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Effect of Community Development and Environmental Expenditure on Financial Performance of Listed Consumer Goods Firms in Nigeria

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ABSTRACT

There has been diverse view regarding the nature of relationship between community development and environmental expenditure and financial performance of companies worldwide. This is due to different need of stakeholders and lack of clarity if company's corporate social responsibility will affect their financial performance. This study investigates the effect of community development and environmental expenditure on financial performance of listed consumer goods firms in Nigeria over the period 2013 – 2023. The study adopts longitudinal panel research design and secondary data were collected from the company's annual reports. The population of this study consists of 21 listed consumer goods firms with a sample size of seventeen (17) listed companies. The selection was made using purposive sampling technique. The independent variables are community development expenditure and environmental expenditure while dependent variable is financial performance proxied by Net Profit Margin. Firm Size used as a control variable. Also descriptive statistics, correlation and regression analyses were conducted with the aid of E-views 12. The result reveals that community development expenditure and environmental expenditure has significant and insignificant effect on net profit margin of listed consumer goods firms in Nigeria respectively. The study concludes that both community development expenditure and environmental expenditure have a positive impact on net profit margin of listed consumer goods firms in Nigeria. The study recommends that companies should improve on Corporate Social Responsibility activities and pay more attention to their environmental cost for sustenance of environment, thereby increasing their financial performance.

Keywords: **Community Development Expenditure, Environmental Expenditure, Net Profit Margin, Stakeholders Theory**

INTRODUCTION

In contemporary times financial performance (FP) is becoming more and more prominent in the business sector as companies deal with intricate and varied problems in their day-to-day operations. Increasing financial performance and optimizing shareholder wealth is a company's main objective. Attaining this objective, though, is contingent upon the level of organizational performance. A company's financial performance serves as an indicator of its level of efficiency, or conversely, inefficiency. Businesses are becoming more aware of the negative impacts of their activities on people, communities, the economy, and the environment, and are taking steps to minimize it in order to improve their efficiency. How efficiently a company uses its resources to accomplish its objectives is a key indicator of its performance [1]. It's how well an organization meets its stated goals in terms of market share, revenue, productivity, profits, and happy customers. Corporate social responsibility has received increasing attention as a complementary to financial statements for evaluating financial performance. Recently, the use of financial metrics only as the measure of a firm's performance is criticized by many scholars and stakeholders due to different reasons [1]. Maximization of corporate responsibility cannot be overemphasized in the operations of corporate organizations. Business exists within an environment in which they operate, therefore business organizations need to give back positively to society to participate in development of such society [2]. [3], state that Corporate social responsibility (CSR) is the inclusion of social, environmental, and economic interests of all the stakeholders in the corporate decision-making of a

firm. In other words, to practice CSR is to consider the social, environmental, and financial needs of all company's stakeholders. Corporate social responsibility includes the discretionary philanthropic, ethical, legal, and economic expectations the society has towards organisations at a given time [4]. The importance of moral conduct and corporate social responsibility has been brought to light by several factors, including the globalisation of the economy and society, advancements in science and technology, and easier access to information. CSR has become a strategy which organisations use as an instrument to enhance their marketing image, customer satisfaction, and stakeholder's acceptance [5], and improve long-term performance. The challenges of environmental abuses and degradation has led various sectors, governments and non-governmental organizations (NGOs) to engage in environmental sustainability debates and initiate strategies for responding to the challenges of sustainable development [5]. The environment has a long history of being regarded unrelated to the economic system [6] and as such, businesses for many decades have ignored the impact of their activities on the natural and social environment in which they operated, unless it had direct repercussions on the statement of financial position. However, the neglect by business of the negative externalities arising from the pursuit of economic objectives along with various environmental abuses by companies have created less than positive attitudes amongst shareholders towards business [7]. Companies including consumer's goods all around the world are incorporating economic, environmental, social and governance considerations into their business strategy because of the increased focus on corporate social responsibility expenditure. It is still unclear, whether these activities will improve financial performance. In terms of methodology gap most studies conducted in this area used time series data and as such employed the Ordinary Least Square method of data analysis [8], [9], and [10], which have some limitations with time series data as it does not explain wide range, complex problems and it does not address the uniqueness of individual companies. While this study used panel data for more robust analysis. More also, existing studies use different variables and proxy for financial performance for instance the study conducted by [11], [12], [13], [14], use profitability as a proxy for financial performance. This study used net profit margin as a proxy for financial performance because it direct measures profitability, and focuses on core business activities. These outcomes were definitely due to the usage of diverse research methodologies, the different periods covered, nature of variables considered, availability and nature of data used, diverse jurisdiction and sector of study, different sample composition and diverse measures of environmental accounting disclosures employed. Hence, this study is carried out to evaluate the effect community development expenditure and environmental expenditure on the financial performance of listed consumer goods firms in Nigeria. This is the knowledge gap that drives this study. The study outlines its specific hypotheses as follow:

Ho_1: Donation has no significant effect on the net profit margin of listed consumer goods firms in Nigeria.

