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Corporate Social Responsibility and Financial Performance of Listed Consumer Goods Firms in Nigeria: A Granger Causality Approach

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Abstract

This study examined the connection between CSR (Corporate Social Responsibility) and the financial efficiency of the listed consumer goods firms on the Nigerian Exchange Group (NGX). CSR was assessed based on community relations, employee relations, and environmental relations. The research focused on the recognition that Nigeria's consumer goods industry has a significant presence of multinational corporations that prioritize stakeholder management. The research employed a longitudinal research design approach to retrieve data from the population. 19 companies out of the 21 listed companies on the NGX were sampled. These firms were listed as of 31st December, 2022. The analysis were conducted on the collected annual reports of various issues. Descriptive statistics and a Granger causality test were employed to evaluate the data and examine the causal impact. The result of the study shows that CSR is statistically correlated to return on assets and overall financial performance. The results suggest that building strong relationships with the community and environment can enhance a company's financial outcomes. On the other hand, employee relationships has a negative correlation and impact on financial performance. Moreover, companies should improve their sustainable labor practices to achieve positive effects on their financial performance and comply with global standards. Additionally, incorporating environmental sustainability practices into CSR can contribute to long-term economic benefits for companies.

Keywords: Financial performance, community relations, environmental sustainability practice, CSR, return on asset, financial performance, consumer goods

1. Introduction

The drive by management of corporate entities to uphold their end of the agent- principal relationships stipulated in the assumption of the agency theory; by providing account of stewardship that maximized earnings and shareholders value has resulted into practices that adversely affect social existence of the firm. In recent times, companies in a bid to improve their financial performance have engaged in business practices that have led to global debate about the long term sustainability potential of such financial performance. That is for companies to maximize profits, they engage in activities that adversely affect their physical and social environment (Igbekoyi, 2021) [19].

In the past, companies were evaluated wrongly by magnitude of their output in the area of earnings, return on asset, and return on investment among other. The global business environment in recent times have however changed because of the ecological and social degradation experienced that has led to loss of lives, property and natural habitation (Akinlo & Iredele, 2014) [5]. Stakeholders are now concerned with long-term sustainable economic activities that include corporate social responsibility that will translate to sustainable financial performance.

Some scholars, like Okudo and Ndubuisi (2021) [32] and Van de Velde, Vermeir, and Corten (2018) [46], have found a significant and positive correlation between CSR and financial performance. Mbonu and Amahalu (2021) [26] and Ruf *et al* (2017) [39] have found a significant and negative relationship between CSR and financial performance. Turban and Greening (2016) [44] also discovered a positive correlation, although it was not statistically significant. Likewise, Suchman (2018) [42] found no statistically significant negative relationship. However, numerous studies in the field of corporate social responsibility (CSR) suggest that corporate philanthropy can influence market returns. Additionally, research indicates that a company's financial success can contribute to the promotion of CSR. Furthermore, several research papers (Blasi *et al*., 2018 [9];

Suteja (2016) [43] have emphasized the ability of CSR to help grow a firm's financial efficiency and market stability. Cheung *et al*. (2010) [11] and Ihan-Nas *et al*. (2015) [20] have submitted that firms that have a good CSR approach are bound to have higher returns.

Companies' activities can be examined to gain insight into the societal responsibilities a company holds and how they impact its financial accomplishments. When a company participates in corporate social responsibility (CSR) endeavors to enhance its financial performance, it can assess its potential contribution to CSR initiatives. Hence, it becomes imperative to conduct a Granger causality test on the variables to ascertain the influence of companies' endeavors to improve financial performance on the social and environmental aspects, as well as vice versa. The granger causality and co-integration tests will show the causal relationships and the long run effects of the variables.

In a country such as Nigeria, where the government does not fulfill basic needs, it is important to find effective solutions to social problems. Corporate social responsibility (CSR) initiatives by companies can play a significant role in addressing these issues (Igbekoyi, 2017) [18].

This study's objective is to examine the influence of community relations, employee's relations and environmental relations on financial performance of listed consumer good companies in Nigeria. This study covered the review and presentation of relevant literature in section two. The third and fourth sections focused on the methods for collecting, analyzing the data, and interpreting the results. The final section consists of the conclusion and recommendations.

2. Materials and Methods

2.1. Conceptual Review

2.1.1. Corporate Social Responsibility (CSR)

CSR has been considered in academic literature as an important field for comprehending the connection between companies and their stakeholders. Since its inception, many individuals and organizations, including investors, corporations, consumers, and academics, have assessed the choices made by businesses to partake in corporate social responsibility endeavors (Akinlo & Irede, 2014) [5].

