



# Economic Sustainability Reporting and Financial Performance of quoted industrial goods sector in Nigeria. (2011 – 2017)

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**Abstract:** The study investigated the effect of economic sustainability reporting on the financial performance of selected quoted industrial goods sector in Nigeria. It examined the extent to which Economic Sustainability Disclosure Index affects financial performance proxies (return on assets (ROA), return on equity (ROE), and earnings per share EPS) of selected industrial goods sector quoted on the Nigerian Stock Exchange (NSE). Content analyses were employed in determining the Economic Sustainability Disclosure Index (used as proxy for economic disclosures). The pooled regression, and correlation random effect models were used for data analysis. The study revealed that economic sustainability disclosures index of industrial-goods sector have a negative but insignificant relationship with performance indices on return on asset (ROA), negative relationship and significant on return on equity (ROE) and positively and insignificant related to earnings per share (EPS). Based on the findings, it is recommended that, corporate organizations should have positive disposition towards their capital providers and other important stakeholders for more general economic distribution operating costs, employee salaries and wages and other community investment and disclose more of this information in their annual reports.

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## I. INTRODUCTION

Years ago, quoted firms in Nigeria have negative look on public disclosure of their economic activities. The listed manufacturing companies rarely disclose their economic performance to investors. Nowadays, companies and organizations satisfy the growing need for transparency from customers, stakeholders and the society at large through economic disclosures (Martínez, Fernández, & Fernández, 2016; Nobanee, & Ellili, 2016). Economic sustainability reporting is a method used by companies to communicate their investors, Stakeholders and the general public through annual financial statement disclosures (Amacha & Dastane, 2017). A business organization discloses their corporate activities in order to meet the expectations of the corporate group and the society at large. The disclosure of financial and non-financial performance is an evidence of good accountability and transparency towards corporate performance and positions in the global world. The establishment of these sustainability frameworks on corporate economic sustainability disclosures makes it possible for corporations to choose the extent their economic activities will earn them, sustainability reporting indices can be reported, irrespective of the importance of such information to various stakeholders (Uddin & Safiuddin, 2015). Gould (2011) noted that sustainability reporting is necessary to equip stakeholders with information of an organization's performance in tangible aspects. The main objective of every business organization is to maximize shareholders' wealth, and also take into consideration the interest of other stakeholders who are connected in corporate activities in one way or the other for the benefit and growth of the organization (Ekwueme, Egbunike, & Onyali, 2013). Unerman, Bebbington, and O'Dwyer, (2007), maintain that in the absence of mandatory reporting of financial performance, some companies or firms engage in reporting some of their non-financial performance and activities which are indeed significant and vital to the development of their financial performance. Aggarwal, (2013) asserts that important measures should be taken to determine the degree of what an organization has to disclose to the investors and general public in terms of their economic activities relative to revenue turn over, operating costs, employee wages and benefits, payment to providers of capitals, payment to government, community investment value of defined benefit and obligation

and mode of setting the defined benefit plan obligation from one financial period to another. TungungandWahyudi, (2019), describe the benefits derived by companies that disclose their sustainability reports: such as increase in company's reputations and community trust, and confidence to investors and stakeholders that their investment is protected from both social risk and environmental risk.

Nigerian firms are under great pressure to disclose information on the dimensions of sustainability practices which will also enhance the firm's reputations at the long run (Ebiringa, Yadirichukwu, Chigbu, and Ogochukwu, (2013). The appropriate valuation of value for stakeholders should be based on both quantitative and qualitative (financial and non-financial) reporting in the form of sustainability disclosures. Organizations must ensure or maintain performance based on economic dimension of sustainability (GRI, 2013). AsuquoAsuquo, Dada, &Onyeogaziri(2018) noted that stakeholders' expectations is to show transparency on how they manage their environment and governance issues, as well as the treatment given to their employees and their host communities. Sustainable development seeks to focus on how to organize and coordinate human activities and satisfy both physical and psychological human needs.Salehi, Tarighi, and Rezanezhad, (2017) opined that environmental, social responsibilities and economic activities is beneficial towards the society and business firms, that will increase their financial performance, and render a better understanding of its potential benefits which can bring high returns on investment for the firm.

Companies are expected to be more transparent in how they treat their economic issues, how they handle their operational activities, employee affairs and the host communities (Kowal and Kustra, 2016). The important thing is to determine the effectiveness and efficiency of the management particularly in the utilization of investment made by providers of capital to create more wealth as return from the operations in monetary term. This can be determined in the firm's Return on Assets (ROA), Return on Equity (ROE), and Earning per Share (EPS) of the organizations (Abbas &Olatoro, 2018).

