

Green Accounting Practices and Investor's Behaviour: A Study of Consumer Goods Firms in Nigeria

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Abstract: *The disclosure of information on the practice of green accounting by firms is usually considered by stakeholders, particularly investors, as crucial signal that such firms are responsible corporate entities. This is usually reflected in the behaviour of investors towards such firms. This study was conducted to investigate whether the practice of green accounting has any effect on the behaviour of investors in consumer goods firms in Nigeria. Green accounting disclosure being an independent variable was proxied by waste management cost disclosure, environmental cleanup cost disclosure and community development cost disclosure; while the dependent variable being investor's behaviour, was measured by market capitalisation. The population of the study comprised of 23 consumer goods firms listed on the floor of Nigerian Exchange Group, of which a sample of seven (7) was purposively selected. The data for the study were extracted from the annual reports and accounts of the sampled firms for the ten-year period of 2015 to 2024. The data were analysed with descriptive statistics and panel regression model (after testing for the assumptions of the model), with the aid of STATA version 10. The findings of the study revealed that waste management cost disclosure have a statistically significant relationship with market capitalisation; environmental cleanup cost disclosure have significant positive relationship with market capitalisation; while community development cost disclosure also exhibited a significant positive relationship with market capitalisation. Based on the findings, the study concluded that green accounting practices disclosure is a good predictor of investors' behaviour in the consumer goods firms in Nigerian. The study recommended that consumer goods firms should devote a specific proportion of their earnings to promote environmental restoration.*

Keywords: green accounting practice; investor's behaviour. market capitalisation waste management costs, environmental cleanup, community development.

INTRODUCTION

Green accounting practice has gained global attention due to its crucial role of shaping the activities of organisations. In the past, financial reports did not take into consideration information relating to environmental costs and this made such reports to be inadequate or incomplete. However, heightened efforts by advocates of environmental restoration have necessitated a change in the previous narratives to the current situation where firms now recognise expenses incurred in maintaining, managing and restoring environment as an important components of cost of production. Initially environmental costs

was usually linked with oil and gas firms, but today it is evident that activities of every organisation affect the environment one way or the other. Thus it is expedient for all entities to consider environmental costs as an integral cost of their production. The concept of green accounting which is also called environmental accounting quantified economically, how well businesses identify, measure and report environmental specific expenses including liability and waste disposal (Weng et al, 2015). Green accounting practices integrate environmental costs and benefits into traditional financial statements, allowing firms to assess the economic impact of their environmental activities. It covers costs pertaining to environmental activities such as pollution control, carbon emission, sustainability, and investments in eco-friendly technologies. As firms face growing pressure from stakeholders, such as investors, regulators and consumers, to adopt sustainable business practices, green accounting has become an essential tool for measuring and disclosing a company's environmental performance. Green accounting practices refers to the process of identifying, measuring and reporting environmental impacts on the organization's operations. The aim of reporting green accounting practice is to provide a comprehensive understanding of the economic implications of environmental practices and promote sustainable development. According to Sumiati et al (2022) by incorporating environmental costs into their financial reporting, companies can gain a comprehensive understanding of the true costs associated with their operations and identify opportunities for cost reduction and efficiency improvements. However, Ahmad (2024) argued that the implementation of green accounting practices can be resource-intensive, potentially outweighing the benefits for some organisation.

Another major consequence of firms' activities on the environment is the climate change. Dan et al (2025) argued that the activities of businesses like consumer goods, oil and gas industries that generate carbon monoxide, environmental waste and crude oil drilling have been connected to climate change since they have degraded the environment. Climate change is intricately linked to poor management of the environment where different pollutants are discharged into the bio environment thereby distorting the natural environment. The overall effect of this phenomena is that firms' struggle to cope with the risk of uncertain weather condition, waste management, damages to the environment, uncertainty in the supply of raw materials, amongst others. All these factors affect the financial performance of such firms and ultimately the perception of investors.

Investor's behaviour represents the outcome of management of analysis of information available to investors in the capital market. Investors react or behave in different ways towards firms they perceive to hold potential of making them realise their investment objectives. It is the metric of measuring the efficiency in the use of resources available to the firm. It shows the level of performance of an entity at any point in time. The initial costs of implementing green accounting is associated with long term effect of improved profitability, attraction of more investors and ensuring maintenance of long-term sustainability through various mechanisms. Therefore, the study of the relationship between green accounting and financial performance is well in order. Green accounting practice can be proxied by different components. However, this study focuses on waste management cost, environmental cleanup cost and community development cost as proxies for green accounting. Furthermore, this study adopted market capitalisation to measure investor's behaviour because it captures the real value of the shares of the firm as perceived by investors at any particular point in time.

The strive by managers to increase the wealth of firms has driven companies to engage more on activities that have caused colossal damages to the environment. These damages have threatened the survival of these companies. To that extent companies that continuously engages in the replenishment

of the environment lays for its future a solid foundation that will results not only increased profitability but also a guaranteed future. The creation of wealth has led to various environmental impacts such as depletion of non-renewable resources, global warming, diminution of land resources, acidification, destruction of aquatic lives, reduction of water resources and potential threats to health and safety of human lives. Businesses for many decades have ignored the impact of their activities on the natural and social environments in which they operate because they regard sustainability strides as expenses that would erode their profit bottom lines.

