accounting Standard Board (IASB) restored decision application as the main objective of the General Purpose Financial Statement (GPFS) in the revised conceptual framework for financial reporting, hereafter referred to as 'the framework' (IASB, 2018). The IASB describe International Financial Reporting Standards (IFRS) compliant financial statement as a decision support tool.

<sup>1</sup> Department of Accounting, Finance and Taxation, Caleb University, Imota, Lagos, Nigeria

<sup>2</sup> Department of Accounting, Finance and Taxation, Caleb University, Imota, Lagos, Nigeria

<sup>3</sup> Department of Accounting, Finance and Taxation, Caleb University, Imota, Lagos, Nigeria



However, in the case of environmental reporting, its preparation is to show responsibility to the environment and not necessarily for decision-making (Audu, 2021). Audu (2021) shows that in Nigeria, it is not mandatory but its preparation has been proven empirically by some scholars (Asuquo, Dada & Onyeogaziri, 2018; Owolabi and Iyoha, 2017; Oncioiu et al, 2020) to have an impact on performance and capital attraction in firms. Therefore, unlike the corporate reports, the quality of corporate environmental disclosures cannot be easily ascertained as to the extent to which it impacts the decisions of users (IASB, 2018; Sadowitz, 1992). However, it has been empirically shown to have significance on capital (investment), which means that it is possible that environmental reporting does influence decision-making.

Soyemi, Akinwale, Akinlabi and Dandango (2019) reported that firms increased environmental reporting results in a positive response to stakeholders' demands. This has not significantly impacted the increasing level of environmental damage especially in developing nations. Currently in Nigeria, environmental information is largely unregulated. The format, quality and extent of disclosures are left at the discretion of the firms' management (Audu, 2021). It is not a surprise that firms adopt environmental accounting as a mere legitimacy tool (Welbeck, Owusu, Bekoe, Kusi & Amoah, 2017). This practice is inadequate to guarantee a better environment free from further damage (Deegan, 2014). The argument for environmental reporting to be prepared with high quality falls on the line of stewardship of the firm to report its activities as it affects the environment which is similar to corporate reporting, where management is expected to report its activities to the shareholders for activities conducted with their resources. Hence, just as corporate reports are expected to be of high quality, environmental reporting should also be of high quality as any form of information of low quality is perceived to be more harmful than no information (Audu, 2021)

Earlier studies on environmental reporting investigated its impact on profitability (Makori&Jagongo, 2013; Alipour, Ghanbari, Jamshidinavid&Taherabadi, 2019b) and factors influencing firms' disclosures (Soyemi et al., 2019) among others. Currently, attention is shifting to the quality of disclosures as earlier predicted by Owen (2008). Available studies largely reported conflicting levels of

environmental disclosure quality. The inability of growing research efforts on environmental accounting to curb the high rate of environmental damage is into two categories. Foremost, most available studies have no consideration for users' perceptions nor engage them in the process. Studies in this category adopt methods that allow the use of secondary data. Secondly, other available studies focus on issues that exclude whether environmental disclosures of firms meet the decision requirements of users of corporate reports.

Some studies examined the application of EDQ to corporate reports users' decisions but failed to consider the view of users in their methodology. Examples of research in this category include Al-Shaer (2018) and Alipour et al. (2019). Other research that considered the view of users in the measurement of EDQ failed to examine how they affect the decision of users. Studies such as Helfaya, Whittinton and Alawattage (2019), Bachmanna, Carneiroa&Espejoa (2013), Al-Shaer (2018) and Wei & Wang (2016) among others fall into this category. It is, therefore, necessary to direct research attention to ascertain the quality, considerations underpinning firms' disclosure quality decisions, perception of users about the quality of disclosures, standardization of environmental disclosures and whether environmental information disclosures meet the decision requirements of users of corporate reporting.

### **The objective of the Study**

The main objective of this study is to investigate the impact of environmental disclosure quality on the informed decision of relevant stakeholders in Nigeria. To achieve the main objective of this study, the following specific objectives were met, which are;

- i. To compare the perception of users and preparers of corporate reports about the level, adequacy and relevance of quality of environmental disclosures of firms in Nigeria;
- ii. To compare environmental disclosure quality indices adopted by preparers and preferred by users of corporate reports; and
- iii. To examine the influence of the environmental disclosure quality of firms in Nigeria on the informed decision of users of corporate reports.



## Research hypotheses

Research hypotheses are stated thus;

H<sub>01</sub>: There is no significant distinction between the perception of users and preparers of corporate reports about the level, adequacy and relevance of environmental disclosures quality of firms in Nigeria;

H<sub>02</sub>: There is no significant difference between EDQ indices preferred by users and indices adopted by preparers of corporate reports of firms in Nigeria;

H<sub>03</sub>: Quality of environmental information disclosure does not influence the decision of corporate reports users significantly.

## Research Questions

- i. How do users and preparers of corporate reports differ on the level of environmental disclosure quality of firms in Nigeria?
- ii. To what extent does users' view significantly differ from preparers' view about indices of environmental disclosure quality?
- iii. What is the level of priority users of corporate reporting accord environmental disclosures quality in making informed decisions?

## 2.0 Empirical Review

The streams of related literature on the usefulness of environmental disclosure quality on users' decisions are scarce. For this research, available studies are grouped based on methodology and whether they address the application of EDQ to user decisions. Some of the empirical evidences that considered the view of users in the methodology adopted (based on primary data) are discussed thus.