Ho_2: Environmental expenditure has no significant effect on the net profit margin of listed consumer goods firms in Nigeria.

LITERATURE REVIEW

Conceptual Framework

Community Development Expenditure

Community Development Expenditure refers to a holistic approach grounded in principles of empowerment, human rights, inclusion, social justice, self-determination, and collective action. This expenditure incurred includes health institutions, schools, and community which can be measured by the total cost of all the expenditure on health, schools and the community. According to [15], 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 [16].

Donation

Donation can be referred to as a gift that is voluntarily given for a charitable purpose. In firms, donation expenditure usually occurs when a company voluntarily provides assets to someone who suffers from financial or economic difficulties, and the company does not expect anything in return [17]. Thus, donation expenditure is different from advertising and entertainment cost, which aims to provide future benefits to the business. Donation activities may help companies to gain a reputation as a reliable company. After a firm establishes a favorable reputation, the public increasingly extends good faith to its product, merchandise, and services. Thus, a firm's donation activities may lead to an unintended increase in firm value [18].

Environmental Expenditure

Environmental expenditure are expenses that arise internally and externally to the company and all costs incurred in connection with or damage to environmental protection. These costs such as prevention costs, discharge, planning, repair of damage that occurred in the company. According to [7], environmental costs are costs connected with the actual or potential deterioration of natural assets due to economic activities. In addition to environmental protection cost accounting, environmental expenditure is a methodical approach to cost accounting that accounts for environmental costs related to materials and energy. Environmental expenditures are costs incurred by the company as a result of environmental pollution and environmental improvement initiatives, whether done so intentionally or unintentionally. The money invested by the corporation in environmental protection will eventually pay off in terms of social and economic benefits.

Financial performance

In a broader sense, financial performance refers to the degree to which financial objectives are being or has been accomplished. It is the process of measuring the results of a firm's policies and operations in monetary terms. These results are reflected in the firm's return on investment, return on assets, value added, return on equity, net profit margin and so on [19]; [20]. This term is also used as a general measure of a firm's overall financial health over a given period of time and can be used to compare similar firms across the same industry or to compare industries or sectors in aggregation [21]. According to [9[, performance measures are the life blood of economic units, since without them no decisions can be made. Financial performance measure is one of the important performance measures for economic units which financial performance measures are used as the indicators to evaluate the success of economic units in achieving stated strategies, objectives and critical success factors. There are various stakeholders who are interested in a company's performance due to leverage. These include the equity holders, who are owners of the firm, and they carry the highest risk in the business since they are the last to be paid upon winding up of the firm after all the debt holders' claims are settled. They gain through the value of their shares appreciating and through pay out of dividends. The debt holders are also interested since they gain through repayment of their principal amount with some interest. Their debt is secured by the company's assets and are first to be paid if the company winds up or is unable to pay its debtors [17]. There are various reports used to rely financial performance across the board which include income statement, statement of financial performance, statement of cash flow and notes to the account. From these statements, concise financial ratios can be computed to examine corporate performance. Most entities use combination of measures in order to succinctly get to understand the financial health of entities [6]. This study used net profit margin (NPM) to measure financial performance.

Net Profit Margin

Net Profit Margin (NPM) is a financial metric that measures the percentage of profit a company earns in relation to its total sales [22]. A larger net profit margin (NPM) indicates a company's ability to generate substantial profits, as it improves the ratio of net profit to net sales. A significant NPM indicates that the organization can expand its operations by consistently generating operational profits. If a company achieves these results, investors may perceive it positively and anticipate a significant return on their investment, leading to increased earnings. A well-established firm should have a consistent increase in its net profit margin. The ratio of a business's or division's net earnings to its total sales is known as the net profit margin. A company's net profit margin is the portion of sales that generates net income. subtracting total income from all a business's outlays, including operating costs, product purchases (that includes raw materials), and payment of tax, yields net income or net profit.

$$NPM = \text{Net income} / \text{Total sales} \times 100\%$$

Firm Size

Firm size is defined as the ability to make investments and accelerate growth to achieve goals of the organization. [8], states that firm size is a scale which the size of the company can be classified as measured by total assets, total sales, share value and etc. While [17], explains that the size of the firm reflects the total assets owned by the company. Firms with smaller total assets often experience greater financial distress, as large total assets generally indicate that a company has reached a level of maturity where cash flow is positive and long term prospects are favourable. Large firms are typically considered more stable, as they tend to attract more investor and have better access to capital. Their size allows them to diversify revenue streams, invest in innovation and withstand economic downturn more effectively [23]. Moreover, larger firms may exhibit greater sensitivity to market changes and experience relatively larger wealth transfers compared to smaller firm.