In every organization, performance is being measured with profitability ratio. It measures the strength of firms' financial health over a good period of time in order to ascertain the firms' earnings. Some investors and management regard organizational financial good health, which will help in the application of different assets, especially human knowledge and skill of employees and other management cadre in the organization, investors and management may need to understand the implication of expenditure in human resource for enhancing organizational efficiency of human resource on the long-term financial performance. Accounting Standards Board (IASB), defined asset as a resource controlled by an entity which arises from their past activities and from which future economic benefits are expected to accrue to the entity (Akinlo&Iredele, 2014).

The aim of this study is to evaluate economic dimension of sustainability reporting by employing the firm's annual financial statement reports. The independent variables comprise economic indicators with reference to Global Reporting Initiative (GRI-G4) index table extract, which contains Economic Disclosure Indicators (ECDI) include: Direct economic value generated e.g. Revenue turnover, Economic distributed e.g. Operating costs, Employee wages and benefit Payment to providers of capital, Payment to government, Community investments, Value of defined benefit plan obligations and Mode of setting the defined benefit plan obligations liability.

These parameters have been chosen as proxies for economic sustainability reporting, and were used in formulating a content analysis table to determine original data for analysis result with the view to expressing the relationship between return on assets (ROA), return on equity (ROE), earnings per share (EPS) and economic sustainability reporting indicators/disclosures.

### **Statement of the Problem**

For the past few years, considerable studies have been carried out on sustainability reporting; most researchers focuses on corporate social responsibility dimension, like were; Uwuigbe and Egbide (2012), Macarulla and Talalweh (2012),Ebiringa, Yadirichukwu, Chigbu, and Ogochukwu (2013) Ada and Daniel (2020) and environmental dimension of sustainability reporting researchers such as; Didia and Onwuchekwa (2015), Abubakar (2017),Ezeagba, Racheal, and Chiamaka (2017), few were measured on the area of economic performance of business organization in relative to the economic disclosure indicators according to Global Reporting Initiatives. Furthermore, evidence from preliminary literature reviewers indicated that most previous studies failed to extend the scope of their research beyond five financial years, reviewers were: Ofoegbu, and Asogwa, (2020), Al-Dhaimesh and Al Zobi (2019),Asuquo, Dada, Temitayoand Onyeogazri, (2018).

Some other studies failed to employ content analysis approach in determining economic disclosure index which is a more ideal parameter to measure such variable. The use of only one performance index was also found to have dominated most existing research works. Therefore, to contribute in closing the aforementioned gaps, this study seeks to extend the line of research on corporate economic sustainability

reporting and financial performance by empirically ascertaining the effect of economic disclosures index on financial performance of industrial-goods sector quoted on the Nigerian Stock Exchange for the period of seven (7) years (2011 to 2017).

### **Objective of the Study**

This study aims at examining corporate economic sustainability reporting and performance of industrial sector in Nigeria. The study specifically seeks to:

1. examine the effect of economic disclosure indices on the return on assets (ROA).
2. determine the extent to which economic disclosure indices affect (ROE).
3. evaluate the effect of economic disclosure indices on earnings per share (EPS).

### **Research Questions**

This study shall provide answers in the following research questions:

1. What is the effect of economic disclosure indices on return on assets (ROA)?
2. To what extent do economic disclosure indices affect return on assets (ROE)?
3. What is the effect of economic disclosure indices on earnings per share (EPS)?

### **Research Hypotheses**

In order to achieve the objective of this study, the following hypotheses have been formulated for empirical validation by using null hypotheses ( $H_0$ ) either to reject or accept:

**H<sub>01</sub>:** Economic disclosure indices have no significant effect on the return on asset (ROA).

**H<sub>02</sub>:** Economic disclosure indices do not significantly affect the return on equity (ROE).

**H<sub>03</sub>:** Economic disclosure indices do not significantly affect the return on asset (EPS).

### **The significance of the Study**

This study would be of significance to the following: .

#### **Manufacturing firms**

- i. It will give the manufacturing firms an insight that would enable them to evaluate the current state of their economic sustainability disclosure activities for future financial years.
- ii. The study will enable the companies to gain knowledge related to the risk and different opportunities they are facing.

**Government:** The study will help the government to come up with new standard regulations that will benefit the entire society.

**Firm Management:** The study will give an insight to firm's organization management to know that economic reporting is an integral part of profit maximization process, which if managed properly will enhance the competitiveness and organizational reputation.