Helfaya et al. (2019) conducted cross-economy research combining respondents from developed and developing economies to investigate the views of users and preparers of corporate reports on the quality of environmental disclosures. The Z tests were performed to ascertain the significance of the difference in means of

the two groups. Results revealed that the EDQ measurement metrics adopted for the study are more appealing to users than preparers of corporate reports. This implies that users' preferences differ from EDQ measures adopted by preparers of corporate reports indicating no consensus. They further identified that both groups preferred quantitative disclosures as better indicators of EDQ. They further submitted that indicators of EDQ should include themes of information disclosed, adoption of reporting guidelines and use of visual tools among others. Apart from the combination of data from respondents from different economic backgrounds, the study failed to assess how the disclosure index or opinion of respondents affects the decisions of users.

Experts' perception of what constitutes the indicators of environmental disclosure quality was the focus of the study by Bachmanna et al. (2013). The study utilized expert panel discussion divided into two stages; the first stage was to identify environmental disclosure indicators and the second stage was to assess and rank the indicators selected. Twenty-six attributes selected by the first panel were reduced to ten which they described as the environmental disclosure quality index (EDI). These include environmental impacts of products, environmental audit, wastes and residues management, environmental targets and objectives and environmental costs among others. Despite valid findings from the study, the impact of the disclosure quality index identified on users' decisions was not captured. The environment of the study is also India, having economic characteristics different from that of Nigeria.

The experimental method was also applied by Holm and Rikhardsson (2008) and Khemir, Baccouche and Ayadi (2019) to investigate how environmental disclosures affect investment allocation by investors with varied experiences. Results obtained by both studies revealed that investors consider environmental disclosures in investment allocation. The former further reported that the experience of investors and investment horizon tends to play a mitigating role in the extent of influence of environmental disclosure on investment allocation. Khemir et al. (2019) confirmed that the influence of governance and social disclosures outweighs that of environmental information. Both studies effectively matched the view of investors with environmental disclosures of firms but their



scope excludes measurements of EDQ and its application to all primary users of financial statements. The study environment differs from that of Nigeria. The application of the study findings is therefore limited.

For a similar study, Wei et al. (2016) adopted a combination of experimental and survey methods. Data for the analysis was gathered from two experimental and one control group as well, a questionnaire was administered. Results obtained show that EDQ has a positive influence on the decision of investors and their perception of the credibility of managers. However, the study data were obtained from Iran and results can only be generalized to other economies with caution.

Research by Al-Shaer (2018) is one of the available empirical evidence on EDQ that utilized secondary data in their investigation. The researcher verified whether environmental disclosures enhance investment recommendations by analysts in the United Kingdom based on assumptions of stakeholders' theory. The "CONI approach" involving a mix of qualitative and quantitative data obtained through content analysis of disclosures in the financial statement was adopted for the study. Regression results confirmed that discretionary environmental disclosures exist and contribute to improvement in the investment recommendations of sampled firms. However, study findings can only be generalized to developed nations especially the United Kingdom. Secondary data obtained for the study ignored the view of users on EDQ and its impact on users' decisions. The study does not cover all relevant decision areas where EDQ is applicable.

Unlike Al-Shaer (2018), Yang, Wen and Li (2020) combined Difference-in-Difference and propensity score matching methods to study the effect of environmental information disclosure on firm value. They reported a significant positive relationship between environmental disclosures and the valuation of firms. The study suffered from quite a several limitations. First, it utilized secondary data that ignore stakeholders' perceptions. Secondly, important details capable of aiding the understanding and generalization of research findings such as theoretical framework, research design and sampling technique among others were not clearly stated.

The focus of a comparable study by Alipour et al. (2019) was the relationship between EDQ and earnings quality in emerging markets based on assumptions of agency theory. Panel data obtained from 107 listed firms on the Iranian Stock Exchange was regressed. Results obtained confirm the existence of a positive relationship between EDQ and earnings quality. Weaknesses of the study include non-disclosure of research design and sampling technique adopted for the study. Data obtained for the study ignored the perception of users and preparers of financial statements.

The perception and experience of analysts about the decision usefulness of fair value was the focus of the study by Georgiou et al. (2021). To achieve the research objective, they problematized the practical application of decision usefulness theory. Study data were obtained from interviews with UK financial analysts and comment letters written to IASB. The study tested three key assumptions of the IASB conceptual framework. Results obtained show decision usefulness of fair value is unquestionable though depending on the type of decision under consideration. They further reported that market-based realities render decision usefulness of fair value meaningless. Though this study considered the decision application of corporate disclosures but was not focused on environmental information disclosure quality.

### **3. Theoretical Framework**

From existing literature, there is an array of theories relevant to explaining the application of disclosures in corporate reports to users' decisions. For this study, the decision usefulness theory developed by George Staubus in 1958 is considered the most appropriate. The theory explains the essence of reporting is primarily to provide information that is of value and understandable to users (Gassen& Schwedler, 2010). Young (2006) explained that decision usefulness theory is what the literature explained as the supremacy of users. Decision usefulness is a major factor in the external reporting activities of firms. This implies that the choice of disclosure decisions depends on whether items disclosed, in quantity, quality and presentation meet the needs and decision requirements of users. The recent convergence between the preparers, standard setters and users of reports is of great



essence (Young, 2006). The decision usefulness theory plays an important role in the identification of user problems and the provision of information necessary to address them. The theory assumes that users of corporate reports are rational and will choose alternatives that give maximum expected returns. This further shows that disclosures of entities are considered by users in making a choice of action or decision that is capable of yielding maximum benefits based on the information at their disposal. Hence, the quality of firms' environmental information disclosures in reports could trigger or influence the actions of users in any direction. The focus of this study is to unearth users' perceptions about the level, adequacy and relevance of EDQ in reports and how they impact user decisions.

#### **4. Methodology**

A survey design was adopted for this study. Primary data was obtained through an online questionnaire administered to preparers and users of corporate reports. Five-point Likert scale was adopted in the design of the questionnaire while respondents were allowed to supply appropriate responses about their professional qualifications only. The questions about how respondents perceived adopted indices measured EDQ and the level of priority they would accord EDQ in making decisions among others were asked and responses were obtained.

