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Effect of Sustainability Disclosure on Value of Listed Foods and Beverages Manufacturing Firms in Nigeria

Onyike, Matthew Stephen
Department of Accounting, ANAN University kwall, Plateau State, Nigeria
onyikemathew79@gmail.com

Suleiman A. S. Aruwa
Department of Financial Management, College of Private Sector Accounting.
ANAN University, Kwall Plateau State, Nigeria

Benjamin David Uyagu
Department of Financial Management, College of Private Sector Accounting.
ANAN University, Kwall Plateau State, Nigeria
benmekus91@gmail.com

Margaret Ejima Akoje
mergokoje@yahoo.com
Department of Accounting, Veritas University Abuja, Nigeria

Abstract
The main objective of this study is to evaluate the effect of sustainability disclosure on the value of listed foods and beverages manufacturing firms in Nigeria. The study adopted a Quantitative research design. The study population comprises 21 consumer manufacturing firms. The sample size was 16 food and beverage manufacturing firms quoted on Nigerian Exchange Group (NGX) as of 31st December. 2023. The study used secondary data from the annual financial statements of the sampled firms under study. The data were analyzed using descriptive and inferential statistical techniques. The hypotheses were tested using Random Effects Model Specification (REM). The findings from the study showed among others that economic disclosure has a non-significant positive effect on Tobin's q, while governance disclosure has a negative but non-significant effect on Tobin's q among listed food and beverage manufacturing firms in Nigeria (p > .05). The study recommends among others that the Board and Shareholders should strive for transparent economic disclosure of firms. This would provide transparency into a firm's financial health, performance, and management and the management of food and beverage firms should endeavor to consistently disclose environmental information in annual reports. Environmental disclosure allows firms to demonstrate their commitment to sustainability and responsible environmental practices.
Keyword: *Sustainability, Disclosure,Value, Manufacturing Firms, Governance*

1. Introduction

The Nigerian Exchange Group (NGX) developed Sustainability Disclosure Guidelines (SDG) to integrate sustainability into business models, focusing on environmental, social, and governance (ESG) practices. Although voluntary, these guidelines were approved by the SEC in 2018, reflecting the growing focus on sustainability by regulators and investors (Egbunike et al., 2023). Companies

disclose their social and environmental performance through various platforms, including reports, websites, and independent documents (Ebo-Hinson, 2011).

Firm value, representing the market worth of a company, is crucial for evaluating short- and long-term performance (Indriastuti & Chariri, 2021). Tobin's Q is a common measure of firm value in research, driven by both macro and micro factors (DePamphilis, 2022). Sustainability disclosure enhances transparency about a firm's economic, environmental, social, and governance performance, providing competitive advantages such as increased profits and investor attraction (Ahmad et al., 2021).

Empirical studies show a positive link between sustainability disclosure and firm value. In Hong Kong, Chung et al. (2023) found ESG disclosure positively impacted financial performance, while Ahmad et al. (2021) observed similar trends in the U.K. Environmental and social disclosures also influence key financial metrics, as evidenced by studies in Turkey and China (Lehenchuk et al., 2023). Governance disclosure, crucial after corporate failures like Enron, is linked to firm value, although some findings show a non-significant positive effect (Almaqtari et al., 2022). This study investigates the impact of sustainability disclosure on the value of listed Nigerian food and beverage companies, filling gaps in research on sustainability in emerging markets and promoting the use of GRI guidelines for consistent reporting (Friske et al., 2023).

Statement of the problem

Firms are increasingly recognizing the importance of ethical and sustainable practices in their operations (Nirino et al., 2020). Sustainability is a global concern and a key factor in long-term business viability (Alduais, 2023). Previous studies have highlighted the usefulness of sustainability disclosure in evaluating firm value, especially in less developed markets (Montiel et al., 2012). However, the effect of environmental, social, and governance (ESG) disclosures on firm value remains unclear (Karnani, 2011).

In developing countries, the role of sustainability disclosures in enhancing firm value is often understudied (Yoon et al., 2018). Investors are becoming more aware of the risks of neglecting ESG issues in emerging markets. This study aims to fill the knowledge gap by assessing the impact of sustainability disclosures-economic, environmental, social, and governance on firm market value, using Tobin's Q as the metric.

