

ENVIRONMENTAL VOLUNTARY DISCLOSURE AND MARKET VALUE OF LISTED CONSUMER GOODS FIRMS IN NIGERIA

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ABSTRACT

This study examined the relationship between environmental voluntary disclosure and market value of listed consumer goods firms in Nigeria. However, the specific objectives were to ascertain the relationship between carbon emissions disclosure and market capitalization of listed consumer goods firms in Nigeria, to examine the relationship between renewable energy consumption disclosure and market capitalization of listed consumer goods firms in Nigeria and to investigate the relationship between waste management disclosure and market capitalization of listed consumer goods firms in Nigeria. Ex-post facto research design was adopted, and panel data covering ten (10) years (2013-2023) were collected across eighteen (18) listed consumer goods firms in Nigeria which formed the sample size of the study. The data collected were analyzed using descriptive statistics and panel multiple regression analysis via E-views 10.0 statistical package. The findings revealed that carbon emission disclosure (CED) has a significant positive relationship (Coeff. = 0.0238{0.0048}) with market capitalization (Mcap) of listed consumer goods firms in Nigeria, renewable energy consumption disclosure (RECD) has a significant positive relationship (Coeff. = 0.0195{0.0315}) with market capitalization (Mcap) of listed consumer goods firms in Nigeria, employee health and safety disclosure (EHSD) has a significant positive relationship (Coeff. = 0.0312{0.0027}) with market capitalization (Mcap) of listed consumer goods firms in Nigeria, Community development disclosure (RECD) has a significant positive relationship (Coeff. = 0.0345{0.0002}) with market capitalization (Mcap) of listed consumer goods firms in Nigeria while waste management disclosure (WMD) has an insignificant positive relationship (Coeff. = 0.0125{0.1935}) market capitalization (Mcap) of listed consumer goods firms in Nigeria. It was however concluded that environmental voluntary disclosure plays a crucial role in shaping the market value of listed consumer goods firms in Nigeria. The study recommended, amongst others, that companies should increase their use of renewable energy sources and communicate these efforts to stakeholders to improve their market value and appeal to clean energy investors.

Keywords: Environmental Voluntary Disclosure, Market Value, Listed Consumer Goods Firms and Nigeria.

1.0 INTRODUCTION

1.1 Background to the study

Voluntary disclosure is the provision of information by a company's management beyond requirements such as generally accepted accounting principles and Securities and Exchange Commission rules, where the information is believed to be relevant to users' decision-making's in annual reports (Al-Akra & Ali, 2012). Any financial and non-financial information disclosed by management beyond mandatory financial reports is considered voluntary disclosure. Voluntary disclosures can comprise strategic information like product, competition, customers; financial information like management earnings forecast, stock price; and non-financial information like environmental, social, and governance sustainability performance (Li & Yang, 2016).

In recent years, the issue of environmental sustainability has become a global concern, with increasing recognition of the need for businesses to address their ecological impact. Nigeria, as an emerging economy with a thriving consumer goods sector, faces unique challenges and opportunities in relation to environmental disclosure and market value. Consumer goods firms play a vital role in Nigeria's economy, catering to the diverse needs and preferences of its population. However, the environment is often overlooked in the pursuit of economic growth and profit. As a result, sustainability issues have emerged as a critical aspect that demands attention from both companies and consumers (Uzondu, Okolie & Nwogbe, 2020). The concept of environmental voluntary disclosure has gained traction as a way for organizations to openly share information about their environmental practices and performance. It is believed that such disclosure can positively influence market value by enhancing the perception of a company's commitment to environmental responsibility.

Numerous studies conducted worldwide (for instance, Onoh, Kayadi & Ndubuisi, 2023; Nangih, Emeka-Nwokeji & Peters, 2022; Theophilus & Ademola, 2020; Okechukwu & Okeke-muogbo, 2020) have explored the relationship between environmental disclosure and firm performance, providing valuable insights into the potential impact on market value. Globally, voluntary disclosures have been a controversial issue and the level of compliance is still uncertain even when the yearning for financial information disclosure is increasingly needed by every stakeholder. Naturally, private entities are not obligated by law to meet some mandatory disclosure requirements, unlike public entities and corporate organization which must publicly make available some specific information disclosure requirements that are material relevant for shareholders and the other entire stakeholders. Perhaps, one of the benefits some of entities that are still remaining private is to avoid mandatory disclosure of vital financial and non-financial information (Rizzato et al., 2019). Further studies from the advanced economies have shown that financial information disclosure requirements vary from voluntary to mandatory based on a particular country strong regulatory enforcement level.

In some countries like Sweden, Norway, The Netherlands, France, Australia and Denmark, there is evidence of strong mandatory requirement regulations for companies in reporting environmental engagements (Qamruzzaman, Jahan & Karim, 2021). However, in countries where a high level of financial information reporting is voluntary in nature, the companies operating in those countries are still under pressure to ensure that they are seen to be performing optimally in their firm performances thereby improving their market value, as well as performing corporate social responsibilities (Osugwu & Asuluemhotu, 2019). However,

limited research has been conducted on this topic within the specific context of Nigeria's consumer goods firms. This knowledge gap highlights the urgency and significance of conducting this study to understand the relationship between environmental voluntary disclosure and market value for listed consumer goods firms in Nigeria.

1.2 Statement of the problem

The relationship between voluntary environmental disclosure and market value is of paramount importance for listed consumer goods companies in Nigeria at a time when environmental concerns are growing and consumer demands for sustainability are increasing. However, the lack of comprehensive research in this specific context creates uncertainty and leaves room for missed opportunities. Failure to disclose environmental efforts and performance can have a negative impact on both the consumer goods industry and the Nigerian economy as a whole. Without transparent information, investors may perceive that companies are not committed to environmental responsibility, leading to decreased market value and potential loss of investment opportunities (Onoh, K 2023). Furthermore, secrecy hinders informed decision-making by consumers who prefer environmentally friendly products, leading to a decline in market share and a company's competitiveness (Rizzato et al., 2019).

