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Sustainability reporting and firms financial performance (A study of selected manufacturing firms)

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Abstract

This paper examined the impact of Sustainability Reporting on Corporate Financial Performance of Selected Quoted Companies in Nigeria. The specific objectives are: to ascertain the impact of sustainability reporting on return on assets, return on equity and earnings per share of companies listed on the Nigerian Stock Exchange. This study employed ex-post facto research design. Data used for the study were sourced from annual reports and financial statements of the companies used in the study for the period 2006 to 2015. The sample for the study was made up of 10 companies selected from 64 non financial companies having sustainability reporting quoted on the Nigerian Stock Exchange. Multiple regression analysis technique run on SPSS was used to test the hypotheses formulated for the study. Findings revealed a positive relationship between return on assets, return on equity and sustainability reporting. No significant relationship was established between earnings per share and sustainability reporting. The study recommends that sustainability be made a compulsory and mandatory practice in Nigeria through legislation and the government should therefore encourage companies to adopt this reporting system through tax credit and other financial incentives.

Keywords*:* 1.Sustainability reporting,2. firms performance and stakeholders theory.

01 introduction

Decisions relating to sustainability reporting involve companies deciding between either investing less to secure smaller profits faster and investing more to receive greater profit in the future. With regards to this, business sustainability can be expressed as the ability of firms to meet their short term financial needs without compromising their ability to meet their future needs (Bansal and Desmdine, 2014).

Global Reporting initiative (2012) asserts that sustainability reporting as the practice of measuring, disclosing and being accountable to internal and external stakeholders for organizational performance towards the goal of sustainable development. The financial analyst, investors and other stakeholders are increasingly demanding information on non financial performance of companies, over and above their financial information, so as to take more rational and informed investment decisions.

The universal objective of any business organization is to consistently grow and survive on a long term basis. Most managers are also aware that their companies are part of a large system which has serious direct and indirect effect on their operations. This implies that if these companies must effectively and efficiently meet their financial objectives they should properly adapt themselves to their environment. Supporting this view, Busse, (2016) posited that companies must develop corporate strategies to do "well" by doing good and turning companies into responsible organizations that do care about the environment and social aspect. It implies that social responsibility is a must rather than a choice to lead in future markets. In a similar view, Haffar and Searcy (2016) stressed that companies must go beyond their short term financial objective and stretch into an all encompassing economic, environment and social sustainability.

The objectives of sustainability Reporting are to increase market opportunities, increase profit and shareholders' value. Therefore, the desire to achieve this objective, most of the financial manager's time and efforts are consumed in managing its relationships with stakeholders properly with a view to improve its financial performance over time Harjoto, Laksmana and Lec, (2014). Ali, Haithan and Nilesh (2018) stated that for organizations to stay relevant in the ever changing markets, most managers have come to realization that it is no longer enough to focus on the economics of their businesses alone. Business success depends largely on the ability of financial managers to effectively design a robust business strategy to position itself interms of sustainable development that balances financial, environmental and human development (Shank and Shockey, 2016). This implies that if these organizations must effectively and efficiently meet their objectives, they should properly adapt themselves to their environment.

Efficient sustainability reporting is very crucial to the financial performance of companies of all sizes and it serves as an important indicator of long term financial health of firms. A good sustainable business practices influences financial performance of firms as affirmed by Ngwakwe, 2009). Agreeing with this view, Shank and Shockey (2016) stated that economic performance of firms that voluntarily submit sustainability reports are better than those who do not support Global Reporting Initiative (GRI) sustainability reporting guidelines.

Over the years, empirical studies have been carried out to examine the association between sustainability reporting and financial performance. Measures of financial performance are Return on Assets (ROA), Return on Equity (ROE), Net profit margin (NPM) and Earnings per share (EPS). Financial performance evaluates the effectiveness and efficiency with which assets are transformed into profit (Pandey, 2010). To achieve the desired financial performance and keep the business operations going in the long run literature affirmed that business organizations must be interested in their economic, environmental and social performance because it directs their financial performance (Adams, Theornton and Sepehri, 2012). In relation to the researcher's knowledge, not much research have been studied recently on the relationship between sustainability reporting and firms financial performance in Nigeria. It is highly disturbing that the available studies have reported a conflicting finding thereby creating a gap for deeper investigation and further studies. While studies like.

Umoren, Isiavwe, Ogbavi and Atolagbe (2016) investigated social responsibility and firm performances. Ndukwe and Nwakanma (2013) conducted a study on the relationship between corporate sustainability reporting and firm profitability. Duke and Kankpang (2013) ascertained the effect of corporate social responsibility on corporate performance of organizations. Sodiq (2016) examined the importance of corporate social responsibility on bank performance in Nigeria. Erin, Afeisume and Owodunni (2016) examined sustainability reporting and quality of corporate disclosure in the Nigerian banking sector. Nwobu (2015) investigated the relationship between corporate sustainability reporting and profitability and shareholders fund in Nigerian banks.

The above mentioned inconclusiveness of the previous research investigating the relationship between sustainability reporting and financial performance calls for deeper investigation. However, there is a gap in literature pertaining to the degree of relationship between sustainability reporting and financial performance. The broad objective of this study is to empirically examine, the impact of sustainability reporting on corporate performance of selected quoted firms in Nigeria. Other specific objectives are to: ascertain the impact of sustainability Reporting on return on assets of companies listed on the Nigerian stock Exchange, to identify the impact of sustainability Reporting on return on equality of companies listed on the Nigerian stock exchange, to assesses the impact of sustainability Reporting on earnings per share of companies listed on the Nigerian stock exchange.