CSR concepts has been a focus to both the academic community and the professional class. However, it has been noted that the majority of studies in this field have defined social responsibility primarily as the connection between a company and its immediate surroundings (Akinlo & Iredele, 2014) [5]. However, this study broadens the focus in accordance with Lo and Sheu (2010) [22] submission, which claimed that companies that practice CSR benefits a long-term stakeholder management relationships as adopted by Maloney and Roberts (2007) [25] in a study conducted on social and environmental performance was adopted. The study used variables such as community relations, employee relations and environmental relation to explain corporate social relationships.

2.1.1.a. Community Relation

Community relations (CR) is the process of creating vibrant, long-lasting communities based on communication, feedback, and consideration of social justice and respect for others. Getting rid of the obstacles that hinder people from being involved in the decisions that influence their life requires altering the systems of power (Ajide, 2018) [4]. When comparing economic development and community relations, it becomes clear that they differ in terms of their focus and approach. Economic development involves promoting a community's potential for growth and then actively pursuing opportunities, while community relations involve the collective processes, plans, strategies, and activities of a community. The strategies used in community relations are aimed at addressing, organizing, and building the local social infrastructure. According to Olonite *et al*. (2021) [33], the corporate social responsibility (CSR) can be adopted inform of a public-private-partnership (PPP) for economic growth and development.

The community anticipates that the corporation will support projects to enhance healthcare, donate to charities, assist children's education, create employment opportunities for people with disabilities, and take part in programs to certify workers (Adediran, 2018) [1]. CSR initiatives are mostly focused on preventing human rights violations, reducing poverty, and preserving the environment. According to Ajide, (2018) [4], the expectations of society and organizations, however, are different; whereas corporate organizations aim to maximize profit, customers demand high-quality, safe, reasonably priced, and a wide range of services. If not carefully addressed, this discrepancy puts pressure on business organizations, which could lead to operational interruptions. Allocating more money for community development, nevertheless, may lead to conflicts with groups, even when businesses engage in excellent CSR practices like charity and social investment Ruf *et al*. (2017) [39].

2.1.1.b. Employee Relation

The ability of an organization to uphold favorable employee relations is crucial for its success. High productivity and human satisfaction depend on healthy workplace relationships. Employee relations typically focuses on mitigating and finding solutions to workplace issues that arise from or affect individuals. A safe and healthy workplace, complete commitment from all employees, and incentives for employee motivation are all necessary for good employee relations and efficient communication mechanism in the company. Healthy workplace relationships provide more effective, motivated, and productive workers, which in turn increases output (Robinson, 2019) [38].

The pressing issue for most companies at present is the necessity to enhance staff productivity. It is widely believed that altering the way employee relations are managed is the sole approach to achieve this increase in productivity. Changes are seen necessary in the way that work is organized and structured as well as in how personnel are paid, instructed, and motivated. Additionally, it is claimed that these modifications are inextricably linked to the requirement to restructure our system of interest representation and dispute resolution. When management tries to improve the competitive performance of their organizations by giving employees a voice, industrial relations, trade union activities and staff incentive will Corresponding increased firms financial performance.

2.1.1.c. Environmental Relation

Stakeholders believe that the prevalence of environmental relation activities will increase corporate costs and make it impossible to make profits in the near future (Rivera & Oh, 2013) [37]. However, if ER can be well managed, the business can use it as a kind of competitive advantage in the market since ER can foster a positive reputation, which will have an effect in the form of raising firm value. Investing in environmentally friendly initiatives has a positive impact on long-term profitability. This occurs because there is a mutual correlation in which financially successful companies tend to prioritize investing in CSR initiatives from the start, and then witness even greater performance improvement as a result of these investments (Galant & Cadez, 2017) [15].

Yakhou and Dorweiler (2003) [47] state that environmental accounting is a wide-ranging field that encompasses various aspects. It provides reports that can be used internally and externally, presenting environmental data to aid in decision-making related to pricing, overhead management, and capital planning. Additionally, it also discloses relevant environmental information to the general public and the financial sector. In Nigeria, sustainable development rests on three interconnected foundations: economic growth, social progress, and safeguarding the environment. ER enables organizations to track and evaluate their environmental data and greenhouse gas emissions, and subsequently compare them against predefined reduction targets. Additionally, it streamlines the process of reporting on environmental matters by offering inclusive, verifiable, and punctual sustainability-related data.

2.1.2. Financial Performance

This is an assessment of the organization's economic state and overall financial well-being during a specific time frame. This evaluation involves determining the extent to which financial objectives have been met and measuring the financial value of the company's strategies and activities (Mbonu & Amahalu, 2021) [26]. Decision-makers analyze the overall gains and losses over a given period to objectively evaluate the effectiveness of business strategies and actions (Amahalu, *et al*., 2020) [7]. The financial performance is a measure of firm's health and growth.