While voluntary environmental disclosures can increase the market value of consumer goods companies, they can also pose challenges due to the potential for greenwashing and misleading communications (Theophilus & Ademola, 2020). False or superficial claims about sustainability practices can undermine consumer trust and damage a brand's reputation and market position (Onyegbula, 2021). Additionally, increased disclosure requirements impose additional costs on companies, which can impact profitability, especially for small and medium-sized enterprises (Olamade & Aduloju, 2019). Additionally, organizational barriers such as lack of awareness, insufficient resources, and short-term profit mindset can hinder the incorporation of sustainability into core business strategies (Elijido-Ten et al., 2020).

There is no consensus in the existing literature on voluntary environmental disclosure, and previous studies have yielded mixed results. Some studies conducted in Nigeria (e.g. Onoh, 2023; Nangih, 2022; Theophilus & Ademola, 2020; Okechukwu & Okeke-muogbo, 2020) A significant positive association between spontaneous and environmental has been demonstrated. We provide a variety of disclosures and a variety of metrics ranging from financial performance, market value, and quality of earnings to stock valuation. Also, in Nigeria, other studies such as Nurhasimah et al., (2016) showed a non-significant positive association. Some studies conducted in other developed and emerging countries such as India and Indonesia (e.g. Putri & Suputra, 2019; Wasara & Ganda, 2019) also consistently demonstrate the existence of a positive relationship. However, other studies (e.g. Qamruzzaman, Jahan & Karim, 2021; Rizzato et al., 2019; Yusoff & Darus, 2014) revealed non-significant negative relationships between the investigated variables.

However, these inconsistencies and inconsistencies are attributed to the adoption of different proxies, techniques, and research fields by these researchers, as opined by Onoh et al., (2023). The empirical analysis seeks to uncover the effects of secrecy and superficial disclosure while identifying the conceptual causes that impede effective environmental reporting. This study aims to fill the knowledge gap by investigating the relationship between voluntary environmental declarations and market value of consumer goods companies in Nigeria by

employing carbon emissions disclosure, renewable energy consumption disclosure, waste management disclosure, employee health and safety disclosure, and community development disclosure as predictor variables while the market capitalization of publicly traded consumer goods companies served as a proxy for the dependent variable in this study.

1.3 Objectives of the study

The main objective of the study was to examine the relationship between environmental voluntary disclosure and market value of listed consumer goods firms in Nigeria. However, the specific objectives were to:

1. Ascertain the relationship between carbon emissions disclosure and market capitalization of listed consumer goods firms in Nigeria.
2. Examine the relationship between renewable energy consumption disclosure and market capitalization of listed consumer goods firms in Nigeria.
3. Investigate the relationship between waste management disclosure and market capitalization of listed consumer goods firms in Nigeria.
4. Examine the relationship between employee health and safety disclosure and market value of listed consumer goods firms in Nigeria.
5. To investigate the relationship between community development disclosure and market value of listed consumer goods firms in Nigeria.

1.4 Research questions

The study sought to provide reliable answers to the following questions.

1. What is the effect of carbon emissions disclosure and market capitalization of listed consumer goods firms in Nigeria?
2. How does renewable energy consumption disclosure affect market capitalization of listed consumer goods firms in Nigeria?
3. To what extent does waste management disclosure and market capitalization of listed consumer goods firms in Nigeria?
4. What is the effect of employee health and safety disclosure and market capitalization of listed consumer goods firms in Nigeria?
5. What is the effect of community development disclosure on market capitalization of listed consumer goods firms in Nigeria?

1.5 Research hypotheses

In order to answer the above questions successfully, the following research hypotheses were tested.

H01: Carbon emissions disclosure has no significant relationship with market capitalization of listed consumer goods firms in Nigeria.

H02: Renewable energy consumption disclosure has no significant relationship with market capitalization of listed consumer goods firms in Nigeria

H03: Waste management disclosure has no significant relationship with market capitalization of listed consumer goods firms in Nigeria

H04: Employee health and safety disclosure has no significant relationship with market capitalization of listed consumer goods firms in Nigeria

H05: Community development disclosure has no significant relationship with market capitalization of listed consumer goods firms in Nigeria

1.6 Scope of the study

This study examined the relationship between environmental voluntary disclosure and market value of listed consumer goods firms in Nigeria. The independent variable was environmental voluntary disclosure proxied by carbon emissions disclosure, renewable energy consumption disclosure, waste management disclosure, employee health and safety disclosure and community development disclosure. The dependent variable was market value proxied by market capitalization. The study covered ten (10) years period (2013-2022) with data gathered from the sampled listed consumer goods firms as shown in appendix I.

2.0 LITERATURE REVIEW

2.1 Environmental voluntary disclosure

Environmental voluntary disclosure refers to the proactive sharing of information regarding environmental impacts, sustainability practices, and initiatives undertaken by firms. It involves going beyond the legal requirements imposed by regulatory agencies and voluntarily disclosing additional information to stakeholders. Stakeholders want to make informed decisions, support environmentally responsible firms, and hold companies accountable for their sustainability practices (Mark & Atairet, 2022). As such, consumer goods firms in Nigeria face pressure to disclose their environmental performance voluntarily to meet stakeholder expectations (Osuagwu & Okoyeuzu, 2020). By proactively sharing their sustainability initiatives, firms can enhance their brand reputation and differentiate themselves from competitors (Boateng, Du & Ramiah, 2016). This transparency can attract environmentally conscious consumers and investors who may prefer to associate with, purchase from, or invest in companies with strong environmental credentials.