#### **Population and Sampling Technique**

The population of the study is accountants, auditors, investors, analysts, creditors and other users of corporate reports of firms in Nigeria. They were further grouped into five; preparers of financial statements (Accountant, finance directors, etc); auditors (including environmental auditors & officers); investors/shareholders (existing & potential); lenders and creditors (debenture holders, bankers credit officers, distributor, etc); and analysts or researchers. This assists in helping respondents to identify the category they belong to and reduces the chance of misunderstanding the questions asked. A convenience sampling technique was adopted in the selection of 50 respondents. This was adopted to ensure that respondents possess the required academic and professional experience, to provide relevant answers to the survey questions.

#### **Measurement of Variables**





## **Environmental Disclosure Quality (EDQ)**

Studies on the evaluation of EDQ of firms used scoring techniques by assigning values based on (non)disclosure in corporate reports of firms (Soyemi et al. 2019; Baalouch et al. 2019; Yang et al., 2020). The GRI environmental reporting framework and SEC guideline for sustainability reporting are considered to be more relevant to determine the extent of disclosures of environmental information rather than the quality of the disclosures. For this study, Environmental Disclosure Quality (EDQ) was measured based on fourteen indices adapted from Helfaya et al. (2019), Bachmanna et al (2013) and Al-Shaer (2018) based on the perception of users, experts and analysts obtained from their respective study environments. Adapted EDQ for the study indices cut across disclosure themes of significance to decisions making activities of users (see Appendix 1). Responses obtained from the respondents formed the basis for the determination of the acceptability of these indices as EDQ measures to respondents.

### **EDQ User Decision Areas**

This study explored the application of EDQ to three major decision areas where corporate report disclosures can be applied by primary users identified by the framework. We further broke down each decision area into specific decisions where investors, lenders and creditors could apply EDQ. Specific decisions covered by the study are shown in appendix 2.

### **Data Collection Instruments**

An online questionnaire was administered through social media groups and email to obtain the required data for the study. Five-point Likert scale with responses ranging from strongly disagree to 5 strongly agree was designed for the study (see appendix 3). The questionnaire was developed on Google documents and the link was shared with individuals and professional groups where users and preparers of corporate reports are participants.



## Method of Analysis

Taking a cue from previous studies of this nature, the combination of descriptive statistics, independent t-test and regression analysis were combined in data analysis (see Uwuigbe, Jimoh&Daramola, 2013; Iredele&Akinlo, 2017 and Iredele&Ogunleye, 2018). Responses from the administered questionnaire were quantified by assigning values 1, 2, 3, 4 and 5 to strongly disagree (will never consider), disagree (may not consider), neutral, agree (low priority) and strongly agree (high priority) respectfully. The mean score of preparers and users of the financial statement was compared to determine their disparity. The hypotheses are tested at a 95% confidence interval.

## Research Model

The independent t-test was adopted for the test of hypothesis one. The hypothesis required a comparison of the mean responses of users and preparers of corporate reports with the view to determine their level of significance. Each of the EDQ indices adopted for the study was coded as indicated in appendix 1. The model for hypothesis is thus stated;

$$\mu Y = \mu X \dots\dots \text{equation 1}$$

Where Y = the mean of EDQ based on the perception of users of corporate reports

X = the mean of EDQ based on the perception of users of corporate reports

$\mu$  = mean

ID = f (EDQ)

$$ID = c + \beta_1 EDQ + \varepsilon \dots\dots \text{equation 2}$$

Where ID = Informed Decision based on disclosures in corporate reports

EDQ = Environmental Disclosure Quality for the decision of users.

c = Constant

$\varepsilon$  = the error term

Note: Hypotheses one and two shall be tested using equation one while equation two applies to hypothesis three.

## 5. Results and Discussions

This section presents the results from the analysis of the data gotten. Responses from the questionnaire were quantified by assigning numeric values to available options based on weight. Strongly agree (high priority or very often) was assigned

5, agree, often or high priority, 4 and in that order. The class of respondents was regrouped as either user or preparer; the preparer and auditor groups were merged as auditors certify the content of corporate reports before they are published. The auditors are regarded as part of contributors to the preparation of the corporate report as their views are usually taken into consideration in their preparation, approval and publishing though the board has the sole responsibility over corporate reports. Other subgroups are treated as users for this study.

## Presentation of Results

### Independent t-test results

The results of comparing the perception of preparers and users of corporate reports in Nigeria are shown in table 2a. The mean of 3.1, 3.94 and 2.76 was obtained for the level, adequacy and relevance of EDQ respectively. This implies that most of the respondents are not sure whether EDQ is observed in corporate reports of firms in Nigeria of high quality. With a mean of 2.76 (which is close to 3), respondents are not sure whether the level of EDQ of firms in Nigeria is relevant to make informed decisions. However, the respondents agree that the EDQ of firms in Nigeria is adequate for informed decision application.

The mean of Users and preparers are not the same but their difference is statistically insignificant as their respective p-values are greater than 5%.

**Table 2a: Independent t-test results: Preference of EDQ indices by Preparers and Users**

Variable	Mean- Total	Mean - Preparer	Mean- User	Difference	Significance (p-value)
Level of EDQ	3.10	3.36	2.89	.471	.104
Adequacy of EDQ for Decision	3.94	3.09	2.82	.269	.358
EDQ relevance to user Decision	2.76	2.52	2.71	.104	.688

Source: Researcher's survey, 2022.