## **II. REVIEW OF RELATED LITERATURE**

Awan and Akhtar, (2014) defined economic sustainability as the responsibility of organizations to maximize profits from the production of goods and services to meet the expectations of their shareholders and the future generation for sustainable development. The defined legal laws and regulations formulated by governments as the ground rules under which businesses must operate (Carroll, 1979). Other economic ethical responsibilities are the standards and norms of the environment where they operate that organizations should maintain to protect their stakeholders' moral rights and legal requirements and free from anti-corruptions (Saleh, Ebeid, & Abdelhameed, 2015).

Hakeem, (2014) defined corporate economic reports as a report that explain the effect of business operations on investments and appraise the future impact on the management, community and shareholders. Yuni (2018) economic activities help companies to maintain and retain quality understanding with the shareholders and the society. Economic information can be defined as quantitative corporate information the firm involved and discloses voluntarily, through the financial statement on its economic performance, in order to guarantee the reliability of that information to stakeholders (Mohammed, Sudhir, & Nelson, 2017). The concept of corporate economic sustainability requires organizations to adopt a broader view of its responsibilities towards shareholders, and many other constituencies, including employees, suppliers, consumers, the local community, local, state, federal government, environmental groups, and other special interest group. Daruset al. (2020) in their study revealed that, the higher the level of corporate profitability, the greater disclosure on economic responsibility information activities. Economic performance disclosure can enhance corporate reputation and reduce the financial risk showing that such companies will be free from bankrupt than those not engage in corporate economic and social disclosures (Ezeagba, Rachael and Chiamaka, 2017). Corporate economic sustainability has been defined by various scholars based on their interest and exposure as well as values embodied in their frame of reference, economic performance includes economic value generated in terms of revenue turnover and economic distributed which include Economic distributed Operating costs, Employee

wages and benefits, Payment to providers of capital, Payment to government, Community investments, Value of defined benefit plan obligations, Mode of setting the defined benefit plan obligations liability (Odetayo&Adeyemi, 2017).

### **Empirical Review**

A lot of studies have been carried out on corporate economic sustainability disclosures from various perspectives, with mixed results and findings. Dibia, and Onwuchekwa, (2015) empirically investigate the determinants of environmental disclosures using oil and gas companies in Nigeria. To examine the effect of Firm size, Profit, Leverage and Audit firm type on environmental disclosures. A sample of 15 companies drawn from the oil and gas sectors of the Nigerian stock exchange for 2008-2013 financial years was used for the study. Binary regression technique was used as the data analysis method. The finding of the study shows that, there is a significant relationship between company size and Profit, no significant relationship between Leverage and audit firm type and corporate environmental disclosures.

Abubakar (2017) studied the influence of firm attributes on environmental disclosure of listed breweries companies in Nigeria, from 2012 to 2016. Multiple regression technique was employed to analyze the data. Profitability (PROF), firm size (FRMS), leverage (LEV) and board size (BDS) were used as proxies to measure the firm attributes, the results revealed board size to have a negative but significant influence on environmental disclosure, leverage has negative and insignificant influence on environmental disclosure. Where firm size has positive insignificant influence on environmental disclosure, profitability has positive significant influence on environmental disclosure of listed breweries companies in Nigeria.

Ezeagba, Racheal, and Chiamaka (2017) investigated the relationship between environmental disclosure and financial performance companies in Nigeria for a period of ten (10) years from 2006- 2015. Data were analyzed using multiple regressions. The result revealed a significant relationship between environmental disclosure and financial performance of companies.

Asuquo, Dada, Temitayo and Onyeogaziri, (2018) treated the effect of sustainability reporting on corporate performance of selected quoted brewery in Nigeria, data was obtained from the audited financial statements of the three brewery firms under study for a period of 2012-2016, with a multiple regression analysis test. The result of the study shows that Economic Performance disclosure, Environmental Performance disclosure and Social Performance disclosure have no significant effect on return on asset (ROA) of selected quoted firms in Nigeria.

Swarnapali, and Le, (2018) studied the impact of sustainability reporting on the market value in Sri Lankan firms (developing country). With a sample of 220 selected companies listed in the Colombo Stock Exchange (CSE) in Sri Lanka from 2012 –2016. Regression analysis was executed on the panel data, and also adopted Tobin's Q to measure the firm's market value to achieve the study objective. The study revealed a positive relationship between sustainability reporting (SR) and firm market value.

Tri and Yuni (2018) carried out a research on the effect of sustainability reporting on the financial performance of the Indonesian mining, metal, and food processing industry between 2014 -2017. The study made use of 60 quoted Indonesian firms. The independent variable (sustainability reporting) measured by economic, environmental, social dimensions, whereas the independent variables were return on asset (ROA) and Tobin Q. The multivariate analysis was adopted. Findings suggest that economic and social dimension of sustainability reporting affect market value (Tobin Q) positively and significantly but do not affect book value (return on asset).