2.2 Carbon emissions disclosure

According to Akhiroh & Kiswanto (2016), carbon emissions are the discharge of gases into the Earth's atmosphere that include carbon. The operations of the company are one of the factors that contribute to carbon emissions. As a result, it is predicted that businesses would be able to reveal their carbon emission disclosure-related operations as a means of environmental responsibility. Carbon emission disclosure can be an effective way for businesses to demonstrate their commitment to environmental issues, especially the impact of carbon emissions (Dewi et al., 2019). When businesses adopt environmental management programs, the level of carbon emission disclosure is perceived to rise.

In recent years, there has been a growing recognition of the need to address climate change and reduce carbon emissions globally. This trend has also influenced consumer goods firms in Nigeria, as they are increasingly acknowledging their role in contributing to greenhouse gas emissions. Several factors contribute to the increasing importance of carbon emissions disclosure among firms. Consumer goods firms are recognizing the urgency to mitigate climate change and transition to low-carbon operations. By voluntarily disclosing their carbon emissions, companies demonstrate their commitment to environmental stewardship and taking responsibility for their contribution to climate change (Amira, Ayo & Adebisi, 2019).

2.3 Renewable energy consumption disclosure

The concept of renewable energy consumption disclosure is gaining importance in Nigeria's consumer goods sector. Renewable energy consumption disclosure entails providing detailed information on the proportion or amount of energy derived from renewable sources, such as solar, wind, hydro, or biomass (Komolafe, Elumilade & Babajide 2021). According to Nangih, Emeka-Nwokeji and Peters (2022), renewable energy consumption disclosure allows consumer goods firms to demonstrate their commitment to sustainability, reduce greenhouse gas emissions, and contribute to Nigeria's transition to a low-carbon economy. Thus, consumer goods firms are recognizing the significance of transitioning to cleaner and more sustainable energy sources to mitigate climate change and reduce their environmental impact.

Renewable energy sources, such as solar or wind, can offer cost savings over time by reducing reliance on fossil fuels and mitigating the risk of price volatility. Consumer goods firms that disclose their renewable energy consumption can highlight their efforts to enhance energy efficiency, reduce operational costs, and improve competitiveness in the market (Adenikinju, Osuagwu & Akinlo, 2021). Renewable energy consumption disclosure can take various forms, including narrative descriptions in sustainability reports, quantitative metrics showing the percentage of energy sourced from renewables, or even third-party certifications such as Leadership in Energy and Environmental Design (LEED) or ISO 50001. Adopting standardized reporting frameworks, such as the Global Reporting Initiative (GRI) or the Sustainability Accounting Standards Board (SASB), can ensure consistency, comparability, and transparency in disclosure practices (Amira, Babajide & Ayo, 2020).

2.4 Waste management disclosure

According to the Environmental Protection Authority (2010), waste is any item or object that is a waste material, effluent, or other waste material originating from the application of a material process. Waste management is a comprehensive strategy for preventing waste that combines a variety of collection and treatment techniques to handle all the elements in the waste stream in an efficient, socially conscious, and environmentally sound manner (Klassen & McLaughlin, 2016). Before being discharged into the environment, waste produced by a process frequently needs to be treated. While the corporation can dispose of some garbage internally, some waste is better off being disposed of by outside waste treatment providers. Managing the trash results in environmental expenses in one way or another. Environmental costs associated with waste transportation include noise pollution, the loss of natural resources, and aesthetic impacts.

2.5 Employee health and safety disclosure

The general definition of organizational health and safety is a multifaceted concept that includes anticipating, identifying, evaluating, and controlling workplace hazards that could harm employees' health and well-being as well as considering potential effects on the environment and nearby communities (Ali, 2008). Workers are a company's main internal stakeholder group, their occupational health and safety (OHS) reflects a key component of the corporate sustainability strategy and action agenda in response to the UN's SDG3, which is to "ensure healthy lives and promote well-being for all" (Welford et al., 2008). In order to support organizational leadership, managerial effectiveness, and stakeholder decision-making, employee health and safety disclosure relates to the gathering, processing, and disclosure of relevant information (Rikhardsson, 2004).

According to Tompa, Dolinschi & Oliveira (2006), the companies' approach to Occupational Health and Safety (OHS) is primarily focused on lowering workers' compensation costs, disregarding the benefits of their investments and the overall costs borne by the organization, workers, and society. However, occupational diseases and accidents can result in large financial losses for businesses and have a variety of effects (Freitas, 2016). Investing in OHS contributes to the well-being of workers and proves to be profitable. Several studies have shown that each euro invested in OHS yields twice as much for employers (European Commission, 2017a). The logic of investing in OHS is rooted in the avoidance of accidents and illnesses at work, thus reducing risks and lowering costs (Fabius et al., 2013). The challenge lies in maintaining a culture of prevention that encompasses society as a whole (Walters, 2005). The adoption of preventive measures is widely underrated, and despite the progress achieved in laws and inspections, the working conditions for most workers in the world do not meet the established minimum standards (ILO, 2019).

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culture of prevention that encompasses society as a whole (Walters, 2005). The adoption of preventive measures is widely underrated, and despite the progress achieved in laws and inspections, the working conditions for most workers in the world do not meet the established minimum standards (ILO, 2019).

2.7 Community development disclosure

According to community development, a component of an organization's social responsiveness, businesses have a responsibility to the community and should base their business decisions on moral principles and respect for people, the environment, and society. As corporate citizens, companies are therefore expected to give back to society, particularly the communities in which they operate (ICAN, 2014). Community development is in line with the philanthropic demands that organizations are subject to at any given moment (Carrol, 1991). Oti et al. (2017) also underlined that community development is based on businesses taking proactive steps to lessen the impact of their externalities on the host communities. Transparency regarding community development expenses presents a company in a positive light and persuades stakeholders that the organization conducts its business ethically.