The independent t-test results showed in table 2b compares the perception of preparers and users on how effective the adopted indices measure the level of



EDQ of firms in Nigeria. The mean for the group (total mean), preparers and users of corporate reports as well as the mean difference, p-value and remarks are shown on the table. The mean values of the group (total), preparers and users of financial statement ranges between 4.0 and 4.68 out of the maximum of 5. This indicates that all the respondents agree that the indices measured the level of EDQ of firms in Nigeria effectively.

Negative mean difference was obtained for all the indices except environmental policy. This implies that the mean values of opinion of preparers are higher than that of users for all the indices except environmental policy. This indicates that the preparers have confidence that the quality indices of information reported in corporate reports meets the expectation of users. However, statistically insignificant mean difference of the above position of preparers is affirmed but less than the expectation of users. Users scored the ability of the indices to measure EDQ effectively lower than assumed by the preparers though the difference is negligible.

**Table 2b: Independent t-test results: Preference of EDQ indices by Preparers and Users**

T	Total Mean	Mean-Preparer	Mean-User	Mean Diff	P-value Diff	Remarks
Environmental Strategy (ES)	4.48	4.45	4.50	-.045	.755	Insignificant
Environmental Policy (EP)	4.58	4.59	4.57	0.19	.893	Insignificant
Environmental award/sanctions (EAS)	4.32	4.32	4.32	-.003	.986	Insignificant
Environmental Management Systems (EMS)	4.52	4.50	4.54	-.036	.831	Insignificant
Environmental objectives & targets (EOT)	4.46	4.36	4.54	-.172	.234	Insignificant
Environmental impacts of firm activities & products (EIAP)	4.56	4.55	4.57	-.026	.868	Insignificant
Environmental certification (EC)	4.4	4.32	4.46	-.146	.403	Insignificant
Pollution & waste management (PWM)	4.24	4.05	4.39	-.347	.063	Insignificant
Measurement & comparison of annual environmental performance (MCEP)	4.3	4.27	4.32	-.049	.804	Insignificant
Adoption of international ED reporting framework (IRP)	4.28	4.14	4.39	-.256	.221	Insignificant
Waste Recycling (WR)	4.24	4.00	4.43	-.429	.050	Significant
Stakeholders Identification (SI)	4.18	3.91	4.39	-.484	.017	Significant
Adoption of environmentally friendly systems, technology & products (EFSTP)	4.42	4.18	4.61	-.425	.013	Significant
Environmental investments & liabilities (EIL)	4.14	4.05	4.21	-.169	.359	Insignificant
Support to host communities (SHC)	4.56	4.41	4.68	-.269	.123	Insignificant
<b>Number of Observations</b>	<b>50</b>	<b>22</b>	<b>28</b>			

**Source: Researcher’s survey, 2022.**

**Regression Results**

Results obtained from regression analysis of data obtained from respondents are shown in table 3. The EDQ was broken down into level, adequacy and relevance to user decisions. For investment and credit decisions, the LEDQ and AEDQ have



positive coefficients while the coefficient of REDQ is negative. Considering the lending decision, only the coefficient of LEDQ was positive while others are negative. The case of patronage decision is unique as only the REDQ has a negative coefficient. All the indices of EDQ have positive coefficients for valuation decisions. The p-values of all the variables are greater than 5% and are statistically insignificant.

**Table 3: Regression results**

		Coef.	P-Value	Nature of Relationship
<b>Investment Decision</b>	LEDQ	.070	.689	Positive
	AEDQ	.239	.163	Positive
	REDQ	-.106	.540	Negative
<b>Lending Decision</b>	LEDQ	.474	.101	Positive
	AEDQ	-.152	.257	Negative
	REDQ	-.134	.586	Negative
<b>Credit Decision</b>	LEDQ	.232	.389	Positive
	AEDQ	.224	.279	Positive
	REDQ	-.419	.258	Negative
<b>Patronage Decision</b>	LEDQ	.181	.342	Positive
	AEDQ	-.062	.761	Negative
	REDQ	.013	.955	Positive
<b>Valuation Decision</b>	QEDQ	.066	.629	Positive
	LAED	.020	.880	Positive
	REDQ	.111	.590	Positive

Source: Researcher's survey, 2022.

## Discussion of Findings and Test of Hypothesis

*H<sub>01</sub>: There is no significant distinction between the perception of preparers and users of corporate reports about environmental disclosures quality of firms in Nigeria;*

The p-values obtained for the mean difference in perception of preparers and users of corporate reports reported by this study are greater than 5%, indicating an insignificant difference. The mean difference indicates that the mean of preparers ( $\mu Y$ ) and users ( $\mu X$ ) perceptions of the EDQ of firms in Nigeria are not equal (that is,  $\mu Y \neq \mu X$ ) but the difference is statistically insignificant (see table 2a). A positive mean difference indicates that the preparers are more confident that the level, adequacy and relevance of EDQ are reported in form and quantity acceptable to users. This further revealed that the EDQ of firms has not been

meeting the needs of users up to the level expected by preparers. Going by the obtained mean values in the region of 3, the preparers and users are aware that the level, adequacy and relevance of EDQ of firms are currently on average. We, therefore, accept the null hypothesis. This finding is contrary to the assumptions of the decision usefulness theory that suggests that the information reported by the preparers of corporate reports is deemed to meet the need of users. This could be due to the lack of standardization in environmental reporting and as such even though users perceive the information content is adequate, it is not significant to take a decision probably due to no standardization in its reporting format.