Various stakeholders have distinct methods of assessing an organization's financial performance. When a company is profitable, managers typically view it as running efficiently. Customers, on the other hand, prioritize purchasing from profitable businesses that offer high-quality products, among other considerations. Shareholders and potential investors are primarily concerned with receiving dividends and achieving wealth maximization (Adeneye *et al*., 2015) [3]. As stated by Rahman *et al*. (2011) [34], financial performance pertains to the capacity of an organization to generate profits through its diverse business endeavors. A company's financial performance significantly impacts its CSR initiatives.

2.1.3. Corporate Social Responsibility and Financial Performance: Stakeholders generally acknowledge that CSR influences company's financial standing. However, the level of relationship between CSR and companies' performance has drawn lots of debate. Numerous studies have failed to find evidence supporting the existence of a reciprocal cause-and-effect relationship (Nelling & Webb, 2009) [29]. Some have suggested a mutual and significant connection. Busch and Friede (2018) [10] discovered evidence that substantiates this association. Additionally, as stated by Lougee and Wallace (2008) [23], the introduction of CSR initiatives has the capacity to improve profitability in the long run. The results from these studies, showed that companies that are growing financially, have engaged in more effective CSR approach. This relationship varies depending on the country, economic framework, and banking activities. In general, it is widely accepted that a company's dedication to CSR initiatives improves the predictability of its earnings and cash flow (García-Sanchez & GarcíaMeca, 2017) [16].

2.1.4. Community Relation and Financial Performance

In the present day, the majority of businesses are integrating community relations into their operations as a means of improving their brand reputation among consumers, ultimately leading to increased sales. Nestle serves as a notable example in this regard. Their tagline, "Good food. Good Life," goes beyond a mere promotional tool, serving as a concise representation of their CSR efforts and highlighting their intention to contribute to public health improvement. Nestle has made 41 public commitments aimed at securing a healthier future and improving overall quality of life, aligning with the United Nations' Sustainable Development Goals. Nestle includes detailed information about their CSR initiatives in their Annual Report each year. The company has been successful in finding a harmonious balance between sustainable growth and efficiency, resulting in long-term value for both shareholders and society overall. The operating profit of Nestle witnessed a growth from 16 percent in 2016 to 17.5 percent in 2017. When a company adopts CSR practices, it ensures that its customers are aware of these efforts. Dangote serves as a prime example, as it has established itself as a leader in environmental initiatives and has maintained this position for several years. CSR demonstrates advantages for both companies and society in general. It improves a company's standing and financial success while also making positive contributions to society. Community relations is a strategic approach employed by corporations to establish and sustain favorable connections with the communities they operate in. It is expected that this relationship will be mutually advantageous, resulting in improved employee morale, community backing, and loyalty.

2.1.5. Employee Relation and Financial Performance

Mohammed *et al* (2008) [28] conducted a historical analysis of employee relations in Algeria. The study, which drew from the authors' years of fieldwork and current interviews with union representatives, was done to analyze a variety of literature on employee relations in Algeria. A conceptual review of prior literatures is conducted in this work. The discovery offers proof that the Algerian system of labor relations is the result of interactions and intersections between historical events and various institutional configurations and arrangements that allowed the state to maintain its grasp on power and control over unions.

In Tanzania, Samwel (2018) [40] conducted a study to analyze how employee relations influence the performance of organizations. The research aims to identify the various strategies employed by small firms in Tanzania for managing employee relationships, as well as exploring the effects of these relations on both organizational and personnel performance. The study involved selecting 387 respondents from various small companies in Tanzania using a stratified random sampling method. The research utilized the cross-sectional research method. The findings of the study demonstrated a strong connection between employee relations and performance. Additionally, the study revealed that small businesses in Tanzania acknowledge the benefits of fostering positive employee relations and employ suitable measures to mitigate negative ones.

2.1.6. Environmental Relation (ER) and Financial Performance: The activities of companies have caused many hazardous pollution like the particulate matter, nitrogen (NOx), led, polycyclic aromatic hydrocarbons (PAHs), ammonia (NH3), metal and ozone (O3) into the air are a great concern for the community. Water pollution caused by consumer goods companies is a significant concern, as it involves the presence of nutrients, dioxins, furans, persistent organic pollutants, and metals such as lead, mercury, and arsenic, which pose significant problems. Various researchers, academics, and experts have conducted empirical studies to investigate the association between the expenses incurred for remediation and the return on assets (ROA). However, these studies have yielded contradictory results. Extensive research and evidence suggest that CSR in terms of environmental concerns is crucial in determining its capability to operate sustainably (Mishra & Suar, 2010) [27]. The industries that incorporate environmentally friendly products experience two distinct types of advantages. Albort-Morant *et al*. (2016) [6] argue that there are financial rewards for conserving the environment and mitigating climate change, benefiting all individuals globally rather than a specific group. Additionally, there is an economic benefit that enhances industry profitability and provides customers with numerous opportunities to utilize eco-friendly products.