Agu and Amedu (2018) examine the impact of sustainability reporting on the profitability of pharmaceutical companies listed in Nigeria. The data were taken from the annual report and financial statement of seven (7) companies, from 2012 to 2017. The data were analyzed by using OLS. The results showed that there was a negative and insignificant correlation between the economic reporting index and ROA, while environmental and social information have insignificant positive correlation with ROA. The results also showed that the environmental reporting index had a statistically negative and insignificant correlation with ROE, while a positive but insignificant correlation exist between economic and social indices and ROE of selected companies.

Akabom, Asuquo, Dada, Esther, Temitayo and Onyeogaziri, (2018) examined the effect of sustainability reporting on corporate performance of selected quoted brewery firms in Nigeria. To determine the association between sustainability reporting and corporate performance, from the three brewery firms under study for a period 2012-2016. The result of the study shows that Economic Performance disclosure (ECN), Environmental Performance disclosure (ENV) and Social Performance disclosure (SOC) have no significant effect on return on asset (ROA) of selected quoted firms in Nigeria.

Al-Dhaimesh and Al Zobi (2019) in a related study, examine the influence of sustainability reporting on financial performance of Jordanian banks from 2013- 2017. Findings from data analysis indicate that

economic reporting, environmental reporting and social reporting have a significant influence over financial performance of banks in Jordan

Ifeanyi, Azubike and Iormbagah (2020), examined the effects of triple bottom line reporting on the financial performance of listed Nigerian oil and Oil and gas firms sector. The secondary data was used from 2012 to 2016 and analyzed using a multiple OLS regression technique. The findings revealed that social disclosure and economic disclosure had no significant effect on return on assets of listed oil and gas firms in Nigeria.

Natasha, and Pupu, (2020) investigates the effect of sustainability report disclosure on the financial performance of banks listed in Indonesia Stock Exchange (IDX) covering from 2013-2016 financial, using multiple regression analysis to regress the data. The independent variables were economic, environmental and social dimension disclosures on financial performance. The result shows that economic and social dimensions had a statistically significant effect on ROA.

Memed and Amir (2020) investigated the effect of sustainability reporting on the financial performance of the Indonesian mining sector from 2012-2016. To ascertain the effect of three dimensions of (economic, environmental and social) sustainability disclosure and financial performance ratios ((ROA, ROE and Tobin'Q). The multiple regression analysis was employed to analyze the data. Findings reiterated that sustainability reporting do not significantly influence ROA, ROE and Tobin Q.

Natasha, and Pupu, (2020) investigates the effect of sustainability report disclosure on the financial performance of banks listed in Indonesia Stock Exchange (IDX) covering from 2013-2016 financial, using multiple regression analysis to regress the data. The independent variables were economic, environmental and social dimension disclosures on financial performance. The result shows that economic and social dimensions had a statistically significant effect on ROA while the environmental dimensions did not affect the Return on Asset (ROA) of the listed banks.

Ighosewe, and Asaba, (2021) examine corporate sustainability disclosure and the Nigerian industrial /consumer goods sector's performance, from 2010 to 2019 culminating into 100 cross-sectional units with sample of 10 firms quoted in the Nigerian industrial/consumer goods sector. Using sustainability disclosure measured by Corporate Social Responsibility Disclosure (COSRD), Employee Disclosure (EMPD), Firm Size (FSIZE), Environment Disclosure (ENVID), and Research and Development Disclosure (REDED) and is firm performance measured by Tobin Q. Both the regressors and regressed were extracted from the financial statement through content analysis in line with Global reporting initiatives (GRI, 2013). The findings revealed that employee disclosure, firm size, and environmental disclosure reduce Tobin Q significantly. While development disclosure increases the Tobin Q significantly also, corporate social responsibility reduces Tobin Q insignificantly.

### **Research Gap**

This study contributed in filling the gap in the previous empirical works, by extending the frontiers of the data base of the old researches to 2017, is also aimed at producing a significant result that will help to resolve the contradictions in previous researches using an in-depth content analysis of the annual reports of five (5) industrial goods firm on the Nigeria Stock Exchange (NSE), covering a 7 year period (2011 – 2017) to determine the effect of economic sustainability disclosure on financial performance proxies to ROA, ROE and EPS of five (5) industrial goods firms..

## **III. RESEARCH METHODOLOGY**

### **Research Design**

This study adopted cross-sectional, longitudinal research design. It is most appropriate for these studies where information is gathered from different sections (firms) over different periods of time but from the same sample (Egbulonu, K.G. (2007).