Despite the rising interest in environmental issues, there have been divergent views regarding the extent of the effect of waste management cost, environmental cleanup cost and environmental remediation cost on financial performance of companies in Nigeria. This stems from the fact investor's behaviour of consumer goods firms have not totally reflected the information pertaining to green accounting costs of those firms. The customers and investors see the consumer goods firms as responsible corporate citizens which engenders the patronage of not only their products but also investment in the firms. However, consumer goods firms are struggling to attract sufficient interests of investors thus raising the fundamental question of whether the information relating to the practice of green accounting have actually led to improved perception of investors towards the firm. This gap is the impetus for this study which is aimed at unravelling the puzzle whether green accounting practices have actually led to increased financial performance of manufacturing companies in Nigeria.

Conceptual framework

Overview of the concept of green accounting practice

The concept of green accounting practices can be described as the process of given accounts of an entity's interaction with the environment. It is the arrangement whereby firms give accounts of the costs incurred in addressing environmental challenges occasioned by the depletion of the environment caused by the activities of the firms. Green accounting has sometimes described as environmental accounting, resource accounting, or integrated economic and environmental accounting, refers to reports on the effect of the company's activities on the environment and also the impact of the environment on the business in financial and physical terms (Lusiana et al., 2021).

However, green accounting practices, also known as environmental accounting, are methods used to quantify and report the environmental costs associated with a company's operations (Okpo, 2020). This approach accounts for natural resources and environmental impacts, integrating them into traditional financial reporting systems. The aim of green accounting is to provide a comprehensive understanding of the economic implications of environmental practices and promote sustainable development. According to Ogouni and Ekpulu (2020) green accounting also uses a set of accounting systems to measure, record, and disclose how corporate environmental actions affect the company's financial standing. Accordingly, the goal of environmental accounting is to help businesses attain sustainable development and engage in effective and efficient environmental conservation initiatives while preserving positive ties with their communities. This procedure helps organisations determine the costs associated with environmental conservation efforts, as well as the benefits of conservation efforts that can be measured quantitatively, as well as facilitating the dissemination of evaluation results to stakeholders (Akpan & Nkanta, 2023).

The importance of reporting green accounting cannot be overemphasized. By evaluating environmental activities from the standpoint of costs (environmental costs) and benefits or effects (economic benefits), as well as creating environmental protection effects, green accounting aims to improve the effectiveness of environmental management (Akpan and Nkanta, 2023). On the basis of this, green accounting offers data regarding the degree to which a business or organisation contributes positively or negatively to the environment and the quality of human life. This study considers green accounting practice from the perspective of waste management cost, environmental cleanup cost and community development costs.

Waste Management costs

Waste management costs encompass expenses associated with recycling, waste collection, transportation, processing, and disposal of waste, including labour, equipment, facilities, and regulatory compliance. According to EPA (2021), waste management cost encompasses expenses associated with waste collection, transportation, processing, and disposal, including labour, equipment, facilities, and regulatory compliance (EPA, 2021). Factors influencing these costs include waste type and quantity, accessibility of disposal facilities, and regulatory requirements (EPA, 2021). Initiatives like recycling, composting, and waste-to-energy technologies can mitigate costs and environmental impacts (Horsfall & Womenazu, 2022).

In Nigeria, proper waste management is vital to mitigate health and environmental risks associated with improper practices (Federal Ministry of Environment, 2016). However, challenges such as inadequate funding, infrastructure, and public awareness contribute to the high cost of waste management in the country (Alao et al., 2021). To address these challenges, the Nigerian government has introduced initiatives like the Extended Producer Responsibility (EPR) program and the National Policy on Solid Waste Management (Federal Ministry of Environment, 2016). PWC (2019) states that remediation obligations require businesses to manage the effects of pollution or industrial activities that pose a risk to human health and the environment. An entity may face remediation obligations for negative impacts on the environment for formerly owned or used sites, sites it never owned but contaminated, and sites it owns and has not contaminated. PWC (2019) suggests that a liability for an environmental remediation obligation be recognized when the amount is probable and can be reasonably estimated.

Environmental cleanup costs

Environmental cleanup refers to the expenses involved in remediation efforts to address contamination and environmental damage caused by production, transportation and storage of health care products. Health care firms generate hazardous chemical waste, which must be disposed. Active pharmaceutical ingredients (API) can contaminate soil, water and air requiring specialized procedures. The companies spend trillion on naira to clean up these waste to safeguard the environment and the ecosystem. According to EPA (2021) environmental cleanup cost includes expenses related to the removal and remediation of hazardous materials and pollutants from the environment, covering activities like site investigation, cleanup design, monitoring, and post-cleanup actions. Cleanup costs vary based on contamination type and extent, site accessibility, and cleanup complexity (EPA,2021).