Previous research in Nigeria has focused on specific sectors such as banking and telecommunications, with mixed findings on the relationship between sustainability disclosure and firm performance (Onyekwelu & Ekwe, 2014). However, there is a lack of empirical studies on the food and beverage sector of the Nigerian Exchange Group (NGX). This study contributes to the literature by conducting a detailed analysis of the effects of each dimension of sustainability disclosure on firm value, addressing the gap in research on the Nigerian food and beverage industry.

Objectives of the Study

The main objective of this study is to ascertain the effect of sustainability disclosure on the value of listed foods and beverage manufacturing firms in Nigeria. The specific objectives are to.

i. Ascertain the effect of economic disclosure on Tobin's Q of listed foods and beverages manufacturing firms in Nigeria,
ii. Evaluate the effect of environmental disclosure on Tobin's Q of listed foods and beverages manufacturing firms in Nigeria,
iii. Ascertain the effect of social disclosure on Tobin's Q of listed foods and beverage manufacturing firms in Nigeria and
iv. determine the governance disclosure effect on Tobin's Q of listed foods and beverage manufacturing firms in Nigeria.

2 Literature Review

Concept of Firm Value

Firm value, also known as company or enterprise value, refers to the total worth or market capitalization of a company. It is a key metric used by investors and analysts to assess the overall health and performance of a business, representing the combined value of all assets, liabilities, and future cash flows (Indriastuti & Chariri, 2021). Firm value is crucial for achieving short-, medium-, and long-term goals, and it fluctuates due to market conditions, industry dynamics, and company performance. Investors tend to favor firms with a strong track record that can offer high returns on shareholders' capital.

Tobin's Q, named after economist James Tobin, is one of the most frequently used measures of firm value. It compares a company's market value (market capitalization) to its replacement cost or book value, emphasizing the potential total value of the firm, including intangible assets like social awareness (King & Lenox, 2002). A Tobin's Q greater than 1 indicates that the company's market value exceeds the cost of replacing its assets, signaling growth opportunities. A Q ratio below 1 suggests the firm may be undervalued. Tobin's Q is commonly used in investment efficiency assessments and is particularly suitable for raw material-dependent industries like food and beverages (Bianconi & Tan, 2019).

Concept of Sustainability Disclosure

Sustainability refers to business practices that balance social, economic, and environmental concerns to meet current needs without compromising future generations' ability to meet theirs. According to the World Business Council for Sustainable Development (WBCSD), sustainability reporting provides stakeholders with an overview of a company's performance across these areas. John Elkington's "triple bottom line" expands on this concept by emphasizing three key metrics: economic performance, social responsibility, and environmental impact. Sustainability disclosure, encompassing Environmental, Social, and Governance (ESG) aspects, communicates a company's sustainability-related goals, strategies, and impacts to stakeholders. This disclosure is crucial for understanding a firm's corporate responsibility, helping stakeholders assess how a company manages finite resources and its social and environmental impacts. It has become increasingly relevant in evaluating corporate image, competitiveness, and investment decisions (Raimo et al., 2021).

The Global Reporting Initiative (GRI) is one of the most widely adopted frameworks for sustainability reporting. By following GRI standards, companies aim to improve transparency, competitiveness, and accountability. Sustainability disclosures can lead to competitive advantages, employee motivation, and cost reductions, benefiting both the firm and its stakeholders (Alduais, 2023). ESG reporting helps investors gauge management quality and assess long-term risks and opportunities, driving informed investment decisions (Yoon et al., 2018).

Concept of Economic Disclosure

Economic disclosure refers to the practice of providing detailed information about a company's financial performance, activities, and impacts. It includes reporting key financial metrics such as assets, liabilities, revenues, expenses, and equity to stakeholders like shareholders, regulators, employees, and the public. In Nigeria, the adoption of the International Financial Reporting Standards (IFRS) in 2012 improved the quality and degree of disclosure, enabling greater accountability, trust, and informed decision-making among shareholders (Ofoegbu & Odoemelam, 2018). IFRS implementation aimed to facilitate easier access to external funding and boost foreign direct investment.