### **Population of the Study**

This study focuses on listed thirteen (13) industrial goods companies quoted on the Nigerian Stock Exchange. Hence, the study's target population is as listed below;

1. Austin Laz & Company Plc
2. Berger Paints Plc
3. Beta Glass Plc
4. Bua Cement Plc
5. Cap Plc
6. Cutix Plc
7. Dangote Cement Plc
8. Greif Nigeria Plc
9. Lafarge Africa Plc

10. Meyer Plc
11. Notore Chemical Ind Plc
12. Portland Paints & Products Nigeria Plc
13. Premier Paints Plc

**Source: See Appendix 1**

#### **Sample Size**

Five companies were selected based on assets size of quoted companies that have the largest assets as at 2017 financial year end were considered suitable for the research. The following companies met the selection criteria and therefore qualify to be among the five (5) study companies;

1. Dangote Cement Plc
2. Lafarge Africa Plc
3. Beta Glass Plc
4. Cap Plc
5. Berger Paints Plc

The criteria for the choice of the study companies are hereunder stated;

1) The company must have been in existence (quoted on the Nigerian Stock Exchange) since year 2011. This is because data for the study covers 2011 to 2017 financial years.

2) Using year 2017 financial statements, the asset size of the company must be ranked as one of the largest among the companies quoted on the NSE since year 2011.

#### **Sampling Technique**

Considering the complex nature of the data set to be collected, purposive sampling technique has been employed in selecting five (5) industrial goods companies for this study.

#### **Sources of Data**

Data used in the study predominantly came from secondary sources. Data were extracted from 2011 to 2017 audited annual financial statement and accounts of the study firms, capturing the variables of interest.

### **Variables and Model Specification**

#### **Independent Variable**

The study's independent variable is corporate economic sustainability disclosure, to be measured in terms of Economic Disclosure Indices (ECDI), as computed from the annual reports of the sample firms. Content analysis is to be employed in determining the ECDI disclosure score. Content analysis is a method of codifying written text into various groups or categories on the basis of selected criteria (Ramin & Frank, 2011). In other words, the ECDI index is to be determined by quantifying the amount of ECDI information (disclosures) in the annual report and accounts under various parameters. Content analysis approach assumes that frequency is an indication of the subject matter's importance (Abdolmohammadi, 2005).

The Global Reporting Index (GRI) has been adopted in this study. In other words, a list of economic sustainability disclosure of each firm under study has been prepared, to represent ECDI disclosures (see Appendix 3). Consequently, a binary coding system and content analysis has been adopted to produce ECDI index for each company. An item of information disclosed in the annual financial statement report and accounts were scored three (3) if the style of disclosure is quantitative, one (1) score if it is qualitative report and zero (0) for an item not disclosed. Then, the sum of the scores is divided by the total number of items in all categories for all industrial goods firms. This score is to be regressed or correlated with the independent variables. According to Wisuttorn (2015), the ECDI Index is calculated thus:

$$ECDI_j = \frac{\sum_{i=1}^n X_{ij}}{N}$$

Where:

$ECDI_j$  = Economic Disclosure index of  $j^{th}$  firm.

$n_j$  = Total number of ECDI items for  $j^{th}$  firm.

$X_{ij}$  = 1 if  $i^{th}$  item is disclosed, and 0 if  $i^{th}$  item is not disclosed.

So that  $0 \leq ECDI \leq 1$

#### **Dependent Variable**

Three different profitability indices have been employed in this study. To achieve the objectives of the study, three multiple regression models relating proxies of the independent variable (social disclosures) to the proxy of

dependent variable (financial performance indicators) are presented below for empirical analysis. The generic model of the study is as follows;

$$ROA = \beta_0 + \beta_1SDI_{it} + \beta ASZ_{it} + \mu \text{ ----- (1)}$$

$$ROE = \beta_0 + \beta_1SDI_{it} + \beta ASZ_{it} + \mu \text{ ----- (2)}$$

$$EPS = \beta_0 + \beta_1SDI_{it} + \beta ASZ_{it} + \mu \text{ -----(3)}$$

Where:

ROA = Return on Assets (Dependent variable for model 1)

ROE = Return on Equity (Dependent variable for model 2)

EPS = Earnings per Share (Dependent variable for model 3)

EDI = Economic Disclosure Index

FSZ = Firm size (control variable)

$\beta_0$  represents the constant term or intercept of the relationship in the model. The coefficient  $\beta_1$ , represents the intercept for the independent variable (economic disclosure indices), while  $\mu$  represents the stochastic or error term. Below table enumerates the study variables alongside their operational definitions and how they are measured in the study.