In Nigeria, factors influencing cleanup costs include contamination severity, site accessibility, resource availability, and legal frameworks (Olatunde et al., 2019; Osunyikanmi, 2021). While cleanup efforts offer benefits such as human health protection, environmental restoration, and economic and social

advantages, challenges like limited resources and weak regulatory enforcement persist (Freedman & Shehadeh, 2019; Olatunde et al., 2019). Environmental cleanup is essential for ensuring the long-term sustainability of oil and gas operations. By addressing environmental impacts and restoring ecosystems, companies can protect their license to operate, maintain stakeholder trust, and secure future business opportunities, all of which can positively impact profitability over time. Samuel et al (2020) noted that compliance with environmental regulations is crucial for consumer goods firms to operate legally and sustainably. By investing in environmental cleanup, firms can ensure they meet regulatory requirements, avoid penalties, and maintain a positive relationship with regulators, which can enhance the interests of investors in the face of increasing scrutiny on environmental issues.

Community development costs

Community development costs represent those costs that are expended by firms as part of their community development effort. Tom and Attai (2014) as cited in Kornom-Gbaraba (2025) define community development as the process by which individuals, organisations, governments and private citizens work together to help a community reach its full potential, become more self-assured, and lead morally and purposefully lives as demonstrated by improvement in standard of living and quality of life. Due to incessant demands from the communities in which the firms operate, firms usually incur huge amount of expenses in developing the community in which they operate.

Thus many companies initiate community relations by establishing company community relations initiate in order to breach the gap between them and the oil and gas firms. To sustain the activities of this body, firms usually channel some funds to address the needs of the community in such areas as pipe borne water, sanitation and others. These costs constitute the community relations costs. A study by Yusuf and Dandago (2023) revealed the existence of the positive relationship between community relations cost disclosure and firm's value. Their findings highlighted the importance of community relations cost disclosure in shaping the market value of firms.

Concept of Investors' behaviour

The capital market is a very sensitive market where operators rely heavily on the availability of information for their investment decision. Like other investments the operators are always risk averse where they are precautious of their actions. As opined by Jaya and Rathod (2021) investment behaviour is based on uncertainty about the future and this is risky. Investors continuously search the information opportunities to identify any information that will assist them in their investment decision making. Thus information about any firm which may be of interest to investors is usually treated with every amount of seriousness. The disclosure of information on strategies could have a far reaching effect on the behaviour of investors. This is because investors are always very sensitive to information about the firms they want to invest.

The information contained in the financial report is one of the major factors which influences the attitude of investors in the market place. Apart from mental acceptance or likeness towards a particular set of investments, investors usually display certain behaviour towards a set of investment opportunities. This is also true in the capital markets. The attitude of investors in the capital market is based on experience and information available to them. Financial information have been found to have significant positive effect on the investor intentions and investment decisions. Hence, financial information contributes greatly to investor intentions and investment decisions (Listyarti & Suryani, 2014). The main goal of investors' behaviour towards a certain set of investment opportunities is either

to behave favourably or unfavourably towards such investment. Investors behave favourably towards investment opportunities when they make up their minds to invest in such project. On the other hand, they behave unfavourably when they reject or walk away from such investment opportunities. The final decisions of investors are derived from the results of analysis and appraisal of available information about such investment opportunities.

Investors' behaviour can be seen as the exploration of the emotional responsiveness pertaining to attitude exhibited by individuals, financial experts, and traders during the financial planning and investment management process (Baker & Ricciardo, 2014). They further maintained that the decision making process of investors incorporates both quantitative (objective) and qualitative (subjective) aspects that is based on the features of investment product or financial services. Generally, the behaviour of investors flow from the psychological and emotional perception above all other considerations. Investment in the capital market involves committing the resources of individuals or organisations to projects that are long term in nature and whose returns accumulate gradually over time. Errors arising from decisions leading to investment in any firm may threaten the survival of such organisations and consequently thorough appraisal of such investment must be carried before embarking on it.

Jaya and Rathod (2021) refer to investment decisions as concerned with the optimal use of funds to maximize the wealth of the company and its shareholders. Investment decisions are a function of several factors such as characteristics of the market, and risk profiles of individual in addition to accounting information (Jogogongo & Mutswenje, 2014). The investors are usually considered to be rational with the objective of maximizing their wealth. Consequently, their investment strategies are anchored solely on risk-return trade-off and in strict compliance with basic finance rules. Investors usually take many factors into consideration in their investment decisions. Hussein (2007) argued that investors usually consider the marketability of the firm's stock, get rich syndrome of investors, expectations of corporate returns, past performances of the firm's stock, government interest and availability of organized financial markets in their decision to invest in any company stock. There are various methods of measuring the behaviour of investors in the capital markets. However, this study adopts market capitalisation in line with the prior studies of Okpo (2024). This is because market capitalisation has been found to be the most realistic considering that it is coming from the market.