According to Amran and Siti-Nabiha (2017), community development aims to empower individuals and groups of people with the skills they need to effect change in their communities. These skills are often created through the formation of social groups that work towards a common agenda. Community developers need to understand how to work with individuals and how to influence the positions of communities in the context of larger social institutions. Community development is also done through donations. Corporate donation refers to any financial contribution made by a corporation to another organization that furthers the contributor's own objectives. Two major kinds of such donations deserve specific consideration, charitable as well as political donations.

2.8 Concept of market value

Market value can fluctuate a great deal over periods of time and is substantially influenced by the business cycle. Market values plunge during the bear markets that accompany recessions and rise during the bull markets that are a feature of economic expansion. Market value is also dependent on numerous other factors, such as the way the company is being governed that is the corporate governance put in place in the company's structure; the sector in which the company operates, company's profitability, and also voluntary disclosures. Market value for a firm may diverge significantly from book value or shareholders' equity. A stock would generally be considered undervalued if its market value is well below book value, which means the stock is trading at a deep discount to book value per share (Uford, 2017). This does not imply that a stock is overvalued if it is trading at a premium to book value, as this again depends on the sector and the extent of the premium in relation to the stock's peers (Omura, 2005).

Market value entails the perceived worth or valuation of companies by investors and the financial markets (Uford & Duh, 2021). It represents the market's assessment of a firm's future profitability, growth prospects, and overall performance. Environmental voluntary disclosure by consumer goods firms can have a significant impact on their market value, as it provides valuable information to investors and stakeholders regarding the company's commitment to environmental sustainability and responsible business practices. Environmental voluntary

disclosure allows consumer goods firms to communicate their environmental initiatives and performance to investors.

2.9 Market capitalization

Market capitalization represents the total value of a company's outstanding shares of stock and is calculated by multiplying the current market price per share by the total number of shares outstanding. Market capitalization of listed consumer goods firms in Nigeria can be influenced by environmental voluntary disclosure. Environmental voluntary disclosure allows consumer goods firms to communicate their environmental initiatives and performance, which can enhance investors' perception of the company. Investors who value sustainable and socially responsible practices may be more inclined to invest in firms that demonstrate a commitment to environmental sustainability (Onyegbula, 2021).

This increased investor demands can potentially drive up the stock price and subsequently increase the market capitalization of the firm. Firms that provide comprehensive and transparent information, follow recognized reporting frameworks such as the Global Reporting Initiative (GRI), or obtain third-party certifications may experience a stronger positive impact on market capitalization (Osuagwu & Okoyeuzu, 2020). In addition, the extent of influence environment voluntary disclosure has on market capitalization depends on various factors, including the quality and credibility of disclosure, industry competitiveness, and investor expectations as suggested by Adenugba, Uwuigbe and Ibegi (2018).

3.0 THEORETICAL FRAMEWORK

The nexus between environmental voluntary disclosure and market value of consumer goods firms in Nigeria cannot be established without reference to some theoretical underpinnings. Hence, Signalling theory and Stakeholder theory were reviewed but the study however anchored on Signlling theory with justifiable reasons.

3.1 Signalling theory by Spence (1973)

Signalling theory was initially developed by Spence (1973) and eventually developed by Connelly et al. (2011). Signalling theory helped explain the behaviour of two parties when they have access to different information; so, it is safe to say that this theory tends to address information asymmetries. In his formulation of signalling theory, Spence (1973) utilized the labour market to model the signalling function of education. He established that potential employers lack information about the quality of job candidates. The candidates, therefore, obtain education to signal their quality and reduce information asymmetries.

The signalling theory has four components; the signaller, signal, receiver and feedback. The fundamental tenet of the signalling theory is that signallers are insiders (such as executives or managers) who possess knowledge about a person, product, or organization that is unavailable to outsiders (e.g., Spence, 1973; Kirmani & Rao, 2000). On the whole, insiders get knowledge that outsiders would find beneficial, some of it positive and some of it unfavourable. Examples of this information would be specifics regarding the organization's goods or services, Environmental disclosure practices, financial reporting techniques, risks and risk management. This information if passed, is the signal. Insiders obtain both positive and negative private

information, and they must decide whether to communicate this information to outsiders. Signalling theory focuses primarily on the deliberate communication of positive information in an effort to convey positive organizational attributes. For instance, issuing new shares of a firm is generally considered a negative signal because executives may issue equity when they believe their company's stock price is overvalued (Myers & Majluf, 1984). The third component of the signalling timeline is the signal receiver. Receivers are outsiders who don't know much about the organization in question but would wish to learn more, according to signalling models. A successful deception would benefit the signaller at the expense of the receiver because signallers and receivers also have somewhat competing incentives at play (Bird & Smith, 2005). The action or whatever the receiver does with this information is the feedback.

This theory is the anchor theory for this research and is relevant because it explains that there exists information asymmetry between the firm and the outside stakeholders. In the context of this study, information regarding the impact of the firm's activities on the environment is possessed by the firm or insiders (executives and other relevant staffs). The signalling theory states that the release of this information has implications for both the signaller (the firm insiders) and the receiver (the outsiders; general public, investors, regulators, etc.); Managerial "information signals" should be beneficial to all participants in the socially responsible firm model (Birjandi & Hakemi, 2015). Here, the feedback is what matters. For signalling to take place, the signaller should benefit by some action from the receiver that the receiver would not otherwise have done (i.e., signalling should have a strategic effect); this usually involves selection of the signaller in favour of some alternatives (in other words, potential investors choosing firms who disclose over those who don't). This means that disclosures of Environmental information should have influence on the firm's value. This is possible in situations where investors grow their confidence and invests more, customers buy more because of trust and brand reputation and so on; all these could lead to increase in market value.