2.0 Literature Review

2.1.1 Concepts of Sustainability Reporting

There is no single and generally accepted definition of sustainability reporting. One of the most commonly used and acknowledged reporting described it as company's reporting on its economic, environmental and social performance. KPMG (2008) viewed it as synonymous as responsibility reporting and sustainable development reporting, but the term is becoming more specific in meaning and therefore subjects of sustainability Reporting. Bansal and Desjarging (2014) and Kasum (2012) in Ndukwe in Dibia & Nwaigwe (2016) defined sustainable development as "development that meets the needs of the present without compromising the ability of the future generations to meet their own basic needs. With regards to this, business sustainability can be expressed as the ability of organizations to meet their short term financial needs without compromising their ability to meet their future needs (Hahn and Figge, 2011).

Priyanka (2013) explained that the concept of sustainability Reporting can sometimes be referred to as Corporate Responsibility Reporting (CRR) or Tripple Bottom Line (TBL) Reporting. Elkington (2005) developed the term Tripple bottom line to emphasize the three basic aspects:- profit (economic) people (social) and the planet (environment). He stated further that companies published the sustainability reports to provide description of their triple bottom line performance and to show the commitment of their company towards their stakeholders. According to Global Reporting Initiative (2011), the economic dimension of sustainability emphasizes the organization's impacts on the economic conditions of its stakeholders and on the economic system at local, national and global levels. The social dimension show company's concern on their impact on the social systems within which it operates. The environmental dimension show the Organization's impacts on living and non living natural systems which basically include eco systems, land, air and water.

In recent years, sustainability reporting has gained lots of attention as companies, investors and communizes are turning their attention towards critical corporate sustainability (Ameer and Othman, 2012). Sustainability Reporting is becoming more prevalent by a growing recognition that the issue of sustainability can affect Organizational performance.

Kupers (2011) said that organizations are perceived to be responsible for many negative impacts on the environment and on societies. As this awareness on sustainability issues grows and debate on social and environmental sustainability heighten, corporate entities across the globe as a response are beginning to show their commitment to sustainable development through sustainability reports.

The basic reasons for Sustainability Reporting and Disclosure are to primarily gain legitimacy from the institutional environment and to communicate accountability. Organizations engaged in sustainability reporting to improve their competitiveness, in comparison with other companies producing the same product (Jones, 2010). This view supports the observation made by Bellringer (2011) who observed that sustainability. Reporting is not just undertaken to ensure a move sustainable world but is required for accountability financial incentive and provision of leadership. Kolk (2004) stated the following as reasons for reporting:

- Enhanced ability to trace progress against specific targets.
- License to operate and campaign
- Ability to convey efforts and standards
- Facilitating the implementation of environmental strategy.
- Ability to clearly communicate the corporate message internally and externally.
- Enhanced all-round credibility from greater transparency.

2.1.2 Elements of Sustainability Reporting

Based on performance measurement the Global Reporting Initiative's Sustainability Reporting Guidelines encompass three key elements linked of sustainability relevant to organizations. The performance indicators cover the organization's economic, environment and social performance through the use of quantitative and qualitative indicators as well as supplementary information.

Economic: According to Global Reporting Initiative (2013), it refers to value added by a business organization in terms of wages and benefits, labour productivity, job creation, expenditures on research and development and investment in training, local community donations, payment to government, payment to shareholders in form of dividend and other forms of human capital.
Social: It refers to the manner in which the operations of a business organization affect the people in the organization and in the communities where it operates. For example, work place health and safety, employee retention, labour rights, human rights, wages and working conditions at outsourced operations (Global Reporting Initiative, 2013).
Environmental: According to Global Reporting Initiative (2013), it refers to negative and positive changes in the environment arising from the operations of a business organization. For example, impact of processes, products and services on air water, land, bio diversity and human health (Global Reporting Initiative, 2013).

2.1.3 Measures of Corporate Performance

According to Jat (2006) corporate performance has received significant attention from scholars in the various areas of business corporate performance is essential as exemplified in high performance organizations which are success stories because of their perceived effectiveness and efficiency in managing their operation and their positive contributions to the well being of their shareholders. Whereas, low performance organizations are not owing to their lack of such important attributes (Jat, 2006). Organizational performance encompasses accumulated end results of all the organization's work processes and activities. Financial performance evaluates the effectiveness and efficiency with which assets are transformed into profit. Return on Assets (ROA), Return on Equity, Net Profit Margin (NPM) and Earnings Per Share are often used to proxy the measurement of financial performance. The most effective way to improve financial performance is by investing largely in sustainability. Reporting to generate satisfactory return on invested capital and make a prospective shareholder happy by assuring them that their resources are being, utilized efficiently and effectively in providing the right service to the society (Global Reporting Initiative 2011). The ROA represents the amount of earnings a company can achieve for each naira of assets it controls and is a good indicator of a firm's profitability. ROA therefore takes into account the assets used to support business activities and it is an indicator of managerial efficiency (Hagel, Brown and Davison, 2010).

ROE which is a test of profitability based on the investments of the owners of the business. It measures the return which accrue to the shareholders after interest payment and taxes are deducted (Pandey, 2010) ROE indicates how well the company used the resources of owners.

EPS is the most commonly used measure of entities performance. It indicates the amount of net profit after tax, minority interest and extra ordinary items that are attributable to each ordinary share in issue and ranking for dividend in the period (Pandey, 2010).

2.1.4 Financial performance

This study focused on the impact of sustainability reporting on corporate financial performance of selected quoted companies in Nigeria. Sustainability reporting is one of those measures that are strategically important for the success of the company.

From the reviewed studies many scholars had used various measures to measure financial performance of firms such as: Return on Assets (ROA) and Return on Equity (ROE) (Utami 2018) Return on Assets and Return on Equity ROA and ROE while Ndukwe and Nwakanma (2018) and Aondoakaa (2015) employed accounting terms like ROA and ROE and shareholders wealth measures like eps and stock price. Umoren, Isiavive and Atolagbe (2016) employed Return on Equity (ROE) Sodiq (2016) and Sanna-Lena and Jenny (2015) used Return on Assets (ROA). Nwobu (2018) used profit After Tak (PAT). Therefore, this study measured the financial performance of the companies by looking at profitability (Return on Assets, and Return on equity) and shareholders wealth measure (Earnings per share).