*H<sub>02</sub>: There is no significant difference between EDQ indices preferred by users and indices adopted by preparers of corporate reports of firms in Nigeria.*

A p-value of more than 5% proves that the mean of Y (preparer) is not significantly different from the mean of X (user) for all the EDQ indices except waste recycling, stakeholders' identification and adoption of environmentally friendly systems, technology and products. This result shows that there is a consensus between preparers and users on measurement indices of EDQ except for the above three. The preparers are more convenient with the use of EDQ adopted for this study than users as evidenced in higher mean values (that is  $\mu Y > \mu X$ ) for all the indices. The preparers had scored the effectiveness of these indices in the measurement of EDQ higher than users (see table 2b). The null hypothesis that the difference in perception of preparers and users of corporate reports is not significant is true for all the EDQ indices except three; waste recycling; stakeholders' identification; and adoption of environmentally friendly systems, technology and products. For these three indices, we fail to reject the null hypothesis and the alternative hypothesis that the mean difference is significant is accepted. Hence, there is consensus in the perception of preparers and users about the effectiveness of adopted EDQ indices, for the study excludes waste recycling, stakeholders' identification and adoption of environmentally friendly systems, technology and products. The findings of this study corroborate the submission by Bachmanna et al (2013) and Walden and Stagliano (2015).



Bachmanna et al (2013) proposed that what firms should report securing a high level of EDQ should include the impact of products and operations on the environment, waste management, firms' environmental objectives and targets, environmental policy, costs and investments in the environment among others. Walden and Stagliano (2015) on the other hand submitted that environmental costs and expenses contribute to the level of EDQ of a firm. The findings are contrary to results obtained by Helfaya (2019) who reported that the EDQ indices used are more appealing to users than preparers. Despite that the preparers' perception of the EDQ indices is higher than that of users, the statistically insignificant difference in mean confirmed that the preparers correctly predict the information need of users to a large extent. This further suggests that the information reported in corporate reports meets the need of users which is in line with the assumptions of decision usefulness theory.

*H<sub>03</sub>: Quality of environmental information disclosure does not influence decision of corporate reports users significantly;*

The coefficient of all the EDQ indices and users' valuation decisions are positive. All positive coefficients indicate that the EDQ of firms are important factors that users consider in valuation decision. By reporting quality environmental disclosures that are high, adequate and relevant for users to take informed decisions, a firm can positively influence users about its value. It implies that investors pay attention to the level, adequacy and relevance of EDQ in taking valuation decisions. This is consistent with the results obtained by Yang et al. (2020) and Wei et al. (2016). The former submitted that the valuation of sampled Chinese firms has a positive relationship with their quality of environmental disclosures while the latter confirmed that investors consider the quality of environmental disclosures in decision-making. Irrespective of the economic environments of firms, user consideration for EDQ for valuation decision appears comparable.

The level of EDQ impacts all the user decision areas covered by this study positively. This implies that the increases in the level of EDQ will impact the investment, lending, credit, valuation and patronage decisions positively. For instance, firms with a higher level of EDQ may have better access to raising funds





as investors and lenders will be positively disposed to invest their funds in the firm. Credit facilities form an important element of the working capital and liquidity of a firm. A positive relationship between the level of EDQ and credit and patronage decisions implies that the firms with a higher level of EDQ will attract credit facilities and customers' confidence. Such firm is likely to enjoy better access to trade and other credits from distributors, suppliers and other creditors. Patronage is another advantage that firms with a higher level of EDQ are likely to enjoy better than contemporaries with lower EDQ. Firms can enjoy the ease of access to finance, loans, and credit facilities, improved investors' confidence and direct investments (foreign and local) as well as increased patronage by improving its level of environmental disclosure quality. This finding corroborates the submission of Xing et al. (2021) that Chinese firms with improved EDQ enjoy improved access to loan facilities and Wei et al. (2016) that EDQ formed part of the information that contributes to observed investors' behavioral pattern.

The relevance of EDQ has an inverse relationship with investment, lending and credit decisions while its effect on patronage and valuation decisions is positive. A negative effect on investment, lending and credit decision implies that investors, lenders and creditors will react negatively to whether environmental disclosures are relevant for decision-making or not. A firm cannot improve its investment recommendation, access to loan facilities, or credit rating by ensuring its EDQ are relevant to the decision of users. These findings defied the expectation that reporting EDQ that is relevant to user decisions will improve access to funds, investors' confidence, credit rating and loan facilities. This finding aligns with the report by Al-Shaer (2018) that discretionary disclosures improve the investment recommendations of sampled firms.

Unlike REDQ, the adequacy of EDQ has a positive coefficient for all the user decision areas except lending. The positive coefficient implies a positive influence; the higher the EDQ adequacy for the decision of users the higher the level of access to funding, investors' confidence, credit rating, patronage and firm value among others. Unexpectedly, a negative coefficient indicates that a firm



cannot attract better credit facilities by improving the adequacy of its EDQ for users' decisions.

Results further indicate that the relationship between all indices of EDQ and user decisions is statistically insignificant. An insignificant effect of the level, adequacy and relevance of EDQ of firms to the decision of users can be traced to the level of development of the capital market in Nigeria, the level of environmental impact awareness and the voluntary nature of environmental reporting in Nigeria among others. The level of information available to corporate reports users groups (such as investors, lenders, creditors and customers among others) is limited. Information required for user decisions is often scarce leaving users with no other choice than to depend largely on the historical information that is made available by firms periodically. Sometimes, the cost of obtaining additional information outweighs the benefits. Most firms are not aware of the environmental impacts of their products and activities, reason why they failed to capture them in their reports. Management of firms is yet to accord environmental disclosures the level of priority they deserved in corporate reporting. Many of them are unaware of the benefits of engaging in high environmental disclosure quality and its influence on the decision of users about their firm.

## **5. Conclusion**

The following conclusions are therefore raised from the study.