**Table 3.1: Definition and Measurement of Variables**

Variable	Definition	Measurement (proxy)
ROA	Return on Assets	Ratio of net income to total assets, expressed in percentage terms.
ROE	Return on Equity	Ratio of net income to equity (shareholders' fund), expressed in percentage terms.
EPS	Earnings per Share	Unit price of shareholders' earnings/returns, as stated by the reporting entity in the annual reports.
ECDI	Economic Disclosure Index	Average economic disclosure using Global Reporting Index (GRI) table (Content analysis). See Appendix 7.
ASZ	Firm size (control variable)	Net present value of total assets of the study company.

Source: Researcher's compilation, 2022

**Data Presentation**

Data collected for this study include data for the following companies DANGOTE, LAFARGE, BETA, CAP, and BERGER. The data captures three dependent variables ROA, ROE and EPS regressed on economic index and FS as explanatory variables the data are presented on table 4.1 below:

**Table 4.1: Explanatory variables of ROA, ROE and EPS**

YEAR	C_ID	COMPANY	ROA	ROE	EPS	Economic index	FS
2011	1	DANGOTE	23.92	42.56	8.12	2.75	8.721385
2012	1	DANGOTE	22.21	35.62	8.92	2.82	8.828445
2013	1	DANGOTE	23.33	35.75	11.85	2.8	8.925932
2014	1	DANGOTE	16.36	27.22	9.42	2.82	8.993313
2015	1	DANGOTE	13.96	24.05	10.86	3	9.045692
2016	1	DANGOTE	18.81	36.04	11.34	2.82	9.184097
2017	1	DANGOTE	12.05	25.68	11.65	2.8	9.221644
2011	2	LAFARGE	9.68	21.52	4.9	2.8	8.181697
2012	2	LAFARGE	19.84	34.58	1.26	2.82	8.4744
2013	2	LAFARGE	11.24	17.94	7.38	2.8	8.485549
2014	2	LAFARGE	3.95	10.15	6.29	2.82	8.65611
2015	2	LAFARGE	3.69	7.45	3.15	2.82	8.701128
2016	2	LAFARGE	-2.73	-10.05	-6.37	2.82	8.761723
2017	2	LAFARGE	-1.71	-6.87	-1.05	2.82	8.732986
2011	3	BETA	5.4	10.67	2.95	2	7.434033
2012	3	BETA	8.86	14.96	4.78	2.64	7.43021

2013	3	BETA	7.12	11.01	3.98	2.64	7.434107
2014	3	BETA	12.34	19.07	7.6	2.64	7.521016
2015	3	BETA	10.89	16.54	8.23	2.8	7.582195
2016	3	BETA	10.97	17.05	10.11	3	7.663509
2017	3	BETA	10.71	16.15	11.16	2.8	7.716674
2011	4	CAP	53.96	140.82	2.37	2	6.488675
2012	4	CAP	51.02	114.43	2.49	2.8	6.532665
2013	4	CAP	32.62	70.22	2.29	2.75	6.691612
2014	4	CAP	29.89	66.84	2.14	3.00	6.700183
2015	4	CAP	29.26	72.25	0	3	6.841109
2016	4	CAP	25.77	69.08	0	3	6.830009
2017	4	CAP	14.35	32.66	0	3	6.930749
2011	5	BERGER	8.85	13.33	1.14	2	6.590604
2012	5	BERGER	5.71	8.99	0.77	2	6.613024
2013	5	BERGER	6.15	10.04	0.85	2	6.634621
2014	5	BERGER	7.07	11.39	1.11	3	6.656606
2015	5	BERGER	8.86	14.6	1.55	3	6.704704
2016	5	BERGER	2.94	4.64	0.5	3	6.69652
2017	5	BERGER	23.92	42.56	8.12	3	8.721385

Source: annual financial report of the selected companies for various years.

#### IV. DATA ANALYSIS AND RESULTS

Data analysis in this study was carried out using Panel analysis estimate as was expressed in the model stated in this work. The choice of the use of fixed or random panel estimation is subject to the result of Hausman Test.

##### Hausman Test.

Correlated Random Effects - Hausman Test

Equation: Untitled

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	6.885626	2	0.0720

Correlated Random Effects - Hausman Test

Equation: Untitled

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	11.866339	2	0.0527

Correlated Random Effects - Hausman Test

Equation: Untitled

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.272994	2	0.8724



From the above result, the p-value of Hausman test Summary was obtained as 0.0720, 0.0527 and 0.8724 for the three models. Since the p-value of Hausman test summary is greater than 0.05, we accept the null hypothesis that random panel analysis is more suitable for the estimate.