Market capitalization

Market capitalization represents the total value of a company's outstanding shares of stock, calculated by multiplying the current market price per share by the total number of shares outstanding. The concept of market capitalization is crucial when considering the impact of environmental information practices of listed manufacturing firms in Nigeria on investor's behaviour. It is a key metric used by investors and analysts to assess the size, financial performance and overall worth of a firm. When companies voluntarily or mandatorily disclose information regarding their environmental performance, such as emissions, waste management practices, and compliance with environmental regulations, it affects how investors perceive the firm's environmental risks and opportunities. Several studies have examined the relationship between environmental information disclosure and market capitalization in the context of oil and gas firms in Nigeria. Using data from ten oil and gas firms listed on the Nigerian Stock Exchange (now known as Nigerian Exchange Group). Ijeoma and Uwuigbe

(2020) found a positive relationship between environmental information disclosure and market capitalization. They argued that companies that disclose environmental information are seen as more transparent, responsible, and better positioned to proactively manage environmental risks, leading to an increase in market capitalization.

The non-disclosure or inadequate disclosure of environmental information can negatively impact market capitalization (Ijeoma & Uwuigbe, 2020). Investors may perceive such companies as lacking transparency and being more exposed to environmental risks and potential regulatory penalties. This can lead to a decrease in market capitalization as investors discount the value of the company's stocks. Furthermore, environmental incidents or violations disclosed by oil and gas firms can also have a direct impact on market capitalization. When companies disclose negative environmental events, such as oil spills or non-compliance with environmental regulations, investors may react negatively, which can result in a decline in market capitalization. These incidents are often seen as indicators of poor risk management, potential legal liabilities, reputational damage, and increased costs for the firm. Ibe-Lamberts and Enahoro (2017) argued that to enhance market capitalization and investor confidence, listed oil and gas firms in Nigeria should prioritize robust environmental management systems and transparent disclosure practices. By actively monitoring and reporting their environmental performance, implementing sustainable practices, and promptly disclosing any environmental incidents or violations, firms can demonstrate their commitment to environmental responsibility. Such actions are likely to improve investor perception, positively influencing market capitalization.

Theoretical framework

Some theories have been suggested to explain the relationship between green accounting practices and investor's behaviour.

Agency theory which was developed by Jensen and Meckling in 1976 highlight the relationship between principals (shareholders) and agents (management) in organizations pointing out the potential conflicts of interest that may arise due to the separation of ownership and control and explores how these conflicts can be managed. Manufacturing firms in Nigeria are often owned by shareholders who entrust the management with the day-to-day operations. This theory posits that the management, as agents, may prioritize their own interests over those of the shareholders. This can lead to information asymmetry, where managers have access to privileged information regarding the firm's environmental performance but fail to disclose it adequately. Green accounting practices costs disclosure becomes crucial in this context as it serves as a mechanism to mitigate agency conflicts (Onyinyechi & Ihendinihu, 2016). By providing transparent and comprehensive information about the cost of remediating the environment, manufacturing companies can reduce information asymmetry and align the interests of shareholders with that of management.

Furthermore, green accounting practice can also help address the agency conflicts between shareholders and other stakeholders. Stakeholders such as communities, employees, and regulators are increasingly concerned about the environmental impact of oil and gas operations. By disclosing green accounting practices, manufacturing firms can demonstrate their commitment to responsible practices and satisfy the demands of these stakeholders, thus reducing potential conflicts. Instances of the application of agency theory in the oil and gas industry can be observed in various corporate governance mechanisms implemented by companies and regulatory bodies. In order to address the seeming conflict the Nigerian Exchange Group (NEG) developed corporate governance codes that

emphasize the disclosure of relevant environmental information by listed companies. These codes aim to mitigate conflicts of interest between shareholders and management by promoting transparency and accountability.

Overall, Agency Theory provides insights into the relationship between green accounting practices and the market capitalisation of listed manufacturing firms in Nigeria. By addressing agency conflicts, reducing information asymmetry, and aligning stakeholder interests, environmental remediation costs disclosure can enhance behaviour of investors and positively impact market capitalisation of oil and gas firms.

Empirical Review

Some prior studies on green accounting practices and investors behaviour have been reviewed. This is to provide better perspective on the subject matter. Dan et al (2025) investigated the effect of green accounting on the financial performance of Nigerian listed oil and gas companies. The study employed experimental research design, as data were extracted from Nigerian Exchange Group for the period 2014 to 2023. The sample size of eight (8) firms was chosen from a population of nine (9). The study employed unit root testing and descriptive statistics as well as panel data regression for the test of hypotheses with the aid of E-view statistical software version 9. The independent variables green accounting was measured by cost of environmental sustainability, waste management and environmental cleanup; while the dependent variable being financial performance was measured by return on capital employed, earning per share and net profit margin. The findings showed no correlation between cost of environmental sustainability, environmental cleanup and waste management, and return on invested, earnings per share and net profit margin.

Ayoola-Akinjobi (2025) examined the effect of green accounting on financial performance of listed companies in Nigeria Exchange Group between the period of 2013 and 2023 using ex post facto research design as secondary data were drawn from the annual accounts of the firms. The dependent variable being financial performance was proxied by earnings per share; while the independent variable was green accounting. The data were analysed with robust regression analysis. The findings of the study revealed that green accounting had negative and significant effect on earnings per share. Green accounting also has positive and significant impact on return on equity.

