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SUSTAINABILITY ACCOUNTING AND STOCK PERFORMANCE OF QUOTED CONSUMER GOODS MANUFACTURING FIRMS

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ABSTRACT

The broad objective of the paper is to evaluate the effect of sustainability accounting on stock performance of quoted consumer goods manufacturing firms in Nigeria. The study utilized the ex-post facto research design. The sample comprised twenty two quoted consumer goods manufacturing firms on the Nigerian Stock Exchange. The study relied on secondary data obtained from annual report and accounts from 2011 to 2018. The proxy for sustainability accounting was measured with social and economic measures while stock performance was measured using share prices and earnings per share. The hypotheses were tested using Ordinary Least Square (OLS) regression at 5 per cent significance level. The results revealed that proxies of sustainability accounting had a significant effect on share prices and earnings per share at 5%. The study recommended amongst others that to the issue of sustainability accounting should be part of the corporate mission and strategy statements and not just be regarded as a philanthropic exercise. Policy makers are further encouraged to develop standards to gauge social responsibility disclosure and performance.

Keywords: Sustainability Accounting, Share Price, Earnings per Share.

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1. Introduction

In recent times, sustainability has become an issue of major concern around the globe. Sustainability entails meeting the needs of the present generation without compromising the ability of future generations to meet their own needs, (Brundtland, 1987 as cited in Akabom, Dada, & Onyeogaziri, 2018). Sustainability Accounting or triple bottom line was first coined in 1994 by John, the founder of a British Consultancy called Sustain-Ability (Elkington, 1997, 2004). His argument was that companies should be preparing three different (and quite separate) bottom lines. One is the traditional measure of corporate profit. The "Bottom-line" of the profit and loss account. The second is the bottom line of a company's "People account" - a measure in some shape or form of how socially responsible an organization has been throughout its operations. The third is the bottom line of the company's "Planet" account - measure of how environmentally responsible it has been. The triple bottom line or sustainability accounting consists of three 'Ps' profit, people and planet. It aims to measure the financial, social and environmental performance of the business entity over a period of time.

Investors have also continued to increase demand for non-financial information one of which is a company's sustainability report. Firms all over the world are increasingly being challenged to expand their financial reportage to include both those targeted at profiteering as well as social efforts being made to improve the environment. According to Nnamani and Onyekwelu (2017) firms are also often challenged to increase their shareholders stake which is often achieved through profiteering. In view of this, accounting, as well as financial scholars who advocate sustainability reporting, have argued that firms that have entrenched and availed the public of their sustainability activities have positive performance indices well and above those who have not integrated sustainability reporting. Against this backdrop, the study evaluated the effect of sustainability accounting on the stock performance of quoted consumer goods manufacturing firms in Nigeria.

Based on these, the study formulates the following hypotheses in the null form as follows:

H_1: Social measures do not significantly affect the share price of quoted consumer goods manufacturing firms.

H_2: There is no significant relationship between economic measures and earnings per share of quoted consumer goods manufacturing firms.

2. Review of Related Literature

2.1 Conceptual Framework

2.1.1 Sustainability Accounting

Sustainability disclosure broadly refers to information regarding a company's activities, ambitions, attitudes and public image in relation to environmental, community, employee and consumer issues. It is a broad term that is generally used to describe a company's reporting on its economic, environmental and social performance and can be used interchangeably with sustainability reporting. The European Commission (2001) sees sustainability as a concept which makes companies decide voluntarily to contribute to a better society and a cleaner environment by integrating social and environmental concerns in their business operations and in their interaction with their stakeholders. Elkington (1997) describes a form of sustainability accounting referred to as triple bottom line (TBL), which aims to report on an organization's economic, social and environmental impacts. Underpinning TBL accounting is the evolving three dimensional definition of sustainable development captured under *social, environmental and economic measures* (Van den Bergh, 1996; WCED, 1987; Westing, 1996).

2.1.2 Social Disclosure

The social dimension of sustainability concerns the impacts an organization has on the social systems within which it operates (GRI, 2011). It is one of the three pillars of sustainability, with a focus on people, their needs and desires. It can be said to be an important aspect because it deals with issues such as social responsibility, labor right, community development and the likes. Organizations need to get involved in this aspect of sustainability in order to provide a good quality of life for its employees and within the community in which it operates particularly those of less fortunate. Social disclosure can be for internal parties, such as the company is required to pay attention to employee health and safety, equality opportunity in competition between male and female employees, and human rights aspects. Meanwhile, to external parties, the company is required to promote anti-corruption policies, anti-competitive and monopolistic practices that can harm the stakeholders and labeling products for the health and safety of customers (Caesaria & Basuki, 2017).

Social sustainability can be achieved by putting into consideration employees' welfare (clean and safe working condition, health and fair working wage) and that of the people in the social environment. Generally, it refers to conducting beneficial and fair business practices to the labour, human capital, and to the community (Elkington, 1997).