Empirical Review

[9], examined the relationship between Corporate Social Responsibility (CSR) activities and the financial performance of commercial banks in Nigeria, with a focus on Return on Assets (ROA), Return on Equity (ROE), and Earnings Per Share (EPS). The study adopts ex-post facto research design and secondary data from published annual reports of ten selected prominent banks in Nigeria was used from 2014 to 2023. panel data analysis techniques, the research uncovers significant variability in financial outcomes and CSR efforts among the banks. The Pearson correlation matrix reveals strong positive relationships between financial metrics and CSR activities, suggesting that investments in Community Development (CD), Corporate Donations and Charity (CDC), and Stakeholder Engagement (SE) positively impact financial performance. Furthermore, the Hausman test results consistently favor the fixed effects model, emphasizing the substantial influence of individual bank attributes on observed relationships. The panel regression analysis focusing on EPS demonstrates that increased investments in community development positively impact EPS, while higher corporate donations and charity expenditures are associated with a decrease in EPS. The results underscore the importance of strategic CSR initiatives in enhancing both financial performance and social impact within the Nigerian banking sector, providing valuable insights for policymakers, regulators, and banking institutions aiming to foster sustainable development. The focus of the study is specifically on commercial banks. While this study focus on consumer goods firms in Nigeria.

[24], investigated the impact of environmental cost on the financial performance of listed industrial goods firms in Nigeria. The study employed explanatory research design to collect panel data. The source of data was extracted from the annual reports and accounts of the 11 sampled listed firms, for a period of ten (10) years (2012 -2021). The sample firms were drawn from a total population of the thirteen (13) listed firms on the floor of Nigeria exchange group. Environmental cost is independent variables proxied by firm administrative cost (AC) and community development costs (CDC), while financial performance is a dependent variable proxied by Returns on Asset (ROA) and Tobin's Q. The regression results obtained from the study's models indicates that the firms' environmental cost (Community Development cost and administrative cost) affects their accounting-based financial performance (ROA) significantly and positively. Also environmental cost affects the market-based financial performance indices (Tobin's Q) insignificantly and negatively. The study recommends that the management of the firms should employ effective and right balance investment on environmental cost components that will cater for all the stakeholders' interest. [24], study used Returns on Asset (ROA) and Tobin's Q as proxied for its dependent variables but the study is using Net Profit Margin as its proxy.

[25], carried out research on the moderated regression analysis approach to environmental costs and financial performance of Nigerian industrial goods firms for the period of eleven (11) years from 2010 to 2020. Environmental costs are independent variables proxied by waste management costs (WMC) and community development costs (CDC) with the moderated variable of firm size (FS), while financial performance is the dependent variable proxied by net profit margin (NPM). The ex-post facto research design and panel data were used for the data collection. The panel estimates of generalized least square and unit root tests were analyzed using e-views statistical software. The regression result indicates that waste management costs (WMC) and community development costs (CDC) have a significant positive effect on net profit margin (NPM), while the moderated variable of firm size on both waste management costs (WMC) and community development costs (CDC) has a significant negative effect on the net profit margin (NPM) of the selected industrial goods firms in Nigeria. The study focused on listed industrial goods firms in Nigeria from 2011 to 2020, but its findings may not be generalizable to more recent periods, such as 2013-2023, which could be affected by changes in economic conditions, or industry-specific factors, potentially limiting the study's relevance and applicability to current market conditions.

[26], examined the effect of community involvement activities on the financial performance of food and beverage companies in Nigeria. The specific objectives are to determine the relationship between corporate social responsibility and return on capital employed, and to determine the relationship between corporate social responsibility and earnings per share. The study made use of the quantitative research method. The population of this study is the seventeen (17) food and beverage firms listed on the Nigerian Exchange Group. The study adopted secondary data compiled from the audited financial statements of the seventeen (17) food and beverage companies listed on the Nigerian Exchange Group covering the period of five (10) years from 2011 to the year 2020. The sample of the study comprises seventeen (17) food and beverage companies listed on the Nigerian Exchange Group. Quantitative Data analysis was analyzed using the Stata. The findings of the study revealed community involvement has a positive but insignificant relationship with return on capital employed and also has a positive insignificant relationship with earnings per share in food and

beverage companies in Nigeria. Consequent to this study, it was recommended among others that food and beverage companies should endeavor to improve on their corporate social responsibility disclosures especially the ones with relatively low levels of disclosures. While [26], study used return on capital employed and earnings per share as proxied for its dependent variables but the study will be using Net Profit Margin as its proxy.