Rakhmawati (2025) examined the effect of green accounting implementation on financial performance and corporate sustainability from the perspective of strategic accounting management. The study uses quantitative approach with data collected from manufacturing firms in Indonesia that have implemented green accounting practices. The results of findings indicate that green accounting contributes positively to corporate financial performance through cost efficiency and improved reputation in the eyes of stakeholders. It also shows that the practice has strengthened the company's sustainability position by increasing compliance with environmental regulations and creating long term value.

Kornom-Gbaraba, et al (2025) conducted a study on the impact of community development cost disclosure on the corporate financial performance of quoted oil and gas companies in Nigeria. The study period covers five years from 2018 to 2-22. The study adopted ex-post facto research design as secondary data sourced from Nigeria Exchange Group were employed. A sample of seven companies quoted on the stock exchange during the period were used. The data collected analysed using ordinary

least square method and E-views version 2.0. The results revealed that community development cost disclosure have positive but insignificant relationship with financial performance.

Ubokudom et al. (2024) examined the effect of environmental remediation costs on financial performance of listed oil and gas companies in Nigeria from 2013-2022. Specifically, the study examined the effect of waste management costs, environmental cleanup costs and environmental safety costs on return on assets of these companies. The research design adopted for this study was ex post facto and secondary data used were obtained from the annual reports of ten (10) listed oil and gas companies in Nigeria. The ordinary least square regression technique was used to analyze the data and the statistical package employed was E-views version 10. The results of the analysis showed that waste management costs have insignificant negative effect on return on assets; environmental cleanup costs and environmental safety costs have significant positive effect on return on assets of the companies under study. Therefore, it was concluded that environmental remediation costs can in the long run enhance the profitability of listed oil and gas companies in Nigeria.

Okpo, et al (2024) conducted a study on the effect of environmental policy disclosure on confidence of investors in the Nigerian capital market. The environmental policy disclosure was proxied by environmental replenishment policy disclosure, waste management policy disclosure and carbon emission management policy disclosure while the dependent variable which was investor's confidence was proxied by market capitalisation. The study adopted ex-post facto research design as data from the study were extracted from annual reports of companies listed on the floor of Nigeria Exchange Group from 2016 to 2022 using content analysis. The data were analyzed using descriptive statistics and multiple regression. The results of analysis indicate that environmental replenishment policy disclosure, waste management policy disclosure and carbon emission management policy disclosure exhibited significant positive relationship with market capitalisation. The study concluded that disclosure of information on environmental policy enhances investors' confidence in the capital market.

Majekobaje (2024) investigated the relationship between environmental liability and financial performance of listed oil and gas companies in Nigeria. The study made use of ex-post facto research design. The data used for this study were obtained from the annual reports published by the selected oil and gas firms listed on the Nigerian stock exchange. This research work adopted the panel least square (PLS) regression analysis with longitudinal (panel) regression using E-Views 10.0 statistical software. The findings of the study show that using the dimensions of Compensation obligation and profitability, and the dimensions of Remediation Obligation and Market Value, Environmental liability has a positive and significant relationship with financial performance of oil and gas companies in Nigeria. While environmental liability dimension of Remediation has no significant relationship with profitability of oil and gas firms in Nigeria, and Environmental liability dimension of Compensation Obligation has no significant relationship with market value of oil and gas companies in Nigeria. Based on this, this study recommends that oil and gas companies in Nigeria should spend significant amount on remediation to measure up to the damages caused to the environment and to individuals affected by the activities of their operation.

Odum and Arinomor (2023) examined the effect of green accounting cost on return on equity, shareholders' funds, earnings per share, profit after tax, and net profit margin of selected oil and gas companies. The study covered thirteen (13) years from 2020 to 2022. The researchers employed an

ex-post facto research design with the aid of the Panel Ordinary Least Square (POLS) and Granger Causality techniques to analyze the data. The result of the Granger Causality test revealed that green accounting cost has no significant effect on the return on equity, shareholders' funds, earnings per share, and net profit margin of oil and gas companies. Given the findings, the researchers suggested that the management of oil and gas companies in Nigeria should develop a well-articulated environmental costing system to guarantee a conflict-free corporate atmosphere for improved return on equity.

Akpan and Nkanta (2023) investigated the effect of green accounting practices on shareholders' value in Nigeria by drawing samples from listed consumer goods firms in the Nigerian Exchange Group. The study's chronological scope was from 2012 to 2021. Ex post facto design was used, secondary data were employed and least square dummy variable regression was used in analyzing the data. A sample size of 20 companies was determined using the Taro Yamane formula and these companies were selected using the simple random sampling technique. Green accounting was indicated in the study by biodiversity disclosure, emission disclosure, waste disclosure, water and effluents disclosure, and compliance to environmental laws & regulations disclosure while shareholders' value proxied by shareholders' value added (SHVA). The result showed that biodiversity disclosure and compliance to environmental laws disclosures have a positive significant effect on shareholders' value added; water and effluents disclosures have a positive significant effect on shareholders' value added of listed consumer goods firms in Nigeria during the period under study. The researchers concluded that green accounting practices have a significant effect on shareholders' value added to manufacturing companies in Nigeria.