2.2 Theoretical Framework

2.2.1 (Stakeholder Theory)

Stakeholder theory was developed in 1984 by Edward Freeman. This theory states that corporations are responsible to a variety of stakeholders with the purpose of creating value for stakeholders not just for shareholders (Freeman, 1984). Stakeholder theory is based on a notion that corporations have many stakeholders defined as groups and individuals who benefit from are harmed by and whose rights are respected or violated by the corporate actions (Freeman, 1984). This theory suggest that firms have accountability towards a wide range of stakeholders a part from shareholders, e.g. Creditors, customers, suppliers, employees, community etc. According to King (2002) in order to harmonize the interest of firms and society, the theory recognized the significance of integrated sustainability reporting in strengthening more the relationship between firm and society in which it operates, this implies that ignoring the stakeholders' interests may damage firm's public image, which would negatively affect its financial performance. This is supported by Cornell, Alan and Shapiro (1987), who suggested that firm value is highly dependent on the ability to fulfill the contracts with various stakeholders. Failure to do so may damage firm's reputation as well as decreased financial performance. Sustainability practices can therefore be motivated by self-interest and as means to increase profit and shareholder value (Harjoto, Laksmana and Lee 2014).

This theory is applicable to this study simply because sustainability reporting is one of many mechanisms used in business to enhance the provision of information to the stakeholders about how the organization is impacting on them, perhaps through pollution prevention, community sponsorship, provision of employment etc (Deegan, 2007). Thus according to Barnett and Salomon (2006) managing stakeholder relations may result in competitive advantages. Stakeholder theory contributes to the corporate sustainability concept by bringing supplementary business arguments as to reasons why companies should work toward sustainable development. It also pushes managers to be clear about how they want to do business, specifically what kinds of relationships they want and need to create with their stakeholders to deliver on their purpose, and what a company's objectives should be.

2.3 Empirical Review

Several scholars have carried out research in order to establish the relationship between sustainability reporting and financial performance.

Hossain (2015) in his empirical study "impact of sustainability performance on financial performance: an empirical study of global fortune firms", analyses the relationship between sustainability measures and financial performance from 2007-2011. Using fixed effect regression models, the results revealed that the impact of environmental and social dimensions of sustainability remains relevant and significant across different measures of financial performance.

Hossain (2015) studies was compared with the present study where both studies focused on the impact of sustainability reporting on financial performance. On the other hand the study differs from the present study in terms of methodology. The reviewed study analysed data using fixed effect regression models while the current study used multiple regression analysis technique.

A study by Nosakhare, Che-Ahmad and Mgbame (2015) investigated the effect of environmental accounting on firm profitability in Nigeria, adopting a cross sectional research design. Using regression analysis technique, the results showed that environmental accounting has both positive and negative significant relationships with profitability when moderated with firm specific variables. Both studies were investigated in Nigeria. However the current study was differ in terms of methodology. The reviewed study adopted cross sectional research design and analysed data using regression analysis technique while the current study employed exposit facts research design and analysed data by using multiple regression data analysis technique.

Umoren, Isiavwe-Ogbori, and Atolagbe (2016) Investigated corporate social responsibility and firm performances. A case of listed firms in Nigeria for a two year period 2013 to 2014. Using descriptive statistics, correlation and regression analysis to estimate data, the findings revealed that, the level of CSR was 44%, made up of social disclosure 68% and environmental disclosure 6%. It was also revealed that CRS was influenced by company size and auditor type, but not by profitability. The study concluded that the financial reporting council, accounting profession and stock exchange should take necessary steps in motivating and Compelling quoted companies in addressing social and environmental issues in their annual reports.

This study just like the current study uses Nigeria as the case study. The two studies differ in terms of scope and methodology. The scope used by Umoren etal (2016) was two small 2013 to 2014 compared to the scope used by the current study 2006 to 2015. Also, the reviewed study used descriptive statistics, correlation and regression analysis to estimate data while the current study employed multiple regression data analysis technique.

Sodiq (2016) examined the importance of corporate social responsibility on bank performance in Nigeria-from 2004 to 2013. The data collected for this study were analysed using correlation and regression analysis. The results showed that there is a positive relationship between banks CRS activities and bank performance. The two studies were investigated in the context of Nigeria factor. However the scope of the previous study by Sodiq (2016) was restricted to banking industry while the present study covered all quoted companies in Nigeria-Also, reviewed study analysed data using correlation and regression analysis while the current study used multiple repression analysis technique as a tool for data estimation.

Erin, Afeisume and Qwodunni (2016) examined sustainability reporting and quality of corporate disclosure in the Nigerian banking sector. Using regression analysis, the results revealed that sustainability reporting has a relatively significant impact on the quality of corporate disclosure in the Nigerian banking sector. The paper concluded that adequate measures should be taken to enhance the quality disclosure of relevant financial reporting information especially materiality and uniformity of sustainability reporting in the Nigerian banking sector. Both studies were investigated in the context of Nigeria factor but Erin etal (2016) was a case study of Nigerian banking sector while the present study used selected quoted companies in Nigeria.

Utami (2016) examined the influence of leverage, profitability and the quality of sustainability disclosure index on firm value with revenue growth as moderating variable from 2011 to 2013. Using multiple regression model, the results showed that leverage and profitability have positive significant influence on firm value. In addition, the study found that revenue growth was a moderating variable of the relationship between the quality of corporate sustainability disclosure and firm value. Both studies were carried out in developing countries and as well used the same methodology but differ in terms of scope. While the reviewed study was investigated between 2011 and 2013 which is comparatively to small, the current study was carried out between 2006 and 2015.