### Random Panel analysis model one

Dependent Variable: ROA  
 Method: Panel EGLS (Cross-section random effects)  
 Date: 12/20/22 Time: 14:34  
 Sample: 2011 2017  
 Periods included: 7  
 Cross-sections included: 5  
 Total panel (unbalanced) observations: 34  
 Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	28.01437	23.14441	1.210416	0.2353
ECONOMIC_INDEX	-3.577550	5.009726	-0.714121	0.4805
FS	-0.356600	3.044276	-0.117138	0.9075
Effects Specification				
			S.D.	Rho
Cross-section random			7.503875	0.4471
Idiosyncratic random			8.345293	0.5529
Weighted Statistics				
R-squared	0.018035	Mean dependent var	5.985882	
Adjusted R-squared	-0.045317	S.D. dependent var	8.849045	
S.E. of regression	8.979156	Sum squared resid	2499.383	
F-statistic	0.284683	Durbin-Watson stat	0.696002	
Prob(F-statistic)	0.754198			
Unweighted Statistics				
R-squared	0.003891	Mean dependent var	15.04029	
Sum squared resid	5339.794	Durbin-Watson stat	0.325776	

*Source: E-view version 10.0 statistical Result, 2022*

### Relationship between economic index, FS and Return on Asset

The result on the above table reveals that the coefficient of economic index is negative with the value of -3.577550; the coefficient of FS is negative at -0.356600. The negative values of economic index and FS indicate that a negative effect exist between the variables and return on assets (ROA) of the selected companies. These imply that economic index inverse effect on the performance selected companies.

### Random Panel analysis model two

Dependent Variable: ROE  
 Method: Panel EGLS (Cross-section random effects)  
 Date: 12/20/22 Time: 14:38  
 Sample: 2011 2017  
 Periods included: 7  
 Cross-sections included: 5  
 Total panel (unbalanced) observations: 34  
 Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
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C	91.81927	49.23905	1.864765	0.0717
ECONOMIC_INDEX	-10.79214	11.04698	-0.976931	0.3362
FS	-4.051253	6.423900	-0.630653	0.5329
Effects Specification				
			S.D.	Rho
Cross-section random			14.89378	0.3943
Idiosyncratic random			18.46079	0.6057
Weighted Statistics				
R-squared	0.046705	Mean dependent var		13.02915
Adjusted R-squared	-0.014798	S.D. dependent var		21.21571
S.E. of regression	21.19652	Sum squared resid		13928.07
F-statistic	0.759396	Durbin-Watson stat		0.620422
Prob(F-statistic)	0.476456			
Unweighted Statistics				
R-squared	0.050969	Mean dependent var		29.76765
Sum squared resid	31215.86	Durbin-Watson stat		0.276823

*Source: E-view version 10.0 statistical Result, 2022*

### **Relationship between economic index, FS and Return on Equity**

The result on the above table reveals that the coefficient of economic index is negative with the value of -10.79214; the coefficient of FS is negative at -4.051253. The negative values of economic index and FS indicate that a negative effect exist between the variables and return on equity of the selected companies. These imply that a percentage increase in the slope of economic index and FS will result to a corresponding decrease in return on equity to the tone of -10.79214 and -4.051253 respectively

### **Random Panel analysis model two**

Dependent Variable: EPS  
 Method: Panel EGLS (Cross-section random effects)  
 Date: 12/20/22 Time: 14:41  
 Sample: 2011 2017  
 Periods included: 7  
 Cross-sections included: 5  
 Total panel (unbalanced) observations: 34  
 Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-16.78213	9.135923	-1.836939	0.0758
ECONOMIC_INDEX	0.769024	1.761521	0.436568	0.6655
FS	2.480362	1.223479	2.027302	0.0513
Effects Specification				
			S.D.	Rho
Cross-section random			3.842812	0.6366
Idiosyncratic random			2.903104	0.3634
Weighted Statistics				
R-squared	0.162347	Mean dependent var		1.277896
Adjusted R-squared	0.108305	S.D. dependent var		2.982191
S.E. of regression	2.821185	Sum squared resid		246.7315

F-statistic	3.004075	Durbin-Watson stat	1.115083
Prob(F-statistic)	0.064194		
Unweighted Statistics			
R-squared	0.298305	Mean dependent var	4.638824
Sum squared resid	481.1155	Durbin-Watson stat	0.571851

**Source:** E-view version 10.0 statistical Result, 2022

### **Relationship between economic index, FS and Earnings per share**

The result on the above table reveals that the coefficient of economic index is positive with the value of 0.769024; the coefficient of FS is positive at 2.480362. The positive values of economic index and FS indicate that a direct effect exist between the variables and earnings per shares of the selected companies. These imply that a percentage increase in the slope of economic index and FS will result to a corresponding increase in earnings per share to the tone of 0.769024 and 2.480362 respectively.