[27], examined the effect of community development cost on return on asset of selected oil and gas firms. Six (6) oil and gas firms were randomly sampled for the study and data were collated from published annual reports of these firms over the period of 10 years, spanning between 2010 and 2019. Data were analyzed using panel-based estimation techniques. Community Development Costs (CDC) is the independent variables while financial performance is a dependent variable proxied by return on assets (ROA). The firm size and leverage ratio as control variable. Result showed that a unit increase in community development cost by 1 billion naira led to insignificant increase in return on asset by 0.7%. By implication this result showed that increase in the level of community development cost of oil and gas firms in Nigeria significantly influenced the performance of oil and gas firms as measured in terms of return on asset. This study concluded first that engagement in community development in Nigeria by oil and gas firms has the potential to culminate into improved corporate performance; however, such potential is yet to be fully harnessed by most of the oil and gas firms in Nigeria. Hence oil and gas firms in the country, should be more objective in their engagement in community development in the country, so as to further boost their performance potential. While [27], study provides valuable insights into the effect of community development cost on return on asset of selected oil and gas firms, its focus on a limited timeframe (2010-2019) underscores the need for a more comprehensive and longitudinal examination of the relationship between community development expenditure and environmental expenditure and financial performance in the context of listed consumer goods companies in Nigeria, which this current study aims to address.

[28], examined the impact of disclosure on community development cost on turnover of listed manufacturing firms in Nigeria. To produce valid empirical results, preliminary tests such as normality, serial correlation, heteroscedasticity, multicollinearity were conducted on research data. The OLS and GLS regression analysis was conducted to show the effects of the predictor on financial performance as represented by sales revenue. The results strongly showed that environmental accounting information disclosure has a significant impact on the financial performance of quoted manufacturing firms as represented by sales revenue. In view of the findings, the researcher concludes that effective disclosure and reporting of environmental information in the annual report positively influences financial performance. The researcher recommends that, firms should continue to disclose more information on environmental related issues due to the inherent advantage derivable there from, while firms that are not disclosing their environmental activities should be encouraged to do so because they may be losing the patronage of ethical stakeholders who may be tempted to regard them as not environmentally friendly firms. While [28], study examines the impact of disclosure on community development cost on turnover of listed manufacturing firms in Nigeria but this study used financial performance of consumer goods firms in Nigeria. [29], examined the relationship between corporate social responsibility (CSR) expenditures and both financial and non-financial performance of Jordanian commercial banks during the period 2008-2018. To measure the variables of interest, secondary data published on Amman Stock Exchange (ASE) website were processed to become preliminary data suitable for the nature of the study. The study sample amounted to 13 commercial banks, which represent all Jordanian commercial banks listed on ASE. The study found that there is a positive and significant relationship between CSR expenditures and financial performance, as the study showed that the return on equity (ROE) has a positive and significant relationship with CSR expenditure, while the return on assets (ROA) and Tobin's Q model have a statistically significant negative relationship with CSR expenditure, while the market stock price (MSP) had a positive, but not statistically significant. The study also found that there is a positive, statistically significant relationship between CSR expenditures and non-financial performance, which was represented by total deposits and total training expenditures in Jordanian commercial banks. Accordingly, the study recommends encouraging banks to prepare sustainability reports and CSR reports, which are considered comprehensive, and not only with disclosures within the annual reports. The study of [29], was conducted in foreign country (Jordanian) and concentrated on commercial banks. This study is domicile in Nigeria with special focus on listed consumer goods firms.

[30], examined the effect of environmental performance and environmental costs on financial performance in Indonesia. The study's time frame spanned from 2014 to 2018. The research uses a quantitative method. Purposive sampling method is used in sample selection in which the companies studied are mining and manufacturing companies in Indonesia which are listed on the Stock Exchange. The research uses ratio analysis to measure financial

performance and measure environmental performance sorted by Proper rating, to measure environmental cost used data obtained by looking for a percentage of the environmental cost and then statistical methods to test the hypothesis. The results of this research indicate that only the environmental costs have an effect on the financial performance of mining and manufacturing companies with a significant level 0.047. It means that the disclosure of environmental costs carried out by mining and manufacturing companies in Indonesia has an impact on financial performance, and the company's concern, both in terms of costs for environmental prevention, costs for environmental detection, costs for internal failure and costs for external environmental failure can minimize the risk of environmental pollution. While [30], study provides valuable insights into the effect of environmental performance and environmental costs on financial performance, its reliance on a relatively small sample size of 37 firms listed on the Stock Exchange of Indonesia and a limited time frame of 5 years (2014-2018) may limit the robustness of the findings, highlighting the need for future research to explore these relationships with larger and more diverse samples. [31], examine the effect of environmental cost and financial performance measures of quoted oil and gas companies in Nigeria. Time series data were collected from annual financial reporting and economic review of Central Bank of Nigeria. A Pearson product moment correlation and multiple linear regression analysis were used. The result revealed that adequate disclosure of environmental cost and compliance to corporate environmental regulations has positive and significant effect on financial performance. Thus, it was emphasized that regulatory enforcement for adequate environmental cost accounting and proper reporting by the management of oil and gas companies in Nigeria would guarantee a conflict free corporate atmosphere that would lead to improve corporate performance. Due to differences in operational activities, the conclusions and recommendations of this study may not be applicable to all types of companies. The focus of the study is specifically on oil and gas companies. While this study focus on consumer goods firms in Nigeria.