Sanna-Lena and Jenny (2015) conducted a research on the relationship between corporate sustainability performance and financial performance in a new contextual setting from 2009 to 2013. Using multiple regression method, the results indicated a positive relationship between corporate sustain ability reporting and financial performance. Also, only educational board diversity was found to have an impact on the relationship between sustainability and firm profitability. The previous study similar to current study since the current study used survey methodology design, also used by the reviewed study and both studies were investigated in developing countries. The previous study was differ since it covered five years (5) 2009-2013 as compared with the current study that was investigated between 2006 and 2015.

Nwobu (2015) studied the relationship between corporate sustainability reporting and profitability and shareholders fund in Nigerian banks. Using the regression method of data analysis and ANOVA, the results showed that there is a rise in sustainability reporting of business organizations in the Nigerian banking sector. Although the correlation coefficient between sustainability reporting index and profitability and shareholders fund is small, the association is positive. The study concluded that business organizations should not be deterred by the costs involved in sustainability reporting such as internal controls, training, governance, assurance among others. The main similarity of this study and the current study is that both studies are considering the relationship between sustainability reporting and profitability of firms in the context of Nigeria factor. The two studies differ in terms of methodology. While the present study used multiple regression analysis technique the reviewed study adopted regression method and ANOVA to estimate data. In addition, the reviewed study was limited only to the banking sector while the present study covered selected quoted companies in Nigeria.

Khavey, Nikhashemi, Youself and Hague (2012) Investigated Voluntary Sustainability disclosure, revenue and shareholders' wealth. A perspective from Singaporean companies. Using linear regression model, the results established a positive and considerable relationship between sustainability reporting, revenue and shareholders wealth. This implies that sustainability reporting will inspire organizations awareness about communities and the environment and would inspire a sustainability development and continued profitability for organization as well. This study compares well with the current study, the study carried out its investigation in developing country while the current study investigated its study in developing country as well precisely Nigeria. However, they differ in terms of methodology. While the reviewed study adopted linear regression model to analyze data. The current study used multiple regression analyzing method of data estimation.

Duke and Kankpang (2013) ascertained the effect of corporate social responsibility on corporate performance of organizations. Using multiple regression model to estimate the data gathered, the findings showed a positive relationship between corporate social responsibility and firm performance. This study compares well with the current study, the study carried out its investigation in Nigeria while the current study investigated its study in Nigeria as well. This study just like the current study used the same methodology to estimate data. The two differ in term of measure of corporate performance.

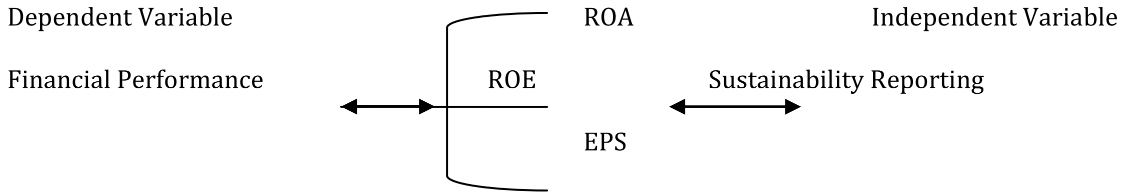
Munasinghe and Kumara (2013) analysed the impact of disclosure of corporate social responsibility on corporate financial performance of plantations companies in Cri-Lanka. Using spegman's rank-order correlation method of data estimation, the results revealed that ROA and ROE were positively correlated and significant. Both studies were conducted in developing countries but the two studies differ in terms of scope, methodology and measure of performance. The previous study was limited to plantations companies, used spegman's rank order correlation method of data estimation and measured performance by ROA and ROE while the present study covered all quoted companies, used multiple regression analysis to analyze data and measured performance by adding EPS.

Aggarwal (2013) carried out a research on the impact of sustainability performance of a company on its financial performance. A study of listed Indian companies, using regression analysis, the results revealed a positive relationship between sustainability performance and its corporate performance. Both studies were investigated in developing countries. The current study was differ in terms of methodology. The above study used ordinary regression analysis to estimate data while the current study employed multiple regression data analysis.

Ndukwe and Nwakanma (2013) conducted a study on the relationship between corporate sustainability reporting and firm profitability for the period 2011 to 2015. Using multiple regression analysis technique run on SPSS version 23 to test the hypotheses, findings revealed a negative relationship between return on equity and corporate sustainability reporting. No significant association was established between earnings per share and corporate sustainability reporting. The study concluded that corporate sustainability be made compulsory through legislation. This study just like the current study used same method of data analysis but the scope used by the previous study was too small 2011 to 2015 compared to the scope used by the current study 2006 to 2015. This study just like the current study were investigated in Nigeria.

Past researchers had also concluded an opposite relationship that higher financial performance lead to higher sustainability performance. Waddock and Grave (1997) carried out a research on sustain ability reporting and its impact on financial performance and discovered equally significance positive results for both directions of the relationship, for instance both when sustainability performance was set as dependent of financial performance and the reverse condition. That means, that good financial performance will create possibilities for investment in sustainability activities whereas at the same time, increased in sustainability activities will as well enhances financial performance. Thus, meaning that if a positive relationship can be established the impacts may move in both directions. This is highly supported by Salzmann, Lonescu- Somers and Steger (2005) who stated that corporate financial performance will allow organizations to allocate more resources towards sustainability sustaining activities. Salzmann, Lonescu- Somers and Steger (2005) stressed that, if there are resources to spare within the organization, firms will be more willing to perform in accordance with the values associated with a corporate social citizen. Scheltens (2008) investigated 280 U.S firms between 1991 and 2004 with financial performance measured in total stock returns. The findings indicated that causation mainly moves from financial to sustainability performance. Based on the fact that the above literature showed a conflicting result, investigating the impact of sustainability reporting on corporate performance call for deeper analysis of components that may potentially affect the relationship where the gap this study intends to cover.