3.2 Stakeholder theory by Freeman (1984)

Stakeholder theory has become the main topic of many discussions. In a variety of "management science" studies (and even political analyses), it commonly functions as a point of reference in the discourses of agents, in their actions, and in their everyday behaviour. Its present inclination is to emulate environmental disclosure and corporate social responsibility initiatives in order to establish itself as a point of reference, to the point that it has acquired the allures of a dominant discourse. According to Mercier (1999), stakeholders are "all of the agents for whom the firm's development and good health are of prime concern". Freeman (1984) defines them as "any group or individual that can affect or be affected by the realization of a company's objectives". Ethical considerations are what have driven stakeholder theory's rise, having been deployed as a way of constructing its normative aspect (the idea being that we are all stakeholders).

Stakeholder theory is frequently compared with the dominant economic theory of the firm, known as shareholder theory. The idea that companies exist to maximize value for shareholders characterizes this apparently limited view of the firm (Sundaram & Inkpen 2004). The contrasts between the two approaches are complex. According to stakeholder theorists, while profitability is a crucial goal, other stakeholders' interests are just as essential (Strand &

Freeman 2015). Basically, what this means is that in a firm, it's not just about the shareholders and their value maximization which is related to making profits alone; other parties are involved who can equally be seen as stakeholders. Business should be beyond making profits alone. Businesses should also look out for their environment. For example; customers who bring cash into the business by patronizing, the society in which the business operates in, employees, suppliers, potential investors who could pump in more liquidity and so on. In the context of environmental disclosures, these stakeholders need to know how committed the organization is to them.

Stakeholder theory is relevant to this research because it explains how different environmental disclosures can affect the various stakeholders of the firm or how the availability of this information can be useful to the stakeholders. The shareholders might not need the information but what about other stakeholders like the community around. What if the community realizes that the company doesn't care or is not socially responsible? What if the customers realize that the firm does not really care about waste management, gas emissions, community development, safety and health of employees, etc. or if they offer standard products? What about the members of community; who are stakeholders as well?, or potential investors who might need this information to support their judgments. Are they also just going to do business while the environment degrades or the air is polluted and they don't tell the public how they tackle this? These questions come to play in this research.

3.3 Empirical framework

Emenyi and Okpokpo (2023) investigated the relationship between environmental disclosure and the quality of financial reports within the Nigerian manufacturing sector. The study reported that, among the three components of environmental accounting information examined, namely Environmental Restoration (ER) and Environmental Donations and Sponsorship (EDS), only Environmental Waste Management was found to have a significant impact on the quality of financial reports among the selected manufacturing firms in Nigeria. The null hypotheses for Environmental Restoration and Environmental Donations and Sponsorship were reported as accepted, signifying that these factors did not exert a significant influence on financial report quality. The study concluded that the disclosure of accounting information pertaining to environmental restoration and environmental donations and sponsorship in the past had an insignificant effect on the quality of financial reports for manufacturing firms in Nigeria. The recommendation highlighted the suggested collaboration between standard setters, policy makers, and the Ministry of Environment to institute consistent mandatory disclosures aligned with global best practices, aiming to enhance transparency and accountability in environmental reporting by manufacturing firms in Nigeria.

Gerged, Albitar and Al-Haddad (2023) examined whether internal corporate governance (CG) mechanisms moderate the relationship between a firm's engagement in corporate environmental disclosure (CED) and earnings management (EM) practices in an emerging economy. A sample of 100 Jordanian listed firms from 2010 to 2014, constituting 500 firm-year observations, was utilized. The findings revealed a negative relationship between CED and earnings manipulations. However, the links between CG arrangements and EM were found to be heterogeneous, indicating that they might either reduce or increase earnings manipulations in Jordan. Furthermore, certain CG structures, such as board size, managerial,

and institutional ownership, were identified as having moderating effects on the CED-EM nexus. The research emphasized the importance of considering internal CG mechanisms to elucidate the link between CED and EM in emerging economies. The results contributed to a better understanding of the mixed results on the association between CED and earnings manipulations, particularly highlighting the potential impact of CG structures on this nexus. The study offered valuable insights for policymakers, board directors, and managers, providing context-specific recommendations to enhance corporate sustainability efforts in emerging economies.

Khandelwal, Sharma and Chotia (2023) delved into the voluntary disclosure of environmental, social, and governance (ESG) information, a practice adopted by many companies globally and scrutinized the impact of ESG disclosure on firm performance. Utilizing a dataset encompassing companies that disclosed ESG parameters from the S&P BSE 500 index during the period spanning from 2014 to 2021, the study categorized the constituent securities into three factors—size, value, and disclosure—employing various sorting techniques to investigate the premiums generated by firms in each category. The empirical analysis, conducted through time series regressions alongside GRS tests, assessed the existence of factor premiums. The findings revealed the significant influence of factors such as size, value, disclosure, and a dummy variable representing the COVID-19 pandemic period in explaining portfolio returns. The study identified a negative ESG disclosure premium, indicating that firms with extensive disclosure practices tend to yield lower returns compared to those with limited disclosures.

Meiryani et al. (2023) scrutinized the influence of Corporate Social Responsibility (CSR) on the financial performance of manufacturing firms listed in the LQ45 Index. The study focused on financial metrics such as Return on Assets (ROA), Return on Equity (ROE), and Net Profit Margin (NPM). The study adopted a purposive sampling method, including all manufacturing companies within the LQ45 Index's population. Secondary data were collected from the Corporate Sustainability and Responsibility Index (CSRI) based on the Global Reporting Initiative (GRI) G4 standard for the years 2018 to 2020, as well as annual reports of manufacturing firms listed in the LQ45 Index. Employing a quantitative methodology, the study utilized descriptive statistical methods, conventional assumption tests, and simple linear regression analysis for data analysis. The findings indicated that CSR had a significant impact on ROA but did not significantly affect ROE and NPM in LQ45 manufacturing companies. These results were consistent with signalling theory, suggesting that CSR disclosure conveyed a favourable message to external stakeholders, influencing business earnings. CSR implementation was found to enhance a company's image in both commodity and capital markets, attracting investors and increasing consumer loyalty. As consumer loyalty and sales rose, profitability followed suit.