2.2. Theoretical Framework

2.2.1. Stakeholder Theory: Professor Edward Freeman initially introduced the stakeholder hypothesis in 1984. The study defines a stakeholder as any entity, whether it is a group, individual, or non-primary figure, that has the ability to impact or be impacted by the actions and objectives of an institution. Furthermore, Nwoba and Udoikah (2016) [30] expanded on this definition by stating that stakeholders encompass a diverse array of individuals and groups with a vested interest in the organization, such as employees, customers, suppliers, governments, investors, and regulators. This theory asserts that businesses owe their stakeholders information disclosure about its activities. The study made the argument that an organization, as a physical creature and a part of society, must constantly be mindful of how its actions affect the environment which could consequently affect the organization performance. He saw organizations as networks of diverse interests, therefore they needed to balance the competing interests of the various stakeholders while also recognizing and respecting their contributions to the business (Kabir & Akinlusi, 2012) [21]. Nigerian stakeholders are not an exception to this rule since they may also have an interest in a company or be impacted by its operations. Research has shown how stakeholder theory is implemented and modified in corporate social responsibility practices. To effectively manage the business's finances, the organization must prioritize voluntary environmental accounting and adopt sustainable practices that benefit all stakeholders involved (Adegbie, *et al*., 2020) [2].

The central idea of the theory is that both individuals and groups are influenced by a company's CSR initiatives, highlighting its relevance to CSR practices. This theory emphasizes the significance of stakeholders' expectations regarding the organization's operations. By translating these expectations into social responsibility actions and implementing them effectively, the organization can enhance its reputation, value, and overall performance (Ayodele 2020) [8]. The stakeholder theory holds significance as it focuses on meeting the legitimate interests of various interdependent groups associated with a company. By prioritizing the satisfaction of these stakeholders, the firm can achieve sustainable financial success.

2.3. Empirical Review: David (2012) [14] conducted a study to explore how the traditional, political, and administrative structures impact the perception of CSR in Niger Delta region. The study employed a quantitative research framework and utilized a case study approach, involving the distribution of questionnaires. By analyzing the collected data through content and contextual analysis, the study evaluated the significance of CSR and the model employed by the petroleum industry in the Niger Delta. The findings indicated that the community's perspective on CSR was influenced by their perception of being underdeveloped and the impact it had on their well-being. This suggests a connection between CSR and the progress of the community.

A research study conducted by Sanni *et al*. (2014) [41] aimed to explore the relationship between corporate social responsibility (CSR) spending and the profitability of Deposit Money Banks (DMBs) in Nigeria. The study utilized financial data from 2007 to 2011 and selected ten out of the twenty-one DMBs currently operating in Nigeria through purposive sampling. The findings derived from correlation and panel data regression analysis revealed that CSR expenditure did not significantly impact the profitability of the banks. Consequently, the researchers recommended that banks should exercise caution when allocating funds to CSR activities to prevent potential risks to their profitability and wealth maximization objectives.

Malik and Nadeem (2014) [24] conducted a study in Pakistan to evaluate the impact of corporate social responsibility (CSR) on the performance of manufacturing companies. The primary objective of the study was to examine the influence of CSR on organizational effectiveness. The research utilized regression analysis to analyze data from both employees and management of 10 manufacturing companies in Pakistan. The study focused on understanding the relationship between CSR and organizational performance. The findings indicated that most manufacturing companies in Pakistan do not have sufficient CSR practices. However, the regression analysis demonstrated a positive correlation between profitability and performance when CSR initiatives are implemented. Based on these results, the study suggests that manufacturing companies in Pakistan should prioritize CSR initiatives to improve their overall performance.

In a more elaborated study by Usman (2015) [45] who conducted a study on the Julius Berger Company in Abuja, Nigeria, which aimed to investigate the relationship between corporate social responsibility (CSR) and community development. The study investigated various aspects such as social motivations, availability of essential social amenities, and benefits provided to community members. Data was collected through a survey spanning a decade, from 2004 to 2014. The research employed the Ordinary Least Square approach and discovered a significant association between community development and corporate social responsibility initiatives.