Table I
Conceptual Framework Diagram



3.1 Methodology

The scope of the study is limited to ten (10) out of sixty four (64) companies listed on the floor of Nigerian Stock Exchange. The companies are selected using purposive sampling technique with the following criteria: (1) Company has sustainability disclosure in their annual report between 2006 – 2015 before economic recession and (2) the financial report can be accessed via internet.

The researcher employed ex-posit facto' research designs for this study. The reason for adopting this design is that the study involves event that have already taken place. The study aims at examining the impact of sustainability reporting on company's corporate performance. Return on assets, return on equity and earnings per share (dependent variables) were used as proxies for company corporate performance. Sustainability reporting (independent variable) was measured as dummy variable.

The researcher basically utilized secondary data and the sources include annual reports and accounts of companies selected for the study. This is due to the fact that annual reports are the main medium through which companies make their sustainability disclosures. Also, annual reports are readily available, accessible and regularly produced. Data were collected on three performance variables of Return on Assets (ROA), Return on Equity (ROE and Earnings Per Share (EPS) and components of Sustainability Reporting such as economic, social and environmental dimension.

In this study, correlation coefficient was used to x-ray the strength of the relationship between the dependent variable and the independent variables. Multiple regression analysis technique was used in carrying out the analysis. Justification for the use of regression analysis is its relevance in investigating the predictive powers of the independent variables on the dependent variable. The analysis was guided by the specified regression model. The hypotheses, were tested using the t-test statistics at 5% level of significance. The statistical package for social sciences SPSS was utilized in the data analysis.

3.2 Model Specification

To measure the relationship between firms financial performance and sustainability reporting disclosure, a multiple regression model was used as shown below:

ROA = f (ECN, SOC, ENV)
ROE = f (ECN, SOC, ENV)
EPS = f (ECN, SOC, ENV)

This model can be written in explicit form as:

$Y = bo + b_1 x_1 + b_2x_2 + b_3x_3 + E$

Where:

Y = Dependent variable which describes firms performance indicators such as:

- ROA = Return on Assets
- ROE = Return on Equity
- EPS = Earnings Per Share

X = Independent variables which represents the components of Sustainability Reporting Disclosure such as:

X_1 = Economic Performance disclosure
X_2 = social performance disclosure
X_3 = Environmental performance disclosure

E = The random error term representing factors other than those specified in the model.

Bo = Constant intercept of the model

B1 + b2 and b3 = the coefficients of the model to be estimated.

In order to ascertain the combined impact of Sustainability Reporting indices on firms financial performance, the following linear regression were adopted as shown below:

$\text{Log ROA} = bo + b_1 \text{ Log SRI} + E$
$\text{Log ROE} = bo + b_1 \text{ Log SRI} + E$
$\text{Log EPS} = bo + b_1 \text{ Log SRI} + E$

Where: SRI (Sustainability Reporting Index) = ECN + SOC + ENV

The study employed a disclosure index to score the extent of sustainability reporting. The items of disclosure were scored or assigned "I" where the disclosure is present and "O" where disclosure is not present. On the other hand if the level of the indicator disclosed is quantitative "3" is assigned and a qualitative disclosure "2" is assigned. Economic, environment or social index = Total level of disclosure divided over total occurrence.

4.1 Data Analysis and Interpretation

This chapter presents that analysis made from the data gathered and tests of hypotheses. The data values from the sampled companies were computed using the extracted data from the annual financial statements of these sampled companies quoted on the Nigerian stock Exchange (NSE).

4.1.1 Correlation Matrix

Table 1: Correlation Matrix Between Return on Assets, Economic Performance disclosure, Environmental performance disclosure and Social Performance Disclosure

		ROA	ECN	ENV	SOC
ROA	Pearson Correlation	1	-.058	-.812**	.350
	Sig. (2-tailed)		.874	.004	.321
	N	10	10	10	10
ECN	Pearson Correlation	-.058	1	.145	.559
	Sig. (2-tailed)	.874		.689	.093
	N	10	10	10	10
ENV	Pearson Correlation	-.812**	.145	1	-.101
	Sig. (2-tailed)	.004	.689		.782
	N	10	10	10	10
SOC	Pearson Correlation	.350	.559	-.101	1
	Sig. (2-tailed)	.321	.093	.782	
	N	10	10	10	10
**. Correlation is significant at the 0.01 level (2-tailed).					

Source: Author's Computation. Where: ROA is Return on Assets, ECN is Economic Performance disclosure, ENV is Environmental performance disclosure and SOC is Social Performance Disclosure.

Table 1 reveals that there exists a negative relationship between ROA, ECN and EVN to the tune of -0.058(p=0.874>0.05) for ROA and ECN and -0.812(p=0.004<0.05). The negative relation was not significant for the relationship between ROA and ECN but it was significant for the relationship between ROA and EVN. This implies that while ROA and ECV move towards different directions insignificantly, the opposite movement of the ROA and ENV was significant. In the same, the table reveals that the relationship between ROA and SOC was positive but insignificant to the turn of 0.350(p=0.321>0.05). This reflects that ROA and Soc move towards the same direction insignificantly.

Table 2: Correlation Matrix Between Return on Equity, Economic Performance disclosure, Environmental performance disclosure and Social Performance Disclosure

		ROE	ECN	ENV	SOC
ROE	Pearson Correlation	1	.160	-.739*	.520
	Sig. (2-tailed)		.660	.015	.124
	N	10	10	10	10
ECN	Pearson Correlation	.160	1	.145	.559
	Sig. (2-tailed)	.660		.689	.093
	N	10	10	10	10
ENV	Pearson Correlation	-.739*	.145	1	-.101
	Sig. (2-tailed)	.015	.689		.782
	N	10	10	10	10
SOC	Pearson Correlation	.520	.559	-.101	1

	Sig. (2-tailed)	.124	.093	.782	
	N	10	10	10	10
*. Correlation is significant at the 0.05 level (2-tailed).					