Theoretical Framework

Legitimacy theory

Legitimacy theory was propounded by [32]. The legitimacy theory can be defined as: "a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions [33]. The theory is based on the perception that the rights and responsibility of companies come from society. [33], identified three forms of legitimacy: the pragmatic (based on audience self-interest); the moral (based on normative approval) and cognitive (based on comprehensibility and taken-for-grantedness), which is used in terms of manipulation and garnering societal support. These three forms have been used to explain the link of CSR with the legitimacy theory. [34], stated that the legitimacy theory has to do with a social contract between corporate bodies and the society where the companies operate. The existence of an agreement between the corporate entity and the society or community in which it carries out its operations is very important for the purposes of legitimacy, peaceful co-existence and for the mutual benefits of both parties. [35], posit that legitimacy theory entails such assurance of meeting the conditions and expectations of the society, while the entity is carrying on its legitimate business. In order words, the theory suggests that companies should accept to carry on their operations or activities within the confines of the existing laws without violating the existing peace, rules, and regulations as well as environmental and social norms in the community where they do their businesses. To maintain legitimacy, the consumer goods companies must communicate its environmental activities by making environmental expenditure to be disclosure. It is expected that reporting community development and environmental expenditure in the financial will be able to restore, increase and maintain legitimacy that has been received by the company. Therefore, in order for these companies to continue to gain legitimacy from their host communities, companies with good environmental performance should allocate environmental costs.

Signaling Theory

Signaling theory was propounded by Spence in 1973 and it holds that organizations will try to send signals in the form of positive information to existing and potential investors through disclosures in financial statements. Signaling 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 signaling theory, [36] utilized the labour market to model the signaling 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. information regarding the impact of the firm's activities on the environment is possessed by the firm or insiders (executives and other relevant staff). The signaling theory states that the release of this information has implications for both the signaler (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 [37]. This means that disclosures of environmental information should have influence on the firm's value. This is possible in situations where investors increase their confidence and invest more, customers buy more because of trust and brand reputation and so on; all this could lead to an increase in market value.

Stakeholder Theory

Stakeholder theory was originally propounded by [38] in the book Strategic Management: A stakeholder approach with its major theory principle being organizational management and business ethics that addresses morals and values in managing an organization by identifying the groups which are stakeholders of the organization and describing/endorsing methods by which management can give due regard to the interest of these groups [39]. The theory is considered one of the central theories that lay the foundation for developing research on corporate social responsibility. 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 behaviors. Its present inclination is to emulate environmental disclosure and corporate social responsibility initiatives which establish itself as a point of reference, to the point that it has acquired the allures of a dominant discourse. According to stakeholder theorists, while profitability is a crucial goal, other stakeholders' interests are just as essential [40]. 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 and community development expenditure disclosures, these stakeholders need to know how committed the organization is to them.

Stakeholders' theory underpin this study because companies are not only maximizing profit to the shareholders but also ensure that they operate within the bounds and norms of society. Consistent with the notion of stakeholder's theory, companies gain and maintain their public image through donation and paying more attention to environmental related issues.

METHODOLOGY

This study employed longitudinal panel research design where information on community development expenditure and environmental expenditure variables and financial performance variables of listed consumer goods firms on the Nigeria Exchange Group were extracted from the audited annual reports of the companies from 2013-2023. The population of this study consists of 21 listed consumer goods firms on the Nigeria Exchange Group as at 31st December 2023 and the sample size consist of seventeen (17) listed consumer goods companies using the purposive sampling technique. E-views were used in analyzing the data. Descriptive statistics were used to show the measure of tendencies that include mean table, standard deviations, and percentages. Correlation and regression analyses were also used to find out the relationship between community development expenditure and environmental expenditure and financial performance. The research adopted [25] research model:

$$NPM_{it} = \beta_0 + \beta_1 \text{ Community Development Cost}_{it} + \beta_2 \text{ Waste Management Cost}_{it} + \beta 3FSIZEit + \beta 4FS{*}CDCit + \beta 5FS{*}WMCit + eit \quad \text{(i)}$$

was modified for the study, as indicated below.

$$NPM_{it} = \beta_0 + \beta_1 CDE_{it} + \beta_2 EE_{it} + \beta_3 FS_{it} + e_{it} \quad (3.1)$$

Where;

NPM = Net Profit Margin,

CDE = Community Development Expenditure,

EE = Environmental Expenditure

FS = Firm Size

β_0 = Constant time

i = Number of firms (1, 2, 3....17)

t= time (2013......2023)

eit = error terms.