In a study conducted by Hirigoyen and Poulain (2015) [17], the relationship between corporate social responsibility (CSR) and firm performance was explored. The study analyzed data from 329 publicly listed companies in the United States, Europe, and the Asia-Pacific region between 2009 and 2010. The data was examined using linear regression analysis and the Granger causality test. CSR was assessed by considering various factors including personnel management, adherence to human rights in the workplace, social commitment, environmental awareness, market behavior, and governance. Surprisingly, the findings of the research revealed that an increase in social responsibility not only does not improve performance, but actually has a detrimental impact on corporate social responsibility.

Rini *et al*. (2017) [36] conducted a study to investigate the influence of corporate social responsibility (CSR) on the performance of manufacturing companies. The research was centered on 439 businesses in Central Java that met specific criteria. The researchers utilized the chi-square statistic to test their hypothesis regarding the connection between CSR and manufacturing sector performance. Data was collected through a questionnaire distributed to 173 top managers using a purposive sampling method. The findings indicated that corporate social initiatives, which are an essential component of companies' business strategies, have a notable positive effect on their overall performance in social, environmental, and financial aspects.

The purpose of Cho *et al*. (2019) [12] research was to investigate whether there is a consistent correlation between corporate social responsibility (CSR) and the financial performance of companies. A sample of 191 companies listed on the Korea Exchange was chosen by the researchers. CSR encompasses companies fulfilling their societal obligations, such as financial, ethical, and philanthropic responsibilities.

A company has the potential to attain long-lasting growth by gaining the confidence of the society. In order to examine this connection, correlation and regression analyses were utilized. This research differs from previous studies by investigating various indicators, particularly focusing on analyzing the correlation between the adoption of corporate social responsibility (CSR) and the growth rate of sales revenue. The objective of the study was to evaluate the influence of CSR on the financial performance, productivity, and overall profitability of companies, using the return on assets (ROA) as a measurement. The results indicate that engaging in CSR activities can potentially improve financial performance, although not all CSR activities show a significant impact. Hence, it can be inferred that while CSR performance may positively affect financial performance, the evidence supporting this relationship is limited.

$H_0$1: No relationship exit between employees' relation and return on assets.

$H_0$2: The relationship between community relations and return on assets is negative.

$H_0$3: There is no causal link between environmental relations and return on asset.

To achieve the study's objective, a longitudinal research design was chosen to gather data over a significant period of time. The research sample included nineteen out of the twenty-one consumer goods companies listed on the Nigerian Exchange Group as of December 31, 2022. These nineteen companies were chosen to represent the study period from 2011 to 2021. The data for this research primarily came from secondary sources such as annual reports, accounts, fact books, publications from the Nigeria Exchange Group, and data related to the selected companies and study period. Descriptive statistics and a granger causality test were utilized to analyze the data and examine any potential causal effects.

2.4. Model Specification

The econometric model of the equations is:

Y = β0 + β1x + Є

Where,

β0 = Constant

β1 = Coefficient of the independent variable

Y = Dependent Variable

X = Independent Variable

Є = Error term

This study estimated the following regression equations:

FPit= β0 + β1FPít + β2CSRít + β3EVRít + Єít………equ (i)

CSRít = β0 + β1CSRít + β2FPít + β3EVít + Єít ……equ (ii)

Where,

CSR = Corporate Social Responsibility

FP = Financial Performance

The adapted model is modified to break down the CSR into Three Components

ROAit= β0 + β1ROAít + β2CSRít + β3EMRít ++ β4EVRít + ЄY+Є …………… equ (iii)

CRít, EMRít, EVRít = β0 + β1CRít + β2EMRít + β3EVRít +ROAít+ ЄYit+Єit …… equ (iv)

Where,

ROA = Return on Assets

CR = Community relation

EMR = Employee relation

EVR = Environmental relation

Є = Error term, also called epsilon

í = At a particular time period

t = Time period

3. Results

3.1. Descriptive Statistics

The collected data in the study aimed to examine the distribution of the study variables, which is crucial for maintaining uniformity and efficiency in the model. Based on Table 1, the average returns on assets for companies listed on the Nigeria Stock Exchange stands at 8.3374.However, there is a significant difference in this measurement among different countries, with a standard deviation of 6.74259 and a coefficient of variation of 80 percent. The calculated standard error mean is 0.4663947, indicating a 46 percent difference between the mean of the population and the mean of the sample. The minimum return value for consumer goods firms is 0.0497321, while the maximum return value is 32.22178. The returns on assets data shows a positive skewness with a value of 0.99999, and a leptokurtic kurtosis of 3.25985. Similarly, the average employee relations value for consumer goods companies listed on the Nigeria stock exchange is 0.69846. However, this value varies significantly among countries, with a standard deviation of 0.3053 and a coefficient of variation of 43.7 percent. The average error in the mean is 0.021120, indicating a 2.1 percent variation between the mean of the population and the mean of the sample. The lowest score for employee relations is 0, while the consumer goods company with the highest employee relations has a maximum score of 1. The employee relations data shows a negative skewness of -1.037397 and a leptokurtic kurtosis of 3.124542.