The findings of the study confirmed that the decision usefulness of EDQ of firms in Nigeria is at its lowest ebb as the effect of EDQ on user decisions is statistically insignificant. Environmental disclosure practices of firms in Nigeria are serving desired purposes but to a lesser degree. The level of environmental disclosure quality of firms in Nigeria is average and less relevant to user decisions than expected.

There is a consensus between the preparers and users on the level of environmental disclosure quality of firms in Nigeria. The difference in their opinion on the level of EDQ is statistically insignificant. The assumptions of the decision usefulness theory and the framework are found true about firms in

Nigeria, again to a lesser degree. Environmental disclosure quality in corporate reports of firms in Nigeria is meeting the information need of users on average.

The user of corporate reports confirmed that the adopted indices for this study are effective in the measurement of the EDQ of firms in Nigeria. Again, there is a consensus (except for three out of fifteen indices) among users and preparers that these indices effectively measure the EDQ of firms. The preparers are aware of the environmental disclosure themes that the users need to measure the quality of their disclosures and make an informed decision. EDQ disclosures are adding value to user decisions. Whether these are well and consistently reported in corporate reports is not outside the scope of this study.

The level of EDQ impacts user decisions positively. Users place a premium on the level of EDQ of reporting firms in making an investment, lending, credit, valuation and patronage decisions. Reporting a high level of EDQ will put a firm at advantage with the investors, creditors, and lenders and increase the level of patronage of products and services offered by the firm. Firms can improve their values by improving the level, adequacy and relevance of the quality of their environmental disclosure to users' decisions.

## **6. Recommendations**

The study, therefore, recommends as follows;

Firms in Nigeria should improve the level of quality of environmental information disclosures. This will not only serve the purpose of saving the environment but also improve the relevance and adequacy of information disclose to user decisions. Firms can effectively secure improved access to funding, better patronage and higher firm value among others through increases in the level, adequacy and relevance of environmental disclosure quality to the decision needs of users.

Preparers of financial statements should ensure better coverage of the EDQ indices covered by this study in corporate reports. Increases in the quality of coverage of these indices will improve the perception of investors, lenders, creditors and customers about the level, adequacy and relevance of environmental



disclosures of firms. By this, the essence of corporate reporting can be preserved and improved upon.

Since preparers of corporate reports are aware of the EDQ required by users for decision-making, firms should pay more attention to ensure these indices are given prominence in corporate reports. Managers of firms should review and strengthen reporting policies and systems that will improve environmental information disclosures around these indices.

There is a dire need to improve the level of awareness of the environmental disclosure quality of firms in Nigeria. Government agencies, pressure groups and researchers should do more to orientate firms on the need to ensure that they respond to their environmental responsibilities and include such information in their annual reports.

Environmental accounting stakeholders should do more to improve the level of environmental disclosure quality of firms in Nigeria. Accounting and environmental standard setters, policymakers and the government can improve EDQ by harmonizing the environmental reporting of firms in Nigeria through the issuance of standards and legislation among others.

### Reference

- Alipour, M., Ghanbari, M., Jamshidinavid, B. and Taherabadi, A. (2019). The relationship between environmental disclosure quality and earnings quality: a panel study of an emerging market", *Journal of Asia Business Studies*, 13(2), 326-347. <https://doi.org/10.1108/JABS-03-2018-0084>
- Alipour, M., Ghanbari, M., Jamshidinavid, B. and Taherabadi, A. (2019b). Does board independence moderate the relationship between environmental disclosure quality and performance? Evidence from static and dynamic panel data. *Corporate Governance*, 19(3), 580-610. <https://doi.org/10.1108/CG-06-2018-0196>
- Al-Shaer, H. (2018). Do environmental-related disclosures help enhance investment recommendations? UK-based evidence. *Journal of Financial Reporting and Accounting*, 16(1), 217-244. <https://doi.org/10.1108/JFRA-03-2016-0020>
- Asuquo, A. I., Dada, E. T., & Onyeogaziri, U. R. (2018). The effect of

- sustainability reporting on corporate performance of selected quoted brewery firms in Nigeira. *International Journal of Business & law Research*, 6(3), 1-10.
- Audu, S.I. (2021). Sustainability reporting and business growth of selected listed deposit money banks in Nigeria. *Crawford Journal of Business & Social Sciences*, 11(1), 130-142.
- Baalouch, F., Ayadi, S.D. and Hussainey, K. A (2019). Study of the determinants of environmental disclosure quality: evidence from French listed companies. *Journal of Management Governance* 23, 939–971. <https://doi.org/10.1007/s10997-019-09474-0>.
- Bachmanna, R. K. B., Carneiro L. M. and Espejo, M. M. S. B. (2013). Environmental information disclosure: a proposed indicator based on experts' perceptions. *Revista de Contabilidade e Organizações*, 7(17), 36-47. <http://dx.doi.org/10.11606%2Frco.v7i17.56666>
- Comyns, B. (2017). Climate change reporting and multinational companies: Insights from institutional theory and international business. *Accounting Forum*, 42(1), 65-77. <https://doi.org/10.1016/j.accfor.2017.07.003>
- Deegan, C. (2017). Twenty five years of social and environmental accounting research within critical perspectives of accounting: hits, misses and ways forward. *Critical Perspectives on Accounting*, 43, 65-87.
- Du, X., Jian, W., Zeng, Q. and Chang, Y. (2018). Do auditors applaud corporate environmental performance? Evidence from China. *Journal of Business Ethics*, 151(4), 1049–1080. <https://doi.org/10.1007/s10551-016-3223-6>
- Fatima, A.H., [Abdullah, N.](#) and [Sulaiman, M.](#) (2015). Environmental disclosure quality: examining the impact of the stock exchange of Malaysia's listing requirements. *Social Responsibility Journal*, 11(4), 904-922. <https://doi.org/10.1108/SRJ-03-2014-0041>
- Georgiou, O., Mantzari, E. & Mundy, J. (2021). Problematising the decision-usefulness of fair values: empirical evidence from UK financial analysts. *Accounting and Business Research*, <https://doi.org/10.1080/00014788.2020.1814687>
- Helfaya, A., Whittington, M. and Alawattage, C. (2019). Exploring the quality of corporate environmental reporting: Surveying preparers' and users' perceptions. *Accounting, Auditing and Accountability Journal*, 32(1), 163-193. <https://doi.org/10.1108/AAAJ-04-2015-2023>
- Gassen, J and Schwedler, K. (2010). The Decision Usefulness of Financial Accounting Measurement Concepts: Evidence from an Online Survey of Professional Investors and their Advisors. *European Accounting Review*, 19(3), 495–509. <https://doi.org/10.1080/09638180.2010.496548>