### **Test of Hypotheses**

To ascertain the significance of these results, the t-statistics results of each of the independent variables are considered; these are discussed under the test of hypotheses.

#### **Test of Hypothesis 1**

**H0<sub>1</sub>:** There is no significant effect between economic disclosure and return on assets (ROA).

In testing this first hypothesis of the study, the regression result on table 4.2 was used. From the result, the p-value (t-stat probability) of the first independent variable economic disclosure was obtained as 0.4805; which is greater than the significant level of 0.05 (5%) i.e.  $P > 0.05$ . This result indicates that an insignificant effect exists. Therefore, we accept the null hypothesis which states that There is no significant effect between economic disclosure and return on assets (ROA).

#### **Test of Hypothesis 2**

**H0<sub>1</sub>:** There is no significant effect between economic disclosure and return on equity (ROE).

In testing the second hypothesis of the study, the regression result on table 4.3 was used. From the result, the p-value (t-stat probability) of the first independent variable economic disclosure was obtained as 0.3362; which is greater than the significant level of 0.05 (5%) i.e.  $P > 0.05$ . This result indicates that an insignificant effect exists. Therefore, we accept the null hypothesis which states that There is no significant effect between economic disclosure and return on equity (ROE).

#### **Test of Hypothesis 3**

**H0<sub>3</sub>:** There is no significant effect between economic disclosure and earnings per share (EPS).

In testing the third hypothesis of the study, the regression result on table 4.4 was used. From the result, the p-value (t-stat probability) of the first independent variable economic disclosure was obtained as 0.6655; which is greater than the significant level of 0.05 (5%) i.e.  $P > 0.05$ . This result indicates that an insignificant effect exists. Therefore, we accept the null hypothesis which states that, There is no significant effect between economic disclosure and earnings per share (EPS).

## **V. Discussion of Findings**

The findings from the analysis and test statistics are discussed in line with the empirical review carried out in the second chapter this study. Discussions of the findings are as follows:

1. In respect of the first objective and the first hypothesis of this study, discovered that economic disclosure has insignificant negative effect on return on assets (ROA) of the captured industrial goods firms.
2. In respect to the second objective and hypothesis of this study, discovered that economic disclosure has insignificant negative effect on return on return on equity (ROE) of the captured firms. .
3. In respect to the third objective and hypothesis of this study, discovered that economic disclosure has insignificant positive effect on earnings per share (EPS) of the captured manufacturing firms.

The study's empirical results show that there is no significant relationship between economic disclosure index (ECDI) and financial performance indices (ROA, ROE) of the selected quoted industrial goods sector in Nigeria. This implies that no matter the level of economic disclosures made by industrial goods firms in Nigeria (such as: economic value generated in terms of revenue turnover and economic distributed which include

Economic distributed Operating costs, Employee wages and benefits, Payment to providers of capital, Payment to government, Community investments, Value of defined benefit plan obligations, Mode of setting the defined benefit plan obligations liability), financial performance of the companies will not be seriously affected. This could be attributed to the under-developed nature of Nigeria's manufacturing sectors, as well as the fact that adherence to sustainability reporting framework mainly on economic sustainability performance.

The Coefficient of economic disclosures index is negative which indicates that economic disclosures have indirect relationship with (ROA and ROE) financial performance of listed industrial goods sectors in Nigeria. The finding agreed with the findings in the previous studies of Asuquo, Dada, Temitayo and Onyeogaziri, (2018) and Memed and Amir (2020) who found that economic quantitative disclosure has a negative relationship on return on asset (ROA) and return on equity (ROE) (performance indicators).

## VI. CONCLUSION

This study examined the effect of economic sustainability disclosure on financial performance of quoted industrial goods sector in Nigeria. The need for economic sustainability disclosure as an aspect of sustainability reporting is rapidly gaining momentum, especially considering the fact that various stakeholders are not relenting in their quest to know how industrialists disclose information on how production and business activities affect the environment and corporate stakeholders. This study is anchored on the stakeholder theory; hence economic information is disclosed to all the stakeholders without considering the element of power or hierarchy of each stakeholder. This study concludes that economic sustainability reporting/disclosure practices have negative and insignificant effect on ROA and ROE (financial performance) of listed industrial goods sector in Nigeria. As a result, the cost and time invested by industrial goods sector in making economic sustainability disclosures, should be closely monitored and regulated as the outcome has little or unfavourable impact on performance of the companies.

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