The average community relations value is .687368. This value varies greatly among different countries, with a standard deviation of .27216 and a coefficient of variation of 39.5 percent. The mean standard error is .018825, indicating a difference of 1.8 percent between the population mean and the sample mean. The community relations scores range from 0 to 1, with some companies having the highest score. On the other hand, the employee relations data shows a negative skewness of -.79158 and a kurtosis value of 2.55012. Moving on to environmental relations, the average value is .9537, with a standard deviation of .20798. This suggests a moderate amount of variation, with a coefficient of variation of 21.8 percent. The average standard error is 0.014386, indicating a 1.4 percent disparity between the population mean and the sample mean. The environmental relations scores also range from 0 to 1, with some companies having the highest score. The variable's data exhibits negative skewness with a value of -4.29996 and a kurtosis value of 19.611.

Table 1: Descriptive Statistics

Variables	ROA	EMR	HCR	EVR
Observations	209	209	209	209
Mean	8.337468	0.6984689	0.6873684	0.953748
Std. Dev.	6.74259	0.3053387	0.2721632	0.2079819
c.v	0.8087095	0.4371543	0.3959495	0.2180679
S.E (mean)	0.4663947	0.0211207	0.0188259	0.0143864
Min	0.0497321	0	0	0
Max	32.22178	1	1	1
Skewness	0.9999927	-1.037397	-.7915895	4.299965
Kurtosis	3.259859	3.124542	2.550127	19.61113

***Source*:** Researcher’s Computation (2023)

3.2. Test of Variables

3.2.1. Correlation Matrix of Dependent and Independent Variables

The dependent and explanatory variables were analyzed using the pairwise correlation coefficient. This analysis helped determine if there was multicollinearity among the variables, which could affect the variables' standard error. The results indicate a slight positive relationship between returns on assets and employee relations (EMR), although it is not statistically significant. This suggests that improving employee relations has the potential to increase returns on assets by approximately 10.64% for businesses. The coefficient of 0.1064 and probability value of 0.1253 support this finding. However, based on table 2, community relations (HCR) and returns on assets have a weak and non-significant correlation. Therefore, enhancing community relations may lead to a decrease of 4.77% in profitability for consumer goods companies. This is supported by a coefficient of -0.0477 and a probability value of 0.4929.

Similarly, there is a significant and unfavorable connection between environmental relations (EVR) and returns on assets. This suggests that enhancing environmental relations will result in a 38.28 percent decrease in returns on assets for consumer goods companies. This deduction is supported by a coefficient of -0.3828 and a probability value of 0.0000. There is no statistically significant correlation between the individual explanatory variable, indicating a negative association. However, it is important to note that there is a noteworthy correlation between employee interactions and community engagement. Furthermore, all relationships show no signs of multicollinearity, as they fall below the expected threshold of 0.7.

Table 2: Correlation Analysis of Study Variables

	OBS	ROA	EMR	HCR	EVR
ROA	209	1.0000			
EMR	209	(0.1064)	1.0000		
		(0.1253)			
HCR	209	-0.0477	0.3921*	1.0000	
		(0.0018)	(0.0000)		
EVR	209	-0.3828*	-0.0036	- 0.0332	1.000
		(0.0)	(0.9585)	(0.6328)	

***Source*:** Researchers’ Computation (2023). * 5 percent; ** 10 percent

3.2.2. Normality Test

The linear model assumes that the data distribution is normal in order to ensure accurate p-values for the t-test and F-test. However, it is observed from the descriptive statistics that certain variables in the study data do not follow a normal distribution. Nonetheless, this is not a significant concern as long as the residuals are distributed identically and independently. The normality of the residuals was evaluated using the Shapiro Wilks test of normality, and the findings are displayed in table 3. As the values in the table are below 0.05 at a significance level of 5%, we can deduce that the null hypothesis, which assumes a normal distribution of the data across the models, will be rejected. Consequently, it can be inferred that the residuals of the models exhibit an unconventional distribution.

Table 3: Shapiro-Wilk W Test for Data Normality

Variables	Obs	W	V	z	Prob>z
Residuals	209	0.55127	69.561	9.782	0.00000

Source: Researchers' Computation (2023)

3.2.3. Multicollinearity Test

Multicollinearity tests are performed post-estimation to validate the validity of the regression model's assumption. Multicollinearity arises when there is a strong association between two or more explanatory variables, suggesting that one can effectively forecast the others through linear techniques. Variance Inflation Factor was employed to assess the level of correlation between the variables. If the outcome does not indicate any significance, it can be inferred that there is multicollinearity. This is because both the variance inflation factor and tolerance values surpass the commonly agreed-upon guideline.