Table 1: Measurement of Variables

Variable	Type	Measurement	Source
Net Profit Margin (NPM)	Dependent	Net Profit divide by Total Revenue. (NPM=NP/TR)	[22]
Community Development Expenditure (CDE)	Independent	Total expenditure on donation.	[3]
Environmental Expenditure (EE)	Independent	Total expenditure on environmental activities.	[41]
Firm Size (FS)	Control variable	Natural logarithm of total assets	[19]

Source: Researcher Compilation, (2024)

Decision Criteria

The null hypothesis (Ho) will not be rejected if the computed value falls within the critical positive value of the distribution table for whichever degree of freedom will be computed with a 5% (0.05) level of significance. Otherwise reject the null hypothesis.

RESULTS AND DISCUSSION

The main objective of this study is to investigate the effect of community development expenditure and environmental expenditure on financial performance. To enhance the validity of the results and the presentation and understanding of the panel multiple regression results, the result of the descriptive and diagnostic tests is included in the result and analysis presented here.

Descriptive Statistics

The mean, maximum and lowest values of the applicable variables are shown together with the corresponding standard deviations. The descriptive statistics for the variables used in the study are displayed in Table 2. Using E views which analysis of variables for the period under consideration was obtained.

Table 2: Descriptive Statistics Results

	NPM	CDE	EE	FS
Mean	0.308210	325713	1823363	6.13667
Median	0.012385	29514.2	97323.4	14.7692
Minimum	-19.04768	62.0100	546.297	1.63932
Maximum	23.53281	48058.7	28021.3	21.4371
Std. Dev.	0.31862	0.56832	0.37905	0.37905
Kurtosis	0.41783	-0.16842	1.65714	0.52744
Skewness	-0.32656	0.01252	1.88442	1.58013
Jarque-Bera	1.42108	0.03624	5.60915	21.18776
Probability	0.49138	0.98204	0.06875	0.00003
Sum	45.73333	3.2387	3.86742	359.00000
Observation	187	187	187	187

Source: E-views 12 Output (2024)

The descriptive statistics of the dependent and the independent variables are shown in Table 2 above. The table displays the mean, minimum, maximum, and standard deviation for financial reporting quality (NPM) which are 0.308210, -19.04768, 23.53281, and 0.31862 respectively. This value shows that there is a small dispersion of the standard deviation from the mean value. The table also displays the mean, minimum, maximum, and standard deviation values for community development expenditure (CDE) as 325713, 62.0100, 48058.7, and 0.56832 respectively. Comparing the range between the maximum and minimum values reveals there is a marginal increase in community development expenditure in the study period shown by the small departure of the standard deviation from the mean value. The results further show environmental expenditure (EE) during the period has mean, minimum, maximum, and standard deviation values of 1823363, 546.297, 28021.3, and 0.37905 respectively. The firm size (FS) has a mean value of 6.13667, a standard deviation of 0.37905, and minimum and maximum values of 1.63932 and 21.4371 respectively. The standard deviation values represent the degree of dispersion in the data series. The more the dispersion of the standard deviation, the more the series deviates from the mean and vice

versa. From the table above, NPM has a negative skewed distribution while all the independent variables display a positively skewed distribution with CDE having a value below zero and EE and FS having a value greater than zero, which predicts that the distribution will have more values above the sample average in the distribution. Skewness reflects the degree of asymmetry of the series. Kurtosis was employed to test the peakness of the series distribution which indicates that the value is leptokurtic if it exceeds 3 and platykurtic if it is below 3. The results show that NPM, CDE, EE, and FS have a short-tailed curve with the value of 0.47794, (-0.16842) 1.65714, and 0.52744 respectively which are below 3. Jarque-Bera statistics which analyses whether the sample data exhibit the skewness and kurtosis of normal distribution indicate that EE and FS has the greatest value of 21.18776 and 21.18776, while NPM and CDE have lower values of 1.42108 and 0.03624. Further analysis of the table shows that EE and FS are statistically significant with P-values of less than 5%, judged by their individual behaviors, while NPM and EE have higher value of over 5% level of significance.

Correlation Analysis

Table 3 presents the correlation matrix showing the Pearson correlation coefficient between the dependent and independent variables as well as among the studies of the independent variables.