Source: Author's Computation. Where: ROA is Return on Equity, ECN is Economic Performance disclosure, ENV is Environmental performance disclosure and SOC is Social Performance Disclosure.

Table 2 reveals that there exists a positive insignificant relationship between ROE, ECN, and SOC to the tune of 0.160(p=0.660>0.05) for ROA and ECN and 0.520(p=0.124>0.05). This implies that ROE moves in the same direction with ECN and SOC insignificantly. In the same vein, the table reveals that the relationship between ROE and SOC was negative and significant to the turn of -0.739(p=0.015<0.05). This reflects that ROE and ENV move in different direction significantly.

Table 3: Correlation Matrix Between Return on Equity, Economic Performance disclosure, Environmental performance disclosure and Social Performance Disclosure

		EPS	ECN	ENV	SOC
EPS	Pearson Correlation	1	.092	-.621	.416
	Sig. (2-tailed)		.800	.055	.232
	N	10	10	10	10
ECN	Pearson Correlation	.092	1	.145	.559
	Sig. (2-tailed)	.800		.689	.093
	N	10	10	10	10
ENV	Pearson Correlation	-.621	.145	1	-.101
	Sig. (2-tailed)	.055	.689		.782
	N	10	10	10	10
SOC	Pearson Correlation	.416	.559	-.101	1
	Sig. (2-tailed)	.232	.093	.782	
	N	10	10	10	10

*. Correlation is significant at the 0.05 level (2-tailed). *Source: Author's Computation. Where: EPS is Earning Per Share, ECN is Economic Performance disclosure, ENV is Environmental performance disclosure and SOC is Social Performance Disclosure*

Table 3 reveals that there exists a positive insignificant relationship between EPS, ECN, and SOC to the tune of 0.092(p=0.800>0.05) for EPS and ECN and 0.416(p=0.232>0.05). This implies that EPS moves in the same direction with ECN and SOC insignificantly. In the same vein, the table reveals that the relationship between EPS and ENV was negative and insignificant to the turn of -0.621(p=0.055>0.05). This reflects that EPS and ENV move in different direction insignificantly.

4.1.2 Multiple Regression

Table 4: Effect of Return on Assets on Sustainability Reporting Disclosure

Dependent Variable: ROA

Variable	Coefficient	Std Error	T-statistics	Prob.	
C	-0.024	0.943	-0.025	0.981	R-Square = 0.747
ECN	-0.309	0.534	-0.578	0.584	Adjusted R-Square = 0.620
EVN	-0.241	0.068	-3.545	0.012	F-statistics = 5.893
SOC	0.583	0.416	1.404	0.210	Prob(F-statistics) =0.032

Source: Data Analysis, 2019**.** *Where: ROA is Return on Assets, ECN is Economic Performance disclosure, ENV is Environmental performance disclosure and SOC is Social Performance Disclosure*

Table 4 reveals that ECN exerts a negative and insignificant effect on ROA to the tune of 0.309 (p=0.584>0.05). Also, the result reveals that EVN exerts a negative but significant effect on ROA to the tune of 0.241 (p=0.012<0.005). Consequently, the result reveals that SOC exerts a positive and insignificant effect on ROA to the tune of 0.309 (p=0.0.584>0.005). Adjusted R-square reported to be 0.620 reflects that all the predictor variables (ECN, EVN, and SOC) accounted for 62% of the change in ROA, while the remaining 38% could be accounted for by other variables not covered by this study. The F-statistics of 5.893 along the probability value of 0.032 revealed that the model is fit

Table 5: Effect of Return on Equity on Sustainability Reporting Disclosure

Dependent Variable: ROE

Variable	Coefficient	Std Error	T-statistics	Prob.	
C	-1.732	1.594	-1.087	0.319	R-Square = 0.746
ECN	0.047	0.903	0.052	0.960	Adjusted R-Square = 0.619
EVN	-0.375	0.115	-3.264	0.017	F-statistics = 5.875
SOC	1.221	0.702	1.739	0.133	Prob(F-statistics) = 0.032

Source: Data Analysis, 2019. *Where: ROE is Return on Equity, ECN is Economic Performance disclosure, ENV is Environmental performance disclosure and SOC is Social Performance Disclosure*

Table 5 shows that both ECN and SOC exert a positive insignificant effect on ROE to the tune of 0.047(p=0.960<0.05) for ECN and 1.221(p=0.133>0.05) for SOC. In the same vein, the result shows that EVN exerts a negative significant effect on ROE to the tune of -0.375(p=0.017<0.05). Adjusted R-square reported to be 0.619 reflects that all the predictor variables (ECN, EVN, and SOC) accounted for 61.9% of the change in ROE, while the remaining 39.1% could be accounted for by other variables not covered by this study. The F-statistics of 5.875 along the probability value of 0.032 revealed that the model is fit.

Table 6: Effect of Earning per Share on Sustainability Reporting Disclosure

Dependent Variable: EPS

Variable	Coefficient	Std Error	T-statistics	Prob.	
C	-23.540	45.471	-0.518	0.623	R-Square = 0.513
ECN	-2.529	25.763	-0.098	0.925	Adjusted R-Square = 0.270
EVN	-7.822	3.278	-2.559	0.038	F-statistics = 5.100
SOC	21.464	20.033	1.071	0.325	Prob(F-statistics) = 0.039

Source: Data Analysis, 2019, *Where: EPS is Earning Per Share, ECN is Economic Performance disclosure, ENV is Environmental performance disclosure and SOC is Social Performance Disclosure*

Table 6 reveals that both ECN and EVN exert a negative effect on EPS to the tune of -2.529 for ECN and -6.422 for EVN. However, the negative effect was significant for EVN to the tune of p=0.038>0.05, unlike the negative effect of ECN that was insignificant to the of p=0.925>0.05. Also, the result reveals that SOC exerts a positive but insignificant effect on EPS to the tune of 21.464(p=0.0325<0.005). Adjusted R-square reported to be 0.270 reflects that all the predictor variables (ECN, EVN, and SOC) accounted for 27%% of the change in EPS, while the remaining 73% could be accounted for by other variables not covered by this study. The F-statistics of 5.893 along the probability value of 0.039 revealed that the model is fit.