According to the data provided in Table 4, it can be inferred that there is no issue of multi-collinearity. This inference is drawn from the observation that all variables have VIF values below 10 and tolerance values above 0.10, which are deemed acceptable. Consequently, the research can confidently employ regression coefficients to forecast the influence of independent variables on dependent variables, and the dependability of the outcomes can be regarded as reliable.

Table 4: Tolerance and VIF Value

Variable	VIF	1/VIF
HCR	1.18	0.845239
EMR	1.18	0.846162
EVR	1.00	0.998791
Mean VIF	1.12	

Source: Researchers' Computation (2022)

3.2.4. Test for Heteroskedasticity and Auto-Correlation

The Heteroskedasticity test was performed to assess whether the assumption of homoscedasticity, which assumes that the variance in the residuals remains constant, is valid. If homoscedasticity is not present, it can invalidate the assumption and potentially result in inaccurate conclusions. The study used the Breusch-Pagan/Cook-Weisberg test to examine heteroscedasticity and the Wooldridge test to investigate autocorrelation in the panel data. In table 5, the Breusch-Pagan test was used to assess heteroskedasticity in the specified model. The test results indicate that heteroskedasticity is not present, as the probability value of 0.8689 is higher than the expected 0.05. This suggests that the error term does not consistently vary across the residuals. Additionally, the probability of autocorrelation is statistically significant at a 5 percent level, with a p-value of 0.0004, which implies the presence of first-order correlation.

Table 5: Test for Heteroscedasticity and Auto-Correlation

Heteroskedasticity		Auto-correlation	
chi2 (1)	= 0.03	F(1, 18)	=18.888
Prob > chi2	= 0.8689	Prob > F	=0.0004

Source: Researchers' Computation (2023)

The results of the cross-sectional dependence test are shown in table 6. The findings provide strong support for the null hypothesis, indicating the absence of cross-sectional dependence. This is evident from the probability value of 0.0872 and the average absolute correlation of the residuals, measured using the abs parameter, which indicates a moderate level of correlation at 0.390. Therefore, based on substantial evidence, it can be concluded that there is no observable connection between social relations and returns on assets when fixed effects are taken into consideration.

Table 6: Pesaran's test of Cross Sectional Independence

Null Hypothesis	Statistics	Probability
No cross-sectional dependence (*p*>0.05)	1.710	0.0872
Average absolute value o the off-diagonal elements	0.390	

Source: Researcher's Computation (2023).

3.2.5. Panel Unit Root

The initial level of panel variables often exhibits non-stationarity, which can affect the stability and consistency of the model's parameters. This study utilizes the Levin, Lin & Chu t* and Im-Pesaran-Shin unit-root tests to identify the stable conditions of the variables. The unit root test assumes that all panels have unit roots as the null hypothesis, while also considering the alternative hypothesis that some panels are stationary. The results of the unit root tests, presented in Table 7, show that all variables have an integration order of either zero or one (0). As a result, there is no need to perform a co-integration test to determine the long-term relationship between the variables. By using the panel least square method, a reliable model can be accurately estimated with a reduced likelihood of generating inaccurate outcomes.

Table 7: Panel Unit Root Test

Variable	Levin, Lin & Chu t*		Im-Pesaran-Shin unit-root test	
	test-statistics	P-value	Z-statistics	P-value
Returns on Assets	--5.7015	0.0000	-2.8031	0.0025
HCR	-2.8610	0.0021	-3.8020	0.0001
EMR	-4.2803	0.0000	-2.4894	0.0064
EVR	-7.8391	0.0000	-4.2161	0.0000

Source: Researchers' Computations (2023).

3.3 Causal Effect of Corporate Social Responsibility on Financial Performance

The method proposed by Granger in 1969 has different specifications. To mitigate the bias resulting from subtracting the mean values of Y and the coefficient estimate's bias, the study utilizes the Half Panel Jackknife method in the Granger non-causality tests specifically for panel datasets. This involves comparing the maximum-likelihood estimates obtained from the entire panel with those obtained from sub-panel blocks with fewer observations. The purpose of using the Granger non-causality test is to determine if higher returns on assets are associated with better community relations, employee relations, and environmental relations. To ensure accurate results and prevent biases, the analysis includes cross-sectional heteroskedasticity robust standard errors in the equation model. The findings are displayed in table 9.