Decision rule

The acceptable threshold for the correlation between the dependent and independent variable is ≤ 0.8 all things been equal.

Table 3: Correlation Matrix

	NPM	CDE	EE	FS
NPM	1			
CDE	0.20112	1		
EE	0.04195	0.2852	1	
FS	0.08154	-0.198	-0.0847	1

Source: E-views 12 Output (2024)

The table above shows that there is no relationship among the explanatory variables that is larger than 0.7 which can pose the problem of serial correlations among the data because the rule state that a correlation coefficient between two independent variables of 0.8 is showing a sign of multicollinearity. The results show that CDE and NPV have a positive correlation coefficient of 0.20112. Furthermore, FS has a negative relation with community development expenditure and environmental expenditure but a positive relation with net profit margin as indicated by coefficients of (0.198), (0.0847), and 0.08154 respectively.

Multicollinearity Test

The multicollinearity test was carried out in order to assess the robustness of the estimate, utilizing the Variance Inflation Factor (VIF). Multicollinearity is a breach of the assumptions for linear regression modeling and occurs when one or more independent variables have a strong influence on the others than they do on each other. This can affect the validity of the findings from any research.

Decision rule:

If the value of VIF is 1< VIF < 5, it specifies that the variables are moderately correlated to each other. If VIF ≥ 5 to 10, there will be multicollinearity among the predictors in the regression model and VIF > 10 indicate the regression coefficients are feebly estimated with the presence of multicollinearity.

Table 4: Multicollinearity Test (VIF)

Variance Inflation Factors
Date: 11/18/24 Time: 07:08
Sample: 2013 2023
Included observations: 187

Multicollinearity

	Coefficient Variance	VIF	1/VIF
C	347.8372	4.86734	NA
CDE	54.4273	7.02136	1.83174
EE	134.1436	6.04365	1.82279
FS	81.21065	8.10034	1.88014

Source: E-views 12 Output (2024)

Table 4 presented the results of the multicollinearity test conducted which revealed that from the distribution of the values in the table, the correlation coefficient of the independent variables is indeed in line with the variance inflation factors (VIF). The VIF ranges from 1.82279 to 1.88014, which is below a threshold of 10 and shows that the study variables are not multicollinear.

Heteroskedasticity Test

In order to validate the robustness of the estimates, the Heteroskedasticity test was conducted as a diagnostic check.

Decision Rule:

At 5% level of Significance if the residuals are homoskedastic reject alternative hypothesis and null is not rejected

H0: No conditional Heteroskedasticity (Residuals are homoskedastic)
H1: There is conditional Heteroskedasticity

Table 5: Heteroskedasticity Test

Panel Cross-section Heteroskedasticity LR Test

Null hypothesis: Residuals are homoscedastic

Equation: UNTITLED

Specification: NPM C CDE EE FS

	Value	Df	Probability
Likelihood ratio	96.1708	11	0.07160

LR test summary:

	Value	Df
Restricted LogL	304.1738	105
Unrestricted LogL	258.5784	105

Source: E-View 12 Output (2024)

From the result in table above with a ratio value of 96.1708 and a corresponding probability value of 0.07160 which is greater than 5%, the study therefore posits that, there is every reason to not reject the null hypothesis, that states there is no heteroskedasticity problem. Consequently, based on the diagnostic probability 0.07160 the alternative hypothesis is rejected, thus there is homoskedasticity, indicating that residuals are homoskedastic and as

such the samples give a true reflection of the population.

Hausman Test

This test is carried out to choose between the fixed effect model and random effect model, in order to interpret the objective of the study and the research hypotheses. The decision rule of Hausman test is at 5% level of significance.

Decision rule:

Reject H_0 if the prob>F is less than 0.05. Otherwise, do not reject.

Hypothesis

H_0: Random effect is the most appropriate for the panel regression analysis.

H_1: Fixed effect is the most appropriate for the panel regression analysis.

Table 6: Hausman test

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob
Cross-section random	6.08750	3	0.0463

Source: E-views 12 Output (2024)

The table above shows that the test is statistically significant at 0.0463 as the probability statistics lies below 5% level of significance. Therefore, this study rejects the null hypothesis that the random effect is the appropriate model.

Fixed Effect Likelihood Ratio Test

In order to distinguish between the fixed effects regression model and the pooled effect regression model, the fixed likelihood ratio test is carried out. Due to the panel format of the data set, pooled and fixed-effect regressions were conducted.

Decision rule:

If p-value is less than 0.05, reject the null hypothesis. Otherwise, do not reject.

Hypothesis

H_0: Pooled effect is the most appropriate for the panel regression analysis.
H_1: Fixed effect is the most appropriate for the panel regression analysis.