2.1.3 Environmental Disclosure

The environmental dimension of sustainability concerns an organization's impacts on living and non-living natural systems, including ecosystems, land, air, and water. Environmental indicators cover performance related to inputs (e.g., material, energy, water) and outputs (e.g., emissions, effluents, waste). Other areas addressed include performance related to biodiversity, environmental compliance, and other relevant information such as environmental expenditure and the impacts of products and services (GRI, 2011). The use of input and output generated by the company triggers a variety of environmental problems (Caesaria & Basuki, 2017). Previously, financial reports were mainly concerned on the financial aspect of operation, which provided investors with insight on the historical performance on key financial indicators but an organization concern for the environment in which it operates exist has led to the emergence of environmental disclosure to account for human and industrial impact on the environment in addition to financial performance reporting.

Since the aim of an organization is to promote and satisfy the interest of stakeholders (Massie, 2015), environmental disclosure is an extension of financial reporting to include a wider community of stakeholders like the environmentalists, non-governmental organizations, immediate communities and the likes (Ayoola, 2017). Environmental reporting is an aspect of sustainability reporting which focuses on the effect that the organization has on the natural environment and the effect of the environment on the organization. It is a process of identifying and disclosing environmental-related cost, cost and benefits arising from the process of production (Ayoola, 2017). Environmental sustainability disclosure is the production of both narrative and numerical information, on the organization's impact on the environment.

Narrative information disclosed in financial report as regards environmental sustainability reporting can be used to convey objectives, explanations, aspirations, reason for failure against previous year's targets, addressing specific stakeholders concern and many more. Numerical information on, the other hand, discloses report on those measures that can usefully and meaningfully be conveyed such as pollution, resources consumed and land used (Association of Chartered Certified Accountants [ACCA], 2015). In all, companies are required to prevent, minimized and repair damages (as a result of their inputs and outputs) as a form of concern and responsibility to the environment. The environmental measure refers to engaging in practices that do not compromise the environmental resources for future generations. It pertains to the efficient use of energy recourses, reducing greenhouse gas emissions and minimizing the ecological footprint, etc. (Goel, 2010).

2.1.4 Economic Disclosure

The economic dimension of sustainability concerns the organization's impacts on the economic conditions of its stakeholders and on economic systems at local, national, and global levels (GRI, 2011). Economic indicators illustrate the flow of capital among different stakeholders; and, the main economic impacts of the organization throughout society (GRI, 2011). According to Reddy and Thomson (2015), 'economic sustainability is inextricably linked to both environmental and social sustainability and this is demonstrated by the limits to growth'. This implies that economies will not be sustained if natural resources are used beyond limits and society still holding on to the past occurrences to grow.

The disclosure of these aspects can prove the company's contribution to the economic development of local communities (Caesaria & Basuki, 2017). The economic measure generally pertains to the impact of the organization's business practices on the economic system (Elkington, 1997). It pertains to the capability of the economy as one of the subsystems of sustainability to survive and evolve into the future in order to support future generations (Spangenberg, 2005).

2.2 Stock Performance

Stock performance indices are items used for evaluating the returns to stockholders in an organization. The stock performance indices adopted and reviewed for this study are explained below:

1. *Earnings per Share:* This is the ratio of the profit after tax of a company for any financial year after payment of preference dividend to the equity shareholders who are the sole claimants to the net earnings of the corporation after making payment of dividend to the preference shareholders. The term earnings per share (EPS) represents the portion of a company's earnings, net of taxes and preferred stock dividends, that is allocated to each share of common stock. Earnings per share serve as an indicator of a company's profitability.

   Calculated as: EPS = (Net Income –Preferred Dividend) / Average Outstanding Shares

2. *Share Price*: According to economic theory, the price of any asset is usually determined by the market forces. However, a number of empirical studies have been conducted on the determinants of stock prices. Some of these studies looked at the relationship between stock prices and the factors that could affect it (Kang & Stulz, 2000). In their study, they examined determinant of firm stock price performance from 1990 to 1993 in Japan. During that period, the typical firm of the Tokyo stock Exchange lost more than half of its value and banks experienced severe adverse stocks. They observed that firms whose debt had a higher fraction of bank loans in 1989 performed worse 1990 to 1993. This effect is statistical as well as economically significant and holds when we control for a variety of variables that affect performance during this period.

2.3 Empirical Review

A number of studies have been advanced on corporate sustainability accounting; some of the studies are reviewed.

Aman, Ismail, and Bakar (2015) conducted a study titled “Corporate sustainability reporting: Malaysian evidence”. They employed regression in analysing the secondary data utilized in the study. Their result shows a significant association between government ownership structure and the level of sustainability reporting among listed firms in Malaysia. It also indicated that industry is significant in explaining the variability in CSR.