Aliyu et al., (2022) investigated the effect of sustainability disclosure on the market value of Oil and Gas firms listed in Nigeria. The study population covered all the ten (10) Oil and Gas firms in Nigeria listed as at 31st December, 2020 and census sampling approach was adopted. Secondary source of data was used to extract the data from the annual reports and accounts of the 10 listed Oil and Gas firms in Nigeria for period of five years (2016-2020). Robust Ordinary Least Square Regression was used as a technique of data analysis. The study used the combination of GRI and Carroll's index and stratified the disclosure items into Philanthropic activities, Legal/ethical activities and Economic activities to proxy sustainability disclosure while Tobin's Q was used to proxy firm market value. The study revealed that, legal/ethical activities and economic activities positively and significantly affecting the market value of Oil and Gas firms listed on the Nigerian Stock Exchange.

Okere et al., (2022) examined the effects of environmental accounting costs on the financial performance of selected quoted oil and gas firms in Nigeria. The utilized secondary data generated from annual reports of three oil and gas firms covering a period of 21 years from 2000 to 2020. The study adopted both descriptive and inferential statistics in analyzing the panel data and in order to empirically investigate the effect of explanatory variables on the dependent variables, multiple regression model involving ordinary least squares method was used to test the hypothesis formulated. Results from the regression indicate environmental internal failure cost have a positive and significant effect on the financial performance of oil and gas companies in Nigeria, while environmental pollution prevention costs and environmental detection costs revealed an insignificant effect on the financial performance of oil and gas companies in Nigeria. The study concluded that the environmental accounting costs have significantly affected the general performance of oil and gas firms in Nigeria.

Yusuf et al., (2021) conducted a study on the relationship between environmental performance and financial performance of listed firms in Nigeria the study aimed to investigate the correlation between environmental performance and financial performance among listed firms in Nigeria. The study utilized the Pearson Moment correlation analysis to examine the relationship between variables. The study found a positive relationship between environmental performance and financial performance, suggesting that firms with better environmental performance may achieve higher profitability. Based on the findings, the study highlights the potential for environmental performance improvements to enhance financial outcomes for listed firms, recommending proactive environmental stewardship as a strategic investment for sustainable profitability.

Solomon (2020) reviewed the effect of environmental disclosure on financial performance of listed oil and Gas companies in Nigeria, and to identify the possible factors that accounts for the mixed results. Based on the review there are positive and negative effects, it means that through disclosing environmental information it will have effect on the financial performance of oil and gas companies in Nigeria. Therefore, companies should disclose environmental information in their annual reports. The differences in results could be as a result of the voluntary nature of Environmental disclosure in Nigeria, in presenting environmental information, to ensure uniformity in reporting environmental issues, there is no definite accounting standards but rather guidelines in Nigeria.

Okoye and Modebe (2020) conducted study on the effect of environmental costs on profitability of manufacturing firms in Nigeria. The aim of the study was to examine the impact of environmental costs on the profitability of manufacturing firms operating in Nigeria. Regression analysis was adopted for analysis in the secondary data collected. The study found a negative relationship between environmental costs and profitability, indicating that higher remediation costs may lead to reduced financial performance for firms. Based on the findings, the study underscores the importance of managing environmental costs effectively to maintain firm profitability, recommending strategies to minimize environmental expenditures while maximizing operational efficiency.

Hypothesis development

Waste management cost disclosure and investor's behaviour

Disclosure of information on waste management costs is expected to stimulate the interests of investors to the fact that waste as an important factor that when not properly managed will pose serious threat to long term survival of the company. Investors are expected to respond by building confidence in such firms and this will lead to increased investment. Thus the first hypothesis is postulated as follows:

H₀₁: Waste management cost disclosure has no significant effect on market capitalisation of listed manufacturing firms in Nigeria.

Another crucial aspect of green accounting practice disclosure is the information on environmental cleanup costs. Firms' activities create environmental pollution which when not properly evacuated will create health hazards and threats to lives. Effective disclosure of environmental cleanup costs also indicates that a firm has robust risk management practices and is taking proactive measures to minimize the negative environmental impacts of its operations. Thus investors consider the cleanup

costs disclosure as an important component of their investment decision making. Consequently, the second hypothesis is constructed as follows:

H₀₂: Environmental cleanup cost disclosure does not have any significant effect on market capitalisation of listed manufacturing firms in Nigeria.

Firms operate in the community where others also operate. Their activities affect the community where they do business one way or the other. They receive from the environment raw materials and other resources, and give out to the environment finished products and wastes. Investors perceive community development initiatives of firms as long term sustainability initiative which will guaranty their future operations. Consequently, the investors will tend to invest in such firms. The third hypothesis is developed as follows:

H₀₃: Community development cost disclosure has no significant effect on market capitalisation of listed manufacturing firms in Nigeria.

Model specification

To achieve the objectives of this study, the study specified its model as a process of constructing logical thinking and abstraction of economic reality. The specification of the model was based on the financial econometrics variables adopted for the study. The functional model of the relationship between independent variable which is the green accounting practices (GAP) and dependent variables which is the investors' behaviour (INVB) is presented below:

$$\text{INVB} = f(\text{GAP}) \quad \text{-----} \quad \text{(i)}$$

Where: INVB = Investor's behaviour

GAP = Green accounting practice.