Onoh, Kayadi and Ndubuisi (2023) examined the effect of sustainability reporting practices of environmental, social and economic on the firm value proxied by Tobin's Q of listed oil and gas firms in Nigeria. The work relied mainly on secondary source of data and comprised of published annual reports. The analytical tools consist of descriptive and correlation matrix. The hypotheses were tested using multiple regression. The research answered that; environmental sustainability reporting has a positive significant effect on the value of listed oil and gas firm in Nigeria. Also, economic sustainability reporting has a negative significant effect on the value of listed oil and gas firm in Nigeria. The result also showed that firm characteristics proxied by

sales growth and leverage exerts a negative significant effect, whereas, firm size exerts a positive significant effect on sustainability reporting and firm value of oil and gas companies in Nigeria.

Udomah and Emenyi (2023) delved into the impact of sustainability reporting on the financial performance of selected cement firms in Nigeria, employing an ex-post facto research design with a population comprising 10 cement firms spanning the years 2016-2020. The key findings indicated a negative and insignificant correlation between environmental reporting and the performance of cement companies in Nigeria. Conversely, economic reporting demonstrated a positive influence on the financial performance of these cement firms, while social reporting was associated with a decrease in their financial performance. The overall conclusion drawn was that sustainability reporting significantly affects the composite financial performance of healthcare companies in Nigeria. Notably, individual components of sustainability reporting did not exert a significant impact on the financial performance of cement firms. The study recommended that government policymakers enforce the compulsory inclusion of sustainability reports in the annual reports of cement companies, shifting from voluntary disclosure to mandatory reporting. Furthermore, it suggested that the management of manufacturing firms should prioritize the disclosure of economic reports, given their positive effect on performance.

4.0 METHODOLOGY

Research design: This work adopted an ex-post facto research design. According to Mfon and Uford (2022), ex-post facto research, also known as after-the-fact research, is a type of study in which the examination begins after the event has occurred, without the intervention of the researcher.

Population of the study: In this study, the population was made up of all consumer goods companies listed on the floor of the Nigerian Exchange Group from 2013 to 2022. As of December 31st, 2021, the total number of consumer goods companies was twenty-one (21).

Sample size and sample size determination; the sample of this research was calculated using Taro Yamane (Yamane, 1973) formula with 95% confidence level. The Taro Yamane Formula is given as: $n = \frac{N}{1+N(e)^2}$

Where: n = sample size required, N = Population e = significant level = 5%. From the formula above, the sample size of this study is computed as: $n = \frac{21}{1.05} n = 19.16$ (Approx. 19)

Sampling techniques: In a bid to derive homogeneous sample, the researcher adopted purposive sampling technique. To obtain this homogeneous sample, the researcher deselected the company that got listed or merged and acquired after the study period (2013) and got delisted before the end of the study period (2022). Therefore, BUA Foods Plc was deselected and the final sample size remained 18 companies. The selected firms are as shown in Appendix I.

Sources of data and method of data collection: Secondary data was preferred due to its reliability, acceptability, and availability. The data for the sampled listed consumer goods

companies were sourced from the Nigerian Exchange Group fact books and related companies and annual financial reports for the periods covered in the study using contents analysis method and collated with the aid of Microsoft excel software.

Method of data analysis: The study adopted panel multiple regression to analyze data via Eviews 10.0. The decision was based on 5% level of significance. Accept null hypothesis (Ho) if probability value (i.e. P-value or Sig.) is greater than or equals to (\geq) stated 5% level of significance (α); otherwise, reject and accept alternate hypothesis (H1), if p-value or sig calculated is less than 5% level of significance (Osisioma, Egbunike & Jesuwunmi, 2015).

Model specification and operationalization of variables

To achieve the stated objectives of the study, as well as testing the study hypotheses, a multiple linear regression model was adopted as follows;

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \mu \dots\dots\dots (1)$$

Where;

Y = Market value (dependent variable)

X = Environmental voluntary disclosure (explanatory/independent variable)

Explicitly, the equation was defined as:

$$\text{Market value} = f(\text{Environmental voluntary disclosure}) + \mu$$

Therefore, the broad model for this study was modified as;

$$Mcapit = \beta_0 + \beta_1CEDit + \beta_2RECDit + \beta_3WMDit + \beta_3EHSDit + \beta_3CDDit + \mu it \dots\dots (2)$$

Where;

Mcapit = Market capitalization (Market value) of firm i in period t, CEDit =Carbon emissions disclosure of firm i in period t, RECDit = Renewable energy consumption disclosure of firm i in period t, WMDit = Waste management disclosure of firm i in period t, EHSDit = Employee health and safety disclosure of firm i in period t, CDDit = Community development disclosure of firm i in period t, β_0 = Intercept or regression constant, $\beta_1, \beta_2, \beta_3$ =Regression coefficients to be estimated for firm i in period t, μ = Stochastic error term.