Table 7: Fixed Effect Likelihood Ratio (Test between Pooled and Fixed)

Effect Test	Statistic	d.f	Prob
Cross-section F	19.07865	85291	0.0000
Cross-section Chi square	115.67581	11	0.0000

Source: E-views 12 Output (2024)

According to the decision rule that led to the test, it reveals a chi-square statistics value of 115.67581 with a probability value of 0.0000, implying that the null hypothesis should be rejected, which indicates that fixed effect is the most suited for the panel regression analysis.

Table 8: Regression Analysis

Dependent Variable: NPM
Method: Panel Least Squares
Date: 11/18/24 Time: 05:17
Sample: 2013 2023
Periods included: 11
Cross-sections included: 11
Total panel (balanced) observations: 187

Variables	Coefficients	Std. Error	t-Stat	Prob.
C	1.40921	0.64093	2.18903	0.02344
CDE	0.76024	0.16390	4.67102	0.00345
EE	0.30176	0.41097	0.49071	0.62356
FS	-0.15904	0.03427	-2.32409	0.00120
		Effects Specification		
Cross-section fixed (dummy variables)				
R Square	0.65776	Mean dependent var		0.30821
Adjusted R Square	0.62453	S.D dependent var		0.31862
S.E of regression	7.82012	Akaike info criterion		4.12043
Sum squared resid	29.43804	Schwarz criterion		4.63190
Log Likelihood	-178.56320	Hannan-Quinn criter.		4.50273
F-value	20.70954	Durbin-Watson stat		1.72901
Prob (F-statistic)	0.000000			

Source: E-views 12 Output (2024)

The table above display and analyze the effect of regression result of the explained variables proxied by NPM as well as the explanatory variables CDE and EE. It shows R2 of 0.65776 which means that about 65.77% of total variation in net profit margin of listed consumer goods firms in Nigeria is accounted for by community development expenditure and environmental expenditure with other factors not included in the model. Furthermore, the regression of result as presented above shows an intercept of 1.40921.

The result reveals that community development expenditure (CDE) has a positive impact on the net profit margin (NPM) of the listed consumer goods firms in Nigeria. CDE has a beta coefficient of 0.76024 and a P-value of 0.00345 which is significant at the 5% level. This suggests that a shift of community development expenditure will result in a significant increase in the net profit margin of listed of consumer goods firms in Nigeria. This implies that community development expenditure of listed of consumer goods firms in Nigeria improves their net profit margin. Also, environmental expenditure (EE) has a positive association with NPM. The result reveals a beta coefficient of 0.30176 and a P-value of 0.62356 which is above 5% level of significance. This implies that environmental expenditure (EE) of listed consumer goods firms in Nigeria improves their net profit margin, although insignificantly.

DISCUSSION OF FINDINGS

The findings of this study contribute to a better understanding on the mix of community development and environmental expenditure variable so as to improve the financial performance of listed consumer goods firms in Nigeria. Net profit Margin and two other independent variables with one control variables which include firm size. All these factors were put to test in order to identify the possible community development and environmental expenditure variable that can improve the financial performance of listed consumer goods firms in Nigeria. The result presented in the above table 8 revealed that the explanatory variables of the hypothesis one was found to be positive and

significant. Thus, the null hypothesis one was rejected and the alternative hypothesis was accepted that is, total expenditure on donation has significant effect on net profit margin. The study shows that environmental expenditure has an insignificant effect on the net profit margin (NPV) of listed consumer goods firms in Nigeria. The result shows from the table above that EE has a positive beta coefficient with a corresponding P-value which is above 0.05 significant value. Thus, we have no reason to reject the null hypothesis which state that total expenditure on environmental activities has no significant effect on net profit margin. This is inconsistent with the finding of [24], who investigated the impact of environmental cost on the financial performance of listed industrial goods firms in Nigeria and find out that it has a positive and significant effect on financial performance.

CONCLUSION AND RECOMMENDATION

This paper examines the effect of community development and environmental expenditure on financial performance of listed consumer goods firms in Nigeria as a sample between 2013 and 2023. The study concluded that there is positive and significant relation between community development expenditure and net profit margin while environmental expenditure has a positive and no significant effect with net profit margin of the listed consumer goods firms in Nigeria. Thus, it is important to note that donations by companies to the community makes them socially responsible and affect how various stakeholders invest in them thereby increasing their financial performance.

Based on the study's findings, the following recommendations are proposed to improve financial performance of listed consumer goods firms on the Nigeria Exchange Group;

i. The sampled companies should endeavor to improve in the corporate social responsibility activities and leverage on it to enhance the financial performance of their businesses in the country.

ii. Consumer goods companies should pay more attention to their environmental cost for sustenance of the environment which will make stakeholders to view them an environmentally friendly company, thereby increasing their financial performance.

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