- Hooks, J., and van Staden, C. J. (2011). Evaluating environmental disclosures: The relationship between quality and extent measures. *The British Accounting Review*, 43(3), 200–213. doi:10.1016/j.bar.2011.06.00.
- Holm, C. and Rikhardsson, P. (2008). Experienced and novice investors: does environmental information influence investment allocation decisions?. *European Accounting Review*, 17(3), 537-557.
- Iredele, O. O and Akinlo, O. O. (2017). Comparative Analysis of Environmental Management Accounting Practices in Nigeria and South Africa. *International Accounting & Finance Research Journal*, 6(1), 133-151. <https://ir.unilag.edu.ng/handle/123456789/10136>.
- Iredele, O. O and Ogunleye, O. J. (2018). An evaluation of environmental management accounting (EMA) practices and barriers to its implementation: a comparative study of Nigeria and South Africa. *Crawford Journal of Business & Social Sciences (CJBASS)*, 13(1), 96-113. <https://ir.unilag.edu.ng/handle/123456789/10117>
- Longoni, A., and Cagliano, R. (2018). Inclusive environmental disclosure practices and firm performance: the role of green supply chain management. *International Journal of Operations and Production Management*, 38(9), 1815-1835. <https://doi.org/10.1108/IJOPM-12-2016-0728>
- Makori, D. A. and Jagongo, A. (2013). Environmental accounting and firm profitability: an empirical analysis of selected firms listed in Bombay Stock Exchange, India. *International Journal of Humanities and Social Science*, Vol. 3 (18).
- Mikial, M., Marwa, T., Fuadah, L. and Meutia, I. (2018). The Effects of Environmental Performance and Environmental Information Disclosure on Financial Performance in Companies Listed on the Indonesia Stock Exchange. In Proceedings of the 4th SriwijayaEconomics, Accounting, and Business Conference (SEABC 2018), 525-532. doi: 10.5220/0008442105250532
- Nwobu, O. A., Owolabi, A., & Iyoha, F. O. (2017). Sustainability reporting in financial institutions: A study of the Nigerian Banking sector. *Journal of Internet Banking and Commerce*, 22(8), 1-15.
- Odera, O., Scott, A. and Gow, J. (2016). An examination of the quality of social and environmental disclosures by Nigerian oil companies. *Corporate Governance*, 16(2), 400-419. <https://doi.org/10.1108/CG-05-2015-0065>
- Oncioiu, I., Petrescu, A., Bilcan, F., Petrescu, M., Popescu, D., & Anghel, E. (2020). Corporate sustainability reporting and financial performance. *MDPI*, 12, 1-13.



- Owen, D. (2008). Chronicles of wasted time? A personal reflection on the current state of, and future prospects for, social and environmental accounting research. *Accounting, Auditing and Accountability Journal*, 21(2), 240–267.
- Owen, D. (2014). The evolution of social reporting: the ‘early days’. *Social and Environmental Accountability Journal*, 34(2), 75–80
- Rahman, S. and Anwar, M. (2016). Shareholder’s Demand: A Determinant for the Environmental Disclosures: A Study in the Bangladesh Context. *Research Journal of Finance and Accounting*, 7((18), 68-74.
- Khemir, S., Baccouche, C. and Ayadi, S.D. (2019). The influence of ESG information on investment allocation decisions: An experimental study in an emerging country. *Journal of Applied Accounting Research*, 20(4), 458-480. <https://doi.org/10.1108/JAAR-12-2017-0141>.
- Rupley, K. H., Brown, D., & Marshall, R. S. (2012). Governance, Media and the Quality of Environmental Disclosure. *Journal of Accounting and Public Policy*, 31, 610–640. <https://doi.org/10.1016/j.jaccpubpol.2012.09.002>
- Sadowitz, M. (1992). Environmental Disclosure: What Is Required and What Is Needed. *Environmental History Review*, 16(4), 69-82. Available at <http://www.jstor.org/stable/3984950>.
- Solikhah, B. and Maulina, U. (2021). Factors influencing environment disclosure quality and the moderating role of corporate governance. *Cogent Business & Management*, 8(1), 1-18. <https://doi.org/10.1080/23311975.2021.1876543>
- Soyemi, K. A., Akinwale, J. A., Akinlabi, A. G. and Dandango, I. K. (2019). Corporate governance and environmental accounting: The Nigerian Experience. *Uniosun Journal of Management Sciences*, 4(2), 92-112.
- The International Accounting Standards Board (2018). Conceptual Framework for Financial Reporting. IFRS Foundation. <https://www.ifrs.org/content/dam/ifrs/publications/pdf-standards/english/2021/issued/part-a/conceptual-framework-for-financial-reporting.pdf>
- Uwuigbe, U., Jimoh, J. and Daramola, S. P. (2013). Corporate environmental accounting practice in Nigeria: a comparative study of the perception of prepares and users. *International Journal of Social Sciences and Humanities Reviews* 4(3), 140 – 148.
- Walden, W.D. and Stagliano, A. J. (2003). An assessment of the quality of environmental disclosure themes. *Advances in Environmental Accounting & Management*, 2, 137-165. [https://doi.org/10.1016/S1479-3598\(03\)02006-5](https://doi.org/10.1016/S1479-3598(03)02006-5)