Guo and Yang (2014) examined the development of sustainability accounting and reporting in practice, and to observe the reporting patterns and standards followed through a survey on reporting frameworks of U.S. large companies (Dow-Jones 30 companies). A survey research design was used. Data was analysed using mean simple average. The results reveal the existence of an increasing trend of sustainability reporting among large publicly traded firms, which is suggested by prior accounting research.

Adams, Thornton, and Sepehri (2012) examined the impact of sustainability pursuit on financial performance of a firm. They explored how companies define sustainability, how they manage it, why they engage in activities related to sustainability, and how they assess as well as communicate this engagement. They concluded that sustainability still remains a "hot topic" in the business round table.

3. Design and Methodology

The study adopted the ex-post facto research design. The study used purposive sampling technique and the sampling frame restricted to firms in the Consumer Goods Sector of the Nigerian Stock Exchange. The study used secondary sources of data; obtained from annual reports and accounts of the selected companies downloaded from their individual websites from 2011 to 2018. Annual reports and accounts are easily accessible (Unerman, 2000); and, significant issues and concerns of a firm are expressed comprehensively through the annual report (Abeysekera & Guthrie, 2005).

Table 1: List of consumers goods manufacturing companies

S/No	Name of company
1.	DN Tyre & Rubber Plc.
2.	Champion Breweries Plc.
3.	Golden Guinea Breweries Plc.
4.	International Breweries Plc.
5.	Nigerian Breweries Plc.
6.	7-up Bottling Company Plc.
7.	Dangote Flour Mills Plc.
8.	Dangote Sugar Refinery Plc.
9.	Flour Mills Nigeria Plc.
10.	Honeywell Flour Mill Plc.
11.	Guinness Nigeria Plc.
12.	N. Nigeria Flour Mills Plc.
13.	Union Dicon Salt Plc.
14.	Cadbury Nigeria Plc.
15.	Nestle Nigeria Plc.
16.	Nigerian Enamelware Plc.
17.	Vitafoam Nigeria Plc.
18.	P.Z. Cussons Nigeria Plc.
19.	Unilever Nigeria Plc.
20.	McNichols Plc.
21.	Nascon Allied Industries Plc.
22.	Multi-Trex Integrated Nig. Ltd

Source: Nigerian Stock Exchange Website (2018)

3.1 Methods of Data Analysis

The study employed multiple regression technique. The data obtained from the annual reports and accounts possessed both time series and cross sectional properties which gave rise to a panel data. Panel data structure: 22 companies, 8 years (2011-2018), 6 variables. The study employed Ordinary Least Squares (OLS) in validating the hypotheses. All statistical analysis was conducted using SPSS version 23.

3.2 Model Specification

The following empirical models were tested in the study:

$SP_{it} = \alpha + X_{1it} + Size_{it} + Leverage_{it} + \mu$ …………………….. (1)

$EPS_{it} = \alpha + X_{2it} + Size_{it} + Leverage_{it} + \mu$ ……………………. (2)

Table 2: Description of Variables

Label	Proxy	Variable type	Measurement
X_1	Social disclosure	Independent	This was measured using content analysis. The dimensions considered are labour practices, human rights and relationship with communities within which it operates. The items are scored one or zero based on the presence or absence of the disclosure item (Uwuigbe & Uadiale, 2011).
X_2	Economic disclosure	Independent	Economic disclosure was proxied using Return on Equity (ROE). This is a Profitability Ratio, measured as *Net Profit/Equity* (Yadiati, 2017).
EPS	Earnings per Share	Dependent	Measured as the ratio of earnings after tax and average equity.
SP	Share Price	Dependent	Measured as the closing share price of company *i* at time *t*.
Size	Firm Size	Control	This is measured as the log of average assets of company *i* at time *t* (Madhushani & Kawshala, 2018)
Leverage	Leverage	Control	This is measured as the ratio of debt to equity of company *i* at time *t* (Madhushani & Kawshala, 2018)

Source: Author's Compilation, 2019

4. Data Presentation and Results

4.1 Descriptive Statistics

Table 3: Descriptive statistics of independent and control variables

	Minimum	Maximum	Mean	Std. Deviation
X_1	0	1	.73	.447
X_2	-6.2472	67.0884	3.840964	10.5458715
Firm Size	7.93	11.77	10.5144	.94091
Leverage	-2.04190	29.30641	.7049978	2.98890853

Source: SPSS ver. 23

X_1 the proxy for social measure showed a mean value of 0.730 and a standard deviation of 0.447; and, X_2 the proxy for economic measure showed a mean value of 3.841 and a standard deviation of 10.546. Firm size calculated as the natural logarithm of average asset shows a mean value of 10.514 and a standard deviation of 0.941. Finally, Leverage as a control variable shows a mean value of 0.705 and a standard deviation of 2.999.