4.2 Discussion of Findings

An attempt has been made to examine the impact of sustainability reporting on corporate performance of selected quoted firms in Nigeria. The scope of the study is limited to ten (10) out of sixty - our (64) companies listed on the floor of the Nigerian Stock Exchange. The companies are selected using purposive sampling technique with the following criteria, company that has sustainability disclosure in their annual report between 2006 – 2015 before the economic recession and that their financial report can be accessed via the internet. The data gathered using the financial statements of the sampled firms were analyzed using correlation matrix and multiple regression.

The first discovery relates that economic performance and environmental performance exerts a negative effect on the return on assets. Although the negative effect was significant for environmental performance and not economic performance. The result also shows that social performance exerts a positive and insignificant effect on return on assets. The results are disaggregated. While the effect of economic performance is negative and insignificant, the effect of environmental performance was negative but significant and the effect of social performance is positive and insignificant. The corollary of these discoveries is that while economic and environmental responsibility could decrease the profitability of firms in terms of return on assets, the social responsibility of the firms could stimulate an increase in the return on assets. The result of this present research is conflicting with the previous research. For example, the result negates the findings of Nakao *et al* (2007) and Cohen and Konar (2003), that a firm's environmental performance does have a statistically significant positive relationship with the financial performance. In the same vein, the outcome of this discovery is not in tandem with the discovery of Duke and Kankpang (2013), that social responsibility performance has a positive significant relationship with the firms' performance level.

The second discovery shows that both economic performance and social performance exert a positive and insignificant effect on return on assets, environmental performance exerts a negative but significant effect on return on equity. Similar to the first discovery, the effect of all the predictor variables are disaggregated, reflecting that while economic performance and social performance have the potency to engender an insignificant increase in the return on equity, the environmental performance can negatively and significantly affect the firms' performance level in terms of the return on equity. The findings of this study do not corroborate the findings Sekarsari (2008) and Nakamura (2011), that environmental investment positively increases firm performance significantly. Also, the discovery made in this study disagrees with the findings of Ngwakwe (2008), that firms which invest in social and environmental would have a higher return on total assets compared to firms that do not invest. The last discovery indicates that while Economic performance exerts a negative and insignificant effect on earnings per share, the environmental performance has a negative and significant effect on earnings per share and social performance has a positive and significant effect on earnings per share.

5 Conclusion and Recommendations

The manufacturing sector in Nigeria was received attention from the stock exchange regulations of Nigeria with regards to the issue of sustainability reporting. The study discovered that sustainability reporting in Nigeria is still growing and the aspect of sustainability covered are not comprehensive as more of social aspect of sustainability are disclosed by cooperate firms than environmental and economic aspects. The study found that there is an increase in sustainability reporting in the manufacturing sector. This indicates that the transition into sustainability reporting is on the increase and has influenced profitability.

The study applied three financial performance indices and three sustainability reporting indices. A detailed analysis shows that the social index has exerted impact on all the performance variables. This implies that if sustainability reporting is imbibed upon by the sampled companies, there will be significant impact on the financial performance as shown by the social index. Economic and environmental reporting index are negative among all the sustainability indices. This may be largely due to its non-reporting nature in most companies investigated.

The study stressed the need for manufacturing companies in Nigeria to take the issue of sustainability development more seriously and work towards enhancing both economic and environmental performance since it will impact significantly on their financial performance. The study recommended that organizations should increase the scope of their sustainability activities as it will enhance their performance.

Finally, this study recommends that sustainability reporting in made compulsory and mandatory practice in Nigeria through legislation to encourage more sustainability performance disclosure by corporate entities. The government should grant tax credits and other financial incentives to corporate organizations that engage in sustainability disclosure as a way of encouraging them. Communities where these companies operate and other stakeholders must demand sustainability reporting to meet their information needs and help them hold companies to account for not only economic performance but also environmental and social performance as they offer them. Finally, corporate organizations should strive hard to be more socially, economically and environmentally responsible by engaging in sustainable development practices in the interest of the present and future stakeholders.

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APPENDIX I

Sample of the Study

NO.	NAME OF COMPANY
1.	7up Bottle
2.	Alumalco
3.	Conoil Plc
4.	Flour Mill
5.	Guinness
6.	J. Berger
7.	Jos INT Bre
8.	Mobil Oil
9.	Nestle Nig
10.	Nig Brew

APPENDIX II

NO.	NAME OF COMPANY	DEPENDENT VARIABLES			INDEPENDENT VARIABLES		
		ROA	ROE	EPS	ECN	ENV	SOC
1.	7up Bottle	0.2648	0.2939	6.4176	2.00	2.20	2.33
2.	Alumalco	-0.0430	0.2602	-0.3752	2.00	2.00	2.00
3.	Conoil Plc	0.2365	0.2177	6.1519	2.00	2.00	2.20
4.	Flour Mill	0.1090	0.1818	4.1776	2.25	2.20	2.33
5.	Guinness	0.4015	0.3981	19.8577	2.00	2.00	2.20
6.	J. Berger	0.0838	0.2543	5.7841	2.00	2.00	2.33
7.	Jos INT Bre	0.0534	0.5343	3.1154	2.00	2.50	2.33
8.	Mobil Oil	0.2597	0.8857	14.0598	2.25	2.00	2.50
9.	Nestle Nig	0.7024	1.2206	19.9910	2.00	00	2.33
10.	Nig Brew	0.0166	-0.0359	-1.4261	2.00	2.20	2.17