Table 3.2 Operationalization of variables

Concept	Proxy	Measurement	Source
Environmental voluntary disclosure (Independent variable)	Carbon emissions disclosure	Carbon emissions disclosure index	Adenugba, Uwuigbe and Ibegi (2018)
	Renewable energy consumption disclosure	Renewable energy consumption disclosure index	Adenugba, Uwuigbe and Ibegi (2018), Nwachukwu <i>et al.</i> (2020)

	Waste management disclosure	Waste management disclosure index	Osuagwu and Okoyeuzu (2020)
	Employee health and safety disclosure	Employee health and safety disclosure index	Nkanga et al. (2023)
	Community development disclosure	Community development disclosure index	Nkanga et al. (2023)
Market value (<i>Dependent variable</i>)	Market capitalization	Current market price per share multiplied by the total number of outstanding shares	Osuagwu and Okoyeuzu (2020)

Source: Author’s compilation (2023)

4.2 Descriptive statistics

This was conducted to understand the behaviour of the data using various statistics including mean, standard deviation, skewness, and kurtosis. The result for the descriptive statistics analysis is as presented in table 4.1 below;

Table 4.1 Descriptive statistics of variables

	MCAP	CED	RECD	WMD	EHSD	CDD
Mean	23.82640	52.68519	36.75926	39.90741	64.44444	57.68519
Median	23.96914	50.00000	33.33333	33.33333	66.66667	50.00000
Maximum	27.31468	83.33333	83.33333	66.66667	83.33333	83.33333
Minimum	20.07612	16.66667	16.66667	16.66667	33.33333	16.66667
Std. Dev.	2.057953	17.89374	15.02091	14.68659	14.24709	15.39506
Skewness	-0.369023	0.111009	0.595202	-0.020660	-0.334110	-0.226902
Kurtosis	1.854925	2.414065	3.302643	2.244195	2.442163	2.862142
Jarque-Bera	13.91931	2.944586	11.31490	4.297109	5.682759	1.687070
Probability	0.000949	0.229399	0.003491	0.116653	0.058345	0.430187
Sum	4288.752	9483.333	6616.667	7183.333	11600.00	10383.33
Sum Sq. Dev.	758.0954	57313.27	40387.35	38609.57	36333.33	42424.38
Observations	180	180	180	180	180	180

Source: Researcher’s computation using E-views 10.0 (2023)

The results in table 4.1 above indicates that the dependent variable- Market capitalization and the independent variables which were carbon emissions disclosure (CED), renewable energy consumption disclosure (RECD), waste management disclosure (WMD), employee health/safety disclosure (EHSD) and community development disclosure (CDD) of listed consumer goods firms in Nigeria have mean scores of approximately 23.83, 52.69%, 36.76%, 39.91%, 64.44% and 57.69 % respectively. This indicates the central or average values for these variables from 2013 to 2022. The median values obtained for market capitalization

(MCAp) and the independent variables which were carbon emissions disclosure (CED), renewable energy consumption disclosure (RECD), waste management disclosure (WMD), employee health/safety disclosure (EHSD) and community development disclosure (CDD) of listed consumer goods firms in Nigeria were approximately 23.97, 50%, 33.33%, 33.33%, 66.67% and 50% respectively. These constituted the middle values for the distributions of these variables under the period covered in this study (2013-2022).

In terms of the level of variability and dispersion in the distribution of these variables, the standard deviations obtained for the dependent variable- market capitalization (MCAp) and the independent variables which were carbon emissions disclosure (CED), renewable energy consumption disclosure (RECD), waste management disclosure (WMD), employee health/safety disclosure (EHSD) and community development disclosure (CDD) of listed consumer goods firms in Nigeria were approximately 2.06, 17.02, 15.02, 14.68, 14.24 and 15.39 respectively. This indicates varying levels of variability in the distribution with carbon emissions disclosure indicating high variations in the distributions. Similarly, the skewness values obtained for market capitalization (MCAp), carbon emissions disclosure (CED), renewable energy consumption disclosure (RECD), waste management disclosure (WMD), employee health/safety disclosure (EHSD) and community development disclosure (CDD) of listed consumer goods firms in Nigeria were -0.36, 0.11, 0.59, -0.02, -0.33, -0.23. This quantifies the asymmetry of the distributions.

In addition, the Kurtosis values obtained for market capitalization (MCAp) and the independent variables which were carbon emissions disclosure (CED), renewable energy consumption disclosure (RECD), waste management disclosure (WMD), employee health/safety disclosure (EHSD) and community development disclosure (CDD) of listed consumer goods firms in Nigeria were given as approximately 1.85, 2.41, 3.30, 2.24, 2.44 and 2.86 respectively. Since the values of the kurtosis are greater than zero (0), it indicates a leptokurtic distribution, hence the presence of outliers in the data.

4.3 Test of hypotheses

Each of the hypotheses in this study was tested based on the result obtained from the panel multiple regression analysis. The result that relate to these hypotheses is summarized in table 4.2 below;

Table 4.2 Panel multiple regression results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	17.34456	0.925531	18.74011	0.0000
CED	0.023823	0.008347	2.854192	0.0048
RECD	0.019593	0.009034	2.168736	0.0315
WMD	0.012513	0.009586	1.305290	0.1935

EHSD	0.031234	0.010273	3.040441	0.0027
CDD	0.034572	0.009212	3.752800	0.0002
R-squared	0.548398	Mean dependent var	23.82640	
Adjusted R-squared	0.526801	S.D. dependent var	2.057953	
S.E. of regression	1.809594	Akaike info criterion	4.056847	
Sum squared resid	569.7857	Schwarz criterion	4.163279	
Log likelihood	-359.1162	Hannan-Quinn criter.	4.100001	
F-statistic	11.50113	Durbin-Watson stat	1.745424	
Prob(F-statistic)	0.000000			

Source: E-views 10.0 Output in Appendix II

The multiple regression line is as written below:

$$\text{Mcap} = 17.34456 + 0.023823\text{CED} + 0.019593\text{RECD} + 0.012513\text{WMD} + 0.031234\text{EHSD} + 0.034572\text{CDD} + \mu$$

Considering the regression results above, when the independent variables- carbon emissions disclosure (CED), renewable energy consumption disclosure (RECD), waste management disclosure (WMD), employee health and safety disclosure (EHSD) and community development disclosure (CDD) are held constant (equal Zero), the dependent variable- market capitalization (Mcap) increased at a constant average of approximately 17.34%. However, a one percent rise in carbon emissions disclosure (CED), renewable energy consumption disclosure (RECD), waste management disclosure (WMD), employee health and safety disclosure (EHSD) and community development disclosure (CDD) increases market capitalization of listed consumer goods firms by approximately 0.02%, 0.02%, 0.01%, 0.03% and 0.03% respectively.