The second model expresses the relationship among the variables used to measure the environmental remediation costs disclosure as follows:

$$\text{GAP} = f(\text{WMCD}, \text{ECCD}, \text{CDCD}) \quad \text{-----} \quad \text{(ii)}$$

Where:

GAP = Green accounting practice

WMCD = Waste management costs disclosure

ECCD = Environmental cleanup costs disclosure

CDCD = Community development costs disclosure

The relationship between the proxy of dependent variable which is market capitalisation and the variables of the independent variables is expressed in the econometric model as follows:

$$\text{MCAP} = \beta_0 + \beta_1 \text{WMCD} + \beta_2 \text{ECCD} + \beta_3 \text{CDCD} + \mu \quad \text{-----} \quad \text{Eq. (iii)}$$

Where: β_0 , β_1 , β_2 and β_3 are coefficients which will be determined from the results of data analysis.

Data collection

The data for the study were collected from published Annual Reports and Accounts of seven selected consumer goods firms in Nigeria from 2015 to 2024. The time series data were utilized to analyze historical trends and patterns in the variables under investigation. E-View 10 software was employed for data analysis, specifically for time series regression analysis. This choice was justified by the software's capabilities in handling time series data and providing statistical outputs such as t-statistics and p-values for coefficient estimation.

RESULTS OF ANALYSIS

Descriptive statistics

The result for the descriptive statistics analysis is as presented in the below:

	MCAP	WMCD	ECCD	CDCD
Mean	1.537333	0.655556	0.577778	0.61112
Median	1.325000	1.000000	1.000000	0.38666
Maximum	3.410000	1.000000	1.000000	1.0000
Minimum	0.010000	0.000000	0.000000	0.0000
Std. Dev.	0.830202	0.477849	0.496681	0.42336
Skewness	0.441587	-0.654713	-0.314945	0.3325
Kurtosis	2.380854	1.428650	1.099190	1.00010
Jarque-Bera	4.362524	15.68903	15.03690	15.03690
Probability	0.112899	0.000392	0.000543	0.00182
Sum	138.3600	59.00000	52.00000	50,0000
Sum Sq. Dev.	61.34196	20.32222	21.95556	12.0441
Observations	70	70	70	70

Source: Researcher's computation using E-views 10.0 (2026)

The results of analysis in the table above indicate that the dependent variable- Market capitalization and the independent variables which were proxied by waste management cost disclosure (WMCD), environmental cleanup cost disclosure (ECCD) and community development cost disclosure (CDCD) of listed consumer goods firms in Nigeria have mean scores of approximately 1.53, 0.66, 0.58 and 0.52 respectively. These indicate the central or average values for these variables from 2015 to 2024. The median values obtained for market capitalization and the independent variables which were waste management costs disclosure (WMCD), environmental cleanup cost disclosure (ECCD) and community development cost disclosure (CDCD) of listed oil and gas firms in Nigeria were approximately 1.32, 1.00, 1.00 and 1.00 respectively. These constituted the middle values for the distributions of these variables under the period covered in this study (2014-2024).

Regarding the level of variability and dispersion in the distribution of these variables, the standard deviations obtained for the dependent variable- Market capitalization and the independent variables which were waste management cost disclosure (WMCD), environmental cleanup cost disclosure (ECCD) and community development cost disclosure of listed consumer goods firms in Nigeria were approximately 0.83, 0.48 and 0.50 respectively. This shows the levels of variability in the distribution with market capitalization indicating high level of variation in the distributions.

Similarly, the skewness values obtained for market capitalization, waste management cost disclosure (WMCD), environmental cleanup cost disclosure (ECCD), employee safety costs disclosure (ESCD) and community development cost disclosure (CDCD) of listed oil and gas firms in Nigeria were 0.44, -0.65, -0.31 and -0.08. This quantifies the asymmetry of the distributions. Furthermore, the Kurtosis values obtained for market capitalization, waste management cost disclosure (WMCD), environmental

cleanup cost disclosure (ECCD) and community development cost disclosure (CDCD) of listed consumer goods firms in Nigeria were given as approximately 2.38, 1.42, 1.09 and 1.000 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.

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 the table below:

Panel multiple regression results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.736435	0.153551	4.796043	0.0000
WMCD	0.591113	0.159791	3.699302	0.0004
ECCD	0.501969	0.159791	3.141422	0.0023
CDCD	1.020211	0.022221	1.222342	0.1340
R-squared	0.295517	Mean dependent var	1.537333	
Adjusted R-squared	0.270942	S.D. dependent var	0.830202	
S.E. of regression	0.708867	Akaike info criterion	2.193130	
Sum squared resid	43.21438	Schwarz criterion	2.304232	
Log likelihood	-94.69083	Hannan-Quinn criter.	2.237933	
F-statistic	12.02511	Durbin-Watson stat	2.464991	
Prob(F-statistic)	0.000001			

Source: Researcher's computation using E-views 10.0 (2026)

Hypothesis one

The t-test was carried out at .05 significance level with T-tab of 2.306 given at $T_{0.05,9}$. From the result above, the t-cal. of 3.6993 is greater than T-tab given at $T_{0.05,9}$. Hence, the null hypothesis which states there is no significant relationship between waste management cost and market capitalization (MCAP) of listed consumer goods firms in Nigeria fails to hold, thus rejected, and the alternative hypothesis accepted. The null hypothesis is further rejected given that at t_c of 0.059, its probability value (p-value = 0.0004) is less than 0.05.