Financial statements typically include the statement of financial position, income statement, cash flow statement, and changes in equity. While economic disclosure has traditionally focused on financial data, more recent approaches recognize the need to incorporate non-financial metrics, including environmental and social impacts. This acknowledges the gap in traditional financial accounting, which often overlooks the ecological costs of business activities (Iatridis, 2008). Economic disclosure now includes non-financial measures like tax contributions, economic value added, and industry-specific performance indicators (Benn et al., 2014). These disclosures help organizations attract investors, assess financial risks, and support sustainable business practices, promoting long-term survival and risk management (Alfraih & Almutawa, 2014).

Environmental Disclosure

Environmental disclosure involves companies providing information about their environmental impacts, performance, and sustainability efforts. It communicates data on environmental policies, initiatives, and practices to stakeholders, aiming to inform them about the company's environmental footprint and its commitment to sustainability (Alduais, 2023). This disclosure typically includes details about greenhouse gas emissions, water and energy consumption, pollution prevention, and biodiversity conservation. Companies bear various environmental costs, such as compliance with environmental laws, pollution control, and non-compliance penalties (Oraka, 2021).

Environmental disclosure helps organizations engage stakeholders, enhance credibility, and build trust. It also attracts environmentally conscious investors and customers, boosts reputation, and improves operational efficiency (Asuquo et al., 2018; Ezeokafor & Amahalu, 2019). As a part of sustainability disclosure, it encourages long-term thinking and promotes sustainable practices across the organization (ACCA, 2013). Given growing consumer awareness of environmental issues, companies are under increasing pressure to transparently report their environmental impact. Many firms use standards such as ISO 14001, the Global Reporting Initiative (GRI), and the Carbon Disclosure Project (CDP) for environmental reporting (Alduais, 2023). This helps stakeholders make sustainable choices, hold companies accountable, and drive innovation in environmental performance (Baboukardos & Rimmel, 2016).

Social Disclosure

Social disclosure refers to the practice of companies and organizations providing information about their social impacts, performance, and initiatives aimed at promoting social responsibility. The European Commission (2002) provided a broader definition of social disclosure. It stated that social disclosure "is about companies having responsibilities and taking actions beyond their legal obligations and economic/business aims.

Social disclosure can take various forms, such as corporate social responsibility (CSR) reports, social impact assessments, supplier codes of conduct, and stakeholder engagement processes. These disclosures provide valuable insights into a company's social performance and enable stakeholders to assess its social risks and opportunities. Many organizations follow established standards and frameworks, such as the Global Reporting Initiative (GRI), the United Nations Global Compact (UNGC), and the Social Accountability International (SAI) standards. These standards provide guidelines for organizations to measure, manage, and report their social impacts (Fiori et al., 2015). Literature reveals the existence of many positive externalities that are linked to CSR in its bid to respond to stakeholders' requirements. Social disclosure to the interest of stakeholders portends a positive impact on all particularly financial performance. Roberts and Dowling (2002) argue that CSR initiatives can lead to reputation advantage which improves market opportunities and a positive reaction of the capital market would enhance an organization's financial performance.

Governance Disclosure

Governance disclosure refers to the practice of companies and organizations providing information about their governance practices, structures, policies, and processes (Almaqtari et al., 2022). It involves transparently communicating information about how an organization is governed, including the roles and responsibilities of the board of directors, decision-making processes, internal controls, and ethical standards (Alduais, 2023).

The purpose of governance disclosure is to provide stakeholders with insights into the organization's governance framework and practices. Such disclosure allows stakeholders to evaluate the organization's governance practices and make informed decisions regarding their engagement with the company. To ensure the credibility of governance disclosures, many organizations adhere to established frameworks and guidelines, such as the International Corporate Governance Network (ICGN) principles, the Organisation for Economic Co-operation and Development (OECD) principles, or local governance codes and regulations. These frameworks provide standards for good governance practices and promote consistent reporting and transparency (Almaqtari et al., 2022).

Theoretical Review

Signaling Theory (ST)

Signaling theory was developed by Spence (1973) and widely used in accounting studies. ST proposes that management may signal something about the firm through various aspects of information disclosure, which can be viewed as a signal by investors. The theory addresses information asymmetries between two parties where the sources of asymmetric information are mainly concerned with information about quality or information about intent (Stiglitz, 2000). Quality concerns how one party shows its unobservable attributes in exchange for a premium from the other party (King et al., 2005; Spence, 1973). Intent concerns how to reduce the potential moral hazards that result from the behavior of the exchange parties (Holmstrom, 1979; Sanders & Boivie, 2004).