The overall findings indicate that the social relations measures have a significant impact on returns on assets as submitted by the significant p-value of 0.0000. Moreover, the analysis also includes regression results related to the HPJ bias-corrected pooled estimator. According to the BIC criterion, selecting two years as the number of lags for the model is deemed the most appropriate as it exhibits the lowest BIC score compared to the other available models. (BIC = 284.08942*). This means that, the effect of social relations on returns on assets is almost immediate hence the reason for using two year lag of returns on assets which the techniques chose to be the lowest unexplained variance. The outcome indicates that host community relations (HCR) is a valuable factor for predicting asset returns with a two-lag timeframe, as it is highly significant with a p value of 0.000. However, it should be noted that the corresponding coefficient has a negative sign, indicating that an increase in host community relations is associated with a subsequent decrease in asset returns.

Similarly, according to table 9, it is evident that employee relations does not have a causal relationship with returns on assets, as it holds no significance with a probability value of 0.764. Furthermore, the data presented in the table indicates that environmental relations possess a z-statistic of -2.87 and a P-value of 0.004, suggesting its potential impact on asset returns. This is because environmental relations are partially responsible for social relations, and the extent to which returns on assets depend on social relations can be partially or entirely determined by these environmental factors. According to the findings mentioned above, it can be concluded that the null hypothesis, which states that social relations have no impact on financial performance, has been proven false.

The study's results validate previous research conducted by Okafor (2018) [31], indicating that improving environmental performance positively affects a company's financial value. In a study carried out by Rimi *et al*. (2017) [35], 439 manufacturing companies were involved, and their results also provide evidence for the connection between corporate social responsibility and financial performance. The study revealed that corporate social initiatives, integrated into a company's business strategy, significantly contribute to a more successful operation and result in positive financial outcomes. The study conducted by Dagwon *et al* (2014) [13] supports our research that examines the influence of CSR on community relationships in Nigeria. It concludes that CSR initiatives have a meaningful and favorable influence on the value of companies.

Table 8: Granger non-causality test results

Ho: Selected covariates do not Grander-cause returns on assets						
BIC selection						
Lags = 1, BIC = 367.02685		Number of units = 19		T		= 9
Lags = 2, BIC = 284.08942*		Number of lags = 2r		BIC		= 234.08942
PJ Wald test: 30.066991		P-value_HPJ: 0.0000				
Result for the Half-Panel Jackknife estimator						
Coef. Std. Err. Z P>IzI [95% Conf. Interval]						
Community Relations						
LI.	3.019591	2.151438	1.40	0.160	-1.19715	7.236332
L2.	-7.90467	2.17845	-3.63	0.000	-12.17435	-3.634986
Employee Relations						
LI.	-2.835006	1.130702	-2.51	0.012	-5.051141	-.6188717
L2.	.3499998	1.167290	.30	0.764	-1.937847	2.637847
Environmental Relations						
L1	.0149475	10.37595	0.00	0.999	-20.32155	20.35144
L2	-2811186	9.798763	-2.87	0.004	-47.31708	-8.906637

Source: Author's Statistical Computation (2023).

3.4. Policy Implication of Findings

The implication of this findings should motivate management of companies in reviewing the companies CSR activities by prescribing high level of social relations through extensive community relations and commitment to environmental relations. This is because social relations have good influence on firm performance as revealed by the study and this is in tandem with the assumption of stakeholders' theory earlier discussed which presents the fact that business owe their stakeholders' that are individuals or groups accountability. This could be done by creating value for all the stakeholders through social relations as the study made the argument that an organization, as a part of the society, must constantly be mindful of how its actions affect the relevant stakeholders including the environment and community especially. A lack of community relations and environmental relations might cause a poor financial performance while good financial performance will arises in an effective social relations. Hence, it is implied that stakeholders' management of consumer goods firm will earn them improvement in their social relations which is a function of financial performance and vice versa. Also, regulatory agencies can make the Nigeria capital market more efficient through improved performance of firms that will translate to investors wealth and attractive for investors by making policies that will encourage better relations.

4. Conclusion

This research study was conducted to examine how corporate social responsibility affects the financial performance of consumer goods companies in Nigeria. The findings reveal that corporate social responsibility significantly affects a company's returns on assets and overall financial performance. The results suggest that establishing strong ties with the community and environment can improve a company's financial outcomes. However, the impact of employee relationships on financial performance is either neutral or possibly negative.

5. Recommendations

The following recommendations were suggested:

1. Firms must continue to invest in CSR because of long run effect it will have on the company public image. The positive causal effect of employee relations showed that good employee relation is an influencer of firm financial performance.
2. Firms should improve on its sustainable labour practice to experience significant effect on its financial performance and align with global best practice.
3. Organizations should embrace environmental sustainability practice in contribution to CSR because of its long run effect on the economic advantages of the companies.

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