Hypothesis two

The t-test was carried out at .05 significance level with t-tab of 2.306 given at $T_{0.05,9}$. From the result above, the t-cal of 3.1414 is greater than T-tab given at $T_{0.05,9}$. Hence, the null hypothesis which states there is no significant relationship between environmental cleanup cost and market capitalization (MCAP) of listed consumer goods firms in Nigeria fails to hold, thus rejected. The null hypothesis was further rejected given that at $T_{0.05,9}$, its probability value (p-value = 0.0023) is less than 0.05.

Hypothesis three

The T-test was carried out at .05 significance level with T-tab of 2.306 given at $t_c = 0.05,9$ to ascertain if the variations in market capitalization caused by community development cost disclosure is significant. From the result above, the T-cal of 1.4925 is less than t-tab given at $t_c-0.05,9$. Hence, the

null hypothesis which states there is no significant relationship between community relations costs disclosure (CDCD) and market capitalization (MCAP) of listed consumer goods firms in Nigeria holds, thus accepted, and the alternative hypothesis rejected. The null hypothesis is further accepted given that at $T_{0.05,9}$, its probability value (p-value = 0.1392) is greater than 0.05.

DISCUSSION OF FINDINGS

The coefficients of the results of analysis of data were extracted and fitted into the multiple regression model earlier formulated as below:

$$\text{MCAP} = 0.736435 + 0.591113\text{WMCD} + 0.501969\text{ECCD} + 1.020211\text{CDCD} + \mu$$

From the results of analysis, the adjusted coefficient of determination stood at 0.2709 indicating that 27.1 changes in market capitalisation is accounted for by changes in green accounting practice; while the remaining 72.9 percent is accounted for by other factors outside green accounting practices.

Waste management costs and market capitalization

The study findings documented that waste management costs disclosure (WMCD) has a significant positive relationship (Coeff. = 0.5911{0.0004}) with market capitalization (MCAP) of listed oil and gas firms in Nigeria. The coefficient of 0.5911 indicates that for every unit increase in waste management costs, the market capitalization of listed oil and gas firms in Nigeria is expected to increase by 0.5911. The findings suggest that investors view such disclosures as an indicator of a firm's commitment to environmental sustainability and social responsibility, which can lead to increased trust and confidence in the firm, thus positively affecting its market value. This position however aligns with majority of extant studies such as Aliyu, et al., (2022).

Environmental cleanup costs and market capitalization

Environmental cleanup costs disclosure (ECCD) has a significant positive relationship (Coeff. = 0.5019{0.0023}) with market capitalization (MCAP) of listed oil and gas firms in Nigeria. With a coefficient of 0.5019, a unit increase in environmental cleanup costs disclosure is associated with a 0.5019 increase in market capitalization. The statistically significant positive relationship between environmental cleanup costs disclosure and market capitalization suggests that investors view such disclosures as indicators of a firm's operational efficiency and risk management capabilities. The findings imply that firms that disclose information about environmental cleanup costs, such as oil spills, pipeline leaks, and other related incidents, tend to have higher market value as investors perceive them as being more transparent and accountable. This findings aligns with prior findings of Ayoola-Akinjobi (2025). Ubokudom et al (2024) found out that environmental disclosures, natural occurrence disclosure has significant effect on total assets turnover and returns on equity, and no significant effect was found for cash flow ratio and current ratio of manufacturing companies in Nigeria.

Community development costs and market capitalization

The study findings documented that community development costs disclosure (CDCD) has a significant positive relationship (Coeff. = 1.0202{0.0004}) with market capitalization (MCAP) of listed oil and gas firms in Nigeria. The coefficient of 1.0202 indicates that for every unit increase in waste management costs disclosure, the market capitalization of listed oil and gas firms in Nigeria is expected to increase by 1.0202. Firms that are proactive in disclosing their community development

initiatives are perceived as more sustainable and likely to perform better in the long run. This position however aligns with majority of extant studies Kornom-Agbaraba, et al (2025) and Yusuf and Dandago (2023) who found a positive relationship between community development cost disclosure and financial performance of oil and gas firms.

CONCLUSION

Based on the findings of this study, it was concluded that green accounting practice is a predictor of investors' behaviour in the listed consumer goods firms in Nigeria. Consequently, this study concludes that green accounting practices influences the behaviour of investors in the manufacturing firms in Nigeria.

Recommendations

Based on the findings of the study and the conclusion drawn therefrom, the following recommendations were proffered:

1. Companies should not only invest in environmental waste management practices but should also disclose same in order to show the investors how environmentally responsible it is.
2. Companies should commit a percentage of their earnings to environmental cleanup efforts to avoid negative impacts on the image of the company
3. Consumer goods firms in Nigeria should increase their investments in the development of the communities they operate by engaging all relevant stakeholders, including the youth, and embark on life touching projects in those communities.

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