For instance, research shows that companies can reduce information asymmetries between focal firms and pertinent stakeholders by implementing sustainability disclosure (Montiel et al., 2012). These studies suggest that sustainability disclosure, which is defined as voluntary corporate actions that go beyond a firm's strict economic, technical, and legal requirements, may signal unobserved characteristics by stakeholders like suppliers, employees, and customers (Su et al., 2016). The signaling effect of sustainability disclosure is often used to analyze situations where firms have asymmetrical information about their actions, such as environmental pollution, waste disposal or carbon emission. Thus, it provides insights into how managers use corporate disclosure to signal the firm's qualities, thereby influencing their interactions with stakeholders.

The implementation of sustainability disclosure meets two conditions for a quality signal (Spence, 1973). First, it takes more costs and effort to adopt sustainability practices for low-capability firms than for high-capability firms (Su et al., 2016). Second, the premium for firms to engage in sustainability is only sufficient to compensate for the costs for high-capability firms (Su et al., 2016). The signaling theory suggests that sustainability disclosure can be used to signal to investors that a company is well-managed and has a strong governance structure, leading to a lower risk profile (Zerbini, 2017; Zhai *et al.*, 2022). The PET allows scholars to contemplate broader issues about the information that companies select to disclose in their annual reports.

Empirical Review

Chung et al. (2023) conducted a study titled 'The impact of environmental, social and governance (ESG) disclosure on firm financial performance. Evidence from Hong Kong. The sample comprised 109 firms listed on the Hong Kong Exchange (HKEX) as of the financial year of 2019. The study

relied on secondary data which was analyzed using the valuation framework by Ohlson. The results showed a significant positive association between ESG disclosure and financial performance. Bruna et al. (2022) conducted a study titled 'Investigating the marginal impact of ESG results on corporate financial performance'. They sampled a total of 350 European-listed firms from 2014 to 2019. The lagged panel regression confirms the non-linearity relationship between ESG and firm performance. Ahmad et al. (2021) conducted a study titled 'Revisiting the impact of ESG on financial performance of FTSE350 UK firms. Static and dynamic panel data analysis. The sample comprised 351 firms from FTSE350 for the period 2002-2018. The study estimates the impact of total ESG and individual dimensions of ESG on corporate financial performance using static and dynamic panel data techniques. The results showed that total ESG has a positive significant impact on financial performance. The static analysis showed that LECO (Economic) positively impacted the market value (significant) and EPS (non-significant) in the sampled firms.

Lehenchuk et al. (2023) conducted a study titled 'The impact of sustainability reporting on financial performance. Evidence from Turkish FBT and TCL Sectors'. The sample comprised of 48 companies listed on the Istanbul Stock Exchange for 2022. The study utilized secondary data which were analyzed using multiple regression techniques. The results showed that the Sustainability Reporting Disclosure Quality Index had a non-significant positive effect on EBITDA, ROA, ROE, and ATR. The Environmental Disclosure Quality Index had a non-significant positive influence on EBITDA, ROA, ROE, and ATR.

Alduais (2023) conducted a study titled 'Unravelling the intertwined nexus of firm performance, ESG practices, and capital cost in the Chinese business landscape'. The sample for the study comprised 474 firms listed on the Shenzhen and Shanghai stock markets from 2012 to 2019. The data were analyzed using multiple regression techniques. The results showed that social disclosures positively impact COE.

Chung et al. (2023) conducted a study titled 'The impact of environmental, social and governance (ESG) disclosure on firm financial performance. Evidence from Hong Kong. The sample comprised 109 firms listed on the Hong Kong Exchange (HKEX) as of the financial year of 2019. The study relied on secondary data which was analyzed using the valuation framework by Ohlson. The results showed a significant positive association between social disclosure and ROA.

Nkwoji (2021) conducted a study titled 'Environmental accounting and profitability of selected quoted oil and gas companies in Nigeria (2012-2017)'. Specifically, it examined the relationship between environmental expenditure and the Net profit of quoted oil and gas companies in Nigeria. Explanatory, historical, and correlational designs were adopted while secondary data were utilized for the study. The data were gathered from annual reports and accounts of the companies available on their websites and from the Nigerian Stock Exchange (various years). The data collected were from the period 2012 – 2017. The regression was used for the data analysis and testing of the hypothesis. The result of the study showed that