APPENDIX III

Correlations

		ROA	ECN	ENV	SOC
ROA	Pearson Correlation	1	-.058	-.812**	.350

	Sig. (2-tailed)		.874	.004	.321
	N	10	10	10	10
ECN	Pearson Correlation	-.058	1	.145	.559
	Sig. (2-tailed)	.874		.689	.093
	N	10	10	10	10
ENV	Pearson Correlation	-.812**	.145	1	-.101
	Sig. (2-tailed)	.004	.689		.782
	N	10	10	10	10
SOC	Pearson Correlation	.350	.559	-.101	1
	Sig. (2-tailed)	.321	.093	.782	
	N	10	10	10	10

**. Correlation is significant at the 0.01 level (2-tailed).

Correlations					
		ROE	ECN	ENV	SOC
ROE	Pearson Correlation	1	.160	-.739*	.520
	Sig. (2-tailed)		.660	.015	.124
	N	10	10	10	10
ECN	Pearson Correlation	.160	1	.145	.559
	Sig. (2-tailed)	.660		.689	.093
	N	10	10	10	10
ENV	Pearson Correlation	-.739*	.145	1	-.101
	Sig. (2-tailed)	.015	.689		.782
	N	10	10	10	10
SOC	Pearson Correlation	.520	.559	-.101	1
	Sig. (2-tailed)	.124	.093	.782	
	N	10	10	10	10
*. Correlation is significant at the 0.05 level (2-tailed).					

Correlations					
		EPS	ECN	ENV	SOC
EPS	Pearson Correlation	1	.092	-.621	.416
	Sig. (2-tailed)		.800	.055	.232
	N	10	10	10	10
ECN	Pearson Correlation	.092	1	.145	.559
	Sig. (2-tailed)	.800		.689	.093
	N	10	10	10	10
ENV	Pearson Correlation	-.621	.145	1	-.101
	Sig. (2-tailed)	.055	.689		.782
	N	10	10	10	10
SOC	Pearson Correlation	.416	.559	-.101	1
	Sig. (2-tailed)	.232	.093	.782	
	N	10	10	10	10

REGRESSION /MISSING LISTWISE /STATISTICS COEFF OUTS R ANOVA /CRITERIA=PIN(.05) POUT(.10) /NOORIGIN /DEPENDENT Q1 /METHOD=ENTER Q4 Q5 Q6 /RESIDUALS DURBIN.

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.864[a]	.747	.620	.1359002	2.613
A. Predictors: (Constant), SOC, ENV, ECN					
B. Dependent Variable: ROA					

Anova[b]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.327	3	.109	5.893	.032[a]
	Residual	.111	6	.018		

	Total	.437	9			
A. Predictors: (Constant), SOC, ENV, ECN						
B. Dependent Variable: ROA						

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	-.024	.943		-.025	.981
	ECN	-.309	.534	-.148	-.578	.584
	ENV	-.241	.068	-.755	-3.545	.012
	SOC	.583	.416	.357	1.404	.210
A. Dependent Variable: ROA						

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	.043504	.718188	.208470	.1904767	10
Residual	-.1522557	.2412982	.0000000	.1109620	10
Std. Predicted Value	-.866	2.676	.000	1.000	10
Std. Residual	-1.120	1.776	.000	.816	10
A. Dependent Variable: ROA					

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.864[a]	.746	.619	.2296273	2.182
A. Predictors: (Constant), SOC, ENV, ECN					
B. Dependent Variable: ROE					

Anova[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.929	3	.310	5.875	.032[a]

	Residual	.316	6	.053		
	Total	1.246	9			
A. Predictors: (Constant), SOC, ENV, ECN						
B. Dependent Variable: ROE						

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	-1.732	1.594		-1.087	.319
	ECN	.047	.903	.013	.052	.960
	ENV	-.375	.115	-.696	-3.264	.017
	SOC	1.221	.702	.442	1.739	.133
A. Dependent Variable: ROE						

Residuals Statistics[a]					
	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	.052899	1.205968	.421070	.3213514	10
Residual	-.2213243	.2660682	.0000000	.1874899	10
Std. Predicted Value	-1.146	2.442	.000	1.000	10
Std. Residual	-.964	1.159	.000	.816	10
A. Dependent Variable: ROE					

Variables Entered/Removed			
Model	Variables Entered	Variables Removed	Method
1	SOC, ENV, ecn[a]	.	Enter
A. All requested variables entered.			

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.716[a]	.513	.270	6.5506659	2.428

A. Predictors: (Constant), SOC, ENV, ECN

B. Dependent Variable: EPS

Anova[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	271.433	3	90.478	5.100	.0.039[a]
	Residual	257.467	6	42.911		
	Total	528.901	9			

A. Predictors: (Constant), SOC, ENV, ECN

B. Dependent Variable: EPS

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	-23.540	45.471		-.518	.623
	ECN	-2.529	25.763	-.035	-.098	.925
	ENV	-7.822	3.278	-.578	-2.959	.038
	SOC	21.464	20.033	.377	1.071	.325

A. Dependent Variable: EPS

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	1.485516	21.413288	7.775380	5.4917462	10
Residual	-5.2761202	14.0792961	.0000000	5.3485963	10
Std. Predicted Value	-1.145	2.483	.000	1.000	10
Std. Residual	-.805	2.149	.000	.816	10

Variables Entered/Removed			
Model	Variables Entered	Variables Removed	Method
1	SOC, ENV, ecn[a]	.	Enter
A. Dependent Variable: EPS			