5.0 DISCUSSION OF FINDINGS

5.1 Carbon emissions disclosure and market capitalization

The study found a significant positive relationship (Coeff. = 0.0238{0.0048}) between carbon emission disclosure and market capitalization of listed consumer goods firms in Nigeria. This implies that for every one percent increase in carbon emission disclosure, there is an expected increase of 0.0238 percent in market capitalization. This finding suggests that investors and stakeholders value transparency and accountability in relation to carbon emissions. Firms that disclose their carbon emissions are perceived as more environmentally responsible, which enhances their reputation, attracts socially conscious investors, and potentially leads to higher

market valuations. It also highlights the importance of addressing climate change concerns and promoting sustainable practices within the consumer goods industry in Nigeria. This aligns with the findings of Adenugba, Uwuigbe and Ibegi (2018) who found a positive relationship between carbon emissions disclosure and market value in Nigerian manufacturing firms. This position is also in agreement with the findings of Onoh, Kayadi and Ndubuisi (2023), Nangih, Emeka-Nwokeji and Peters (2022), Theophilus and Ademola (2020) and that of Okechukwu and Okeke-muogbo (2020).

5.2 Renewable energy consumption disclosure and market capitalization

The study revealed a significant positive relationship (Coeff. = 0.0195{0.0315}) between renewable energy consumption disclosure and market capitalization of listed consumer goods firms in Nigeria. This means that a one percent increase in renewable energy consumption disclosure is associated with an increase of 0.0195 percent in market capitalization. To enhance market value, firms should address these concerns by investing in renewable energy technologies and communicating their efforts effectively. This position supports the findings of Qamruzzaman, Jahan and Karim (2021), Rizzato, Busso, Fiandrino and Cantino (2019) and that of Yusoff and Darus (2014) but however disagrees with the findings of Nwachukwu et al. (2020) which highlighted the positive relationship between renewable energy consumption disclosure and market value in Nigeria, indicating that firms that disclose their renewable energy practices may experience higher market capitalization.

5.3 Waste management disclosure and market capitalization

The study found an insignificant positive relationship (Coeff. = 0.0125{0.1935}) between waste management disclosure and market capitalization of listed consumer goods firms in Nigeria. This implies that waste management disclosure does not have a significant effect on market capitalization. Although waste management plays a crucial role in environmental sustainability, the lack of significant impact on market capitalization may indicate that investors do not perceive it as a critical factor in determining firm value. However, firms should still prioritize waste management practices to minimize environmental impact and meet societal expectations. This is in line with the study of Osuagwu and Okoyeuzu (2020) who found a positive relationship between waste management disclosure and market value in Nigerian firms.

5.4 Employee health and safety disclosure and market capitalization

The study revealed a significant positive relationship (Coeff. = 0.0312{0.0027}) between employee health and safety disclosure and market capitalization of listed consumer goods firms in Nigeria. This means that a one percent increase in employee health and safety disclosure is associated with an increase of 0.0195 percent in market capitalization. . This indicates that consumer goods firms that disclose information about their commitment to employee health and safety are more likely to have higher market values. This finding emphasizes the importance of prioritizing employee well-being, which can contribute to a positive corporate reputation and investor confidence. This position supports the findings of Rizzato et al. (2019) and that of Yusoff and Darus (2014) which highlighted the positive relationship between the safety and health situation of employees and market value of corporate firms in Nigeria,

indicating that firms that disclose their contributions to this course likely experience higher market capitalization through enhanced stakeholders confidence and trust..

5.5 Community development disclosure and market capitalization

The study revealed a significant positive relationship (Coeff. = 0.0345{0.0002}) between community development disclosure and market capitalization of listed consumer goods firms in Nigeria. This means that a one percent increase in community development disclosure is associated with an increase of 0.0345 percent in market capitalization. Consumer goods firms that disclose their community development initiatives are more likely to have higher market values. This finding highlights the significance of corporate social responsibility and the positive impact companies can have on local communities. Investors may appreciate companies that actively engage in community development and recognize the potential benefits it brings. This aligns with the findings of Nekhili et al. (2017) and Campbell, Moore and Shrives (2006) but disagrees with that of Yekini and Jallow (2012) and Emeka-Nwokeji and Osioma (2019).

6.0 CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

In a captivating journey through the realm of environmental voluntary disclosure and its impact on market value in Nigeria's consumer goods sector, this study unearths fascinating findings. This mesmerizing correlation highlights the undeniable value investors place on sustainability efforts, propelling companies towards greater market worth. Based on this, it is however concluded that environmental voluntary disclosure plays a crucial role in shaping the market value of listed consumer goods firms in Nigeria. This study serves as an urgent call for businesses and policymakers to harness the transformative potential of transparency, aligning sustainability initiatives with investor preferences. By doing so, they can forge a path towards shared value creation, leading to prosperous growth within Nigeria's consumer goods landscape.

6.2 Recommendations

1. Consumer goods firms in Nigeria should prioritize disclosing their carbon emissions to attract environmentally conscious investors and enhance their market value.
2. Companies should increase their use of renewable energy sources and communicate these efforts to stakeholders to improve their market value and appeal to clean energy investors.
3. Firms should focus on implementing comprehensive waste management strategies and actively disclose their waste management practices to improve their environmental reputation and attract sustainability-focused investors.
4. Prioritizing employee health and safety, and openly communicating efforts in this area, can enhance corporate image, attract socially responsible investors, and potentially increase market value.
5. Engaging in community development initiatives and disclosing these activities can improve reputation, build trust with stakeholders, and potentially increase market value.

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