- Wei, J. T. and Wang, I. M. (2016). Environmental disclosure, investors' investment decisions and their perceptions of the credibility of management. *Global Journal of Business Research*, 10(4), 17-25.
- Welbeck, E. E., Owusu, G. M. Y., Bekoe, R. A. Kusi and Amoah, J. (2017). Determinants of environmental disclosures of listed firms in Ghana. *International Journal of Corporate Social Responsibility*, 2(1), 11–23. <https://doi.org/10.1186/s40991-017-0023-y>
- Xing, C., Yuming Z. Y., and Tripe, D. (2021). Green credit policy and corporate access to bank loans in China: The role of environmental disclosure and green innovation. *International Review of Financial Analysis* 77, 1-16
- Yang, Y., Wen, J. and Li, Y. (2020). The Impact of Environmental Information Disclosure on the Firm Value of Listed Manufacturing Firms: Evidence from China. *International Journal of Environmental Research in Public Health*, 17(916), 1-20. <https://doi.org/10.3390/ijerph17030916>
- Young, J. Y. (2006). Making up users. *Accounting, Organizations and Society* 31 (6), 579–600. <https://doi.org/10.1016/j.aos.2005.12.005>
- Zarzycka, E. and Krasodomska, J. (2022). Non-financial key performance indicators: what determines the differences in the quality and quantity of the disclosures?. *Journal of Applied Accounting Research*, 23(1), 139-162. <https://doi.org/10.1108/JAAR-02-2021-0036>

### Appendix 1 – ENVIRONMENTAL DISCLOSURE QUALITY INDICES

S/N	Statements
1	Environmental policy
2	Environmental Strategy
3	Environmental management systems
4	Environmental award/sanctions
5	Environmental objectives & targets
6	Environmental impacts of firm activities & products
7	Pollution & waste management
8	Environmental certification (e.g. ISO14001, etc)
9	Adoption of international ED reporting framework (e.g. GRI)
10	Measurement & comparison of annual environmental performance
11	Recycling of waste: water, effluents, solid waste, etc
12	Identification of stakeholders affected
13	Adoption of environmentally friendly systems, technology & products
14	Environmental investments & liabilities
15	Support to host communities, environmental protection agencies & environmental groups





## Appendix 2 – RELEVANT USER DECISION AREAS WHERE ENVIRONMENTAL DISCLOSURE QUALITY (EDQ) OF FIRMS IS USEFUL

S/N	Statements	Responses				
1	Investment decision					
2	Lending decision					
3	Credit decision					
4	Patronage (purchase of product or services)					
5	Valuation decision					

### Appendix 3- Questionnaire

#### SECTION A – DEMOGRAPHIC INFORMATION

S/N	Questions
1	Your age bracket (in years) a) Below 25 Years b) 25 – 35 c) 36 – 45 d) 46 – 55 e) Above 55
2	Gender a) Male b) Female
3	Job Responsibility a) Preparers of Financial Statement (Accountant/finance directors, etc) b) Auditors (including environmental auditors/officers) c) Investor/shareholder (existing and potential) d) Lender/Banker/Creditor (debenture holder, banker's credit officer, distributor, etc) e) Analyst/researcher
4	Years of experience a) Below 5 years b) 6 – 10 years c) 11 – 15 years d) 16 – 20 years e) Above 21 years
5	Qualification a) MBA, MSc & PhD b) First Degree (HND/BSc/B.Ed/BA) c) Others
6	Professional Qualification



## SECTION B – RESEARCH OBJECTIVES

- i) *To compare ED quality indicators' priorities of preparers and different class of users of FS/sustainability reports.*

S/N	Statements	Responses				
		Strongly agree	Agree	Neutral	Disagree	Strongly disagree
	The disclosure of the following in the Financial Statement, websites and/or the Sustainability Reports of a firm help determine quality of ED of the firm					
1	Environmental policy					
2	Environmental Strategy					
3	Environmental management systems					
4	Environmental award/sanctions					
5	Environmental objectives & targets					
6	Environmental impacts of firm activities & products					
7	Pollution & waste management					
8	Environmental certification (e.g. ISO14001, etc)					
9	Adoption of international ED reporting framework (e.g. GRI)					
10	Measurement & comparison of annual environmental performance					
11	Recycling of waste: water, effluents, solid waste, etc					
12	Identification of stakeholders affected					
13	Adoption of environmental friendly systems, technology & products					
14	Environmental investments & liabilities					
15	Support to host communities, environmental protection agencies & environmental groups					

ii) *To investigate how the quality of ED influences decision of users of financial statements.*

S/N	Statements	Responses				
		High priority	Low priority	Neutral	May not consider	Will Never consider
	What level of priority do you give quality of ED (or Environmental reputation) of a firm in making the following decisions					
1	Investment decision					
2	Lending decision					
3	Credit decision					
4	Patronage (purchase of product or services)					
5	Valuation decision					

i. *To assess perception of preparers and users of corporate reports on Quality of ED in Nigeria*

S/N	Statements	Responses				
		Strongly agree	Agree	Neutral	Disagree	Strongly disagree
	Please select appropriate option that match your opinion about each of the following questions					
1	Environmental disclosures of firms in Nigeria are of high quality					
2	The Quality of environmental information disclosures of firms in Nigeria is adequate for users to take informed decisions					
3	The quality of ED of firms in Nigeria is relevant to user decisions.					