4.2 Test of Hypotheses

4.2.1 Test of Hypothesis One

Ho_1: Social measures do not significantly affect share price of quoted consumer goods manufacturing firms.

Table 4: Model summary for hypothesis one

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.362[a]	.131	.125	400.59530361

a. Predictors: (Constant), Size, Leverage, X_1
Source: SPSS ver. 23

Table 5: ANOVA output for hypothesis one

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2027687.543	3	675895.848	4.212	.007[b]
	Residual	27601974.731	172	160476.597		
	Total	29629662.274	175			

a. Dependent Variable: Share Price
b. Predictors: (Constant), Size, Leverage, X_1
Source: SPSS ver. 23

Table 6: Coefficients of model one

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	579.220	495.328		1.169	.244
	X_1	363.453	113.348	.395	3.207	.002
	Leverage	-13.090	10.374	-.095	-1.262	.209
	Size	88.047	53.034	.201	1.660	.099

Source: SPSS ver. 23

The result from table 4 showed that the Adjusted R-squared value for the model is .125, thus, the independent variables explain 12.5% variation in the dependent variable, i.e., share price. Table 5 indicate that the overall regression model is statistically significant, since the p-value of the F statistic (4.212) is less than 0.05. Table 6 above depicts that there is a positive effect of social measure (X_1) on share price of consumer goods manufacturing firms. The *t* statistic was 3.207; and, the probability value p = 0.002 which is less than the critical-value (0.05). Therefore, the null hypothesis is rejected and the alternate accepted, the study concludes that social measures significantly affect share price of quoted consumer goods manufacturing firms in Nigeria.

4.2.2 Test of Hypothesis Two

Ho$_2$: There is no significant relationship between economic measures and earnings per share of quoted consumer goods manufacturing firms.

Table 7: Model summary for hypothesis two

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
2	.489[a]	.239	.218	1.39267432

a. Predictors: (Constant), Size, Leverage, X_2
Source: SPSS ver. 23

Table 8: ANOVA output for hypothesis two

Model		Sum of Squares	df	Mean Square	F	Sig.
2	Regression	18.284	3	6.095	3.142	.027[b]
	Residual	333.601	172	1.940		
	Total	351.886	175			

a. Dependent Variable: EPS
b. Predictors: (Constant), Size, Leverage, X_2
Source: SPSS ver. 23

Table 9: Coefficients of model two

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.734	1.193		1.453	.148
	X_2	.029	.010	.218	2.914	.004
	Leverage	-.004	.035	-.009	-.114	.909
	Size	-.142	.113	-.094	-1.257	.212

a. Dependent Variable: EPS
Source: SPSS ver. 23

The result from table 7 showed that the Adjusted R-squared value for the model is .218, thus, the independent variables explain 21.8% variation in the dependent variable, i.e., EPS. Table 8 indicates that the overall regression model is statistically significant since the p-value of the F statistic (3.142) is less than 0.05. Table 9 above depicts that there is a positive effect of economic measure (X_2) on Earnings per Share of consumer goods manufacturing firms. The *t* statistic was 2.914; and, the probability value $p = 0.004$ is less than the critical-value (0.05). Therefore, the null hypothesis is rejected and the alternate accepted, the study concludes that economic measures significantly affect Earnings per Share of quoted consumer goods manufacturing firms in Nigeria.

4.3 Discussion of Findings

The study focused on the effect of sustainability accounting on the stock performance of quoted consumer goods manufacturing firms on the Nigerian Stock Exchange. The analytical results revealed that social measures have significant effect on share price of quoted consumer goods firms. The study also found a significant relationship between economic measures and Earnings per Share of consumer goods manufacturing firms. The findings are in line with studies by Guo and Yang (2014) and Zainab, Sarifah and Bakar (2015). In contrast, the study by Morhardt, Baird, and Freeman (2002) found an unclear result as to the effect of environmental and social improvements on performance of firms.

5. Conclusion and Recommendations

The study concludes that sustainability accounting has a significant effect on stock performance proxied via share price and earnings per share. Conclusively, the demands of corporate social responsibility have emerged as a modern concern for corporations desiring sustainable development, this requirement demands that corporations look beyond their economic performance to areas previously considered non-managerial. This move has necessitated that corporations develop and adopt systems to identify, measure and manage the effect of their sustainability accounting performance areas. Based on the findings the following recommendations were made;

1. To ensure its successful performance, the issue of sustainability accounting should be part of the corporate mission and strategy statements and not just be regarded as a philanthropic exercise; also, Policymakers and standard setters are encouraged to develop standards to gauge social responsibility disclosure and performance;
2. Shareholders should advise management in their regular meetings to critically and extensively look into sustainability accounting (environmental protection) as it affects such organisations since there is a strong positive relationship between economic measures and share prices on organisations in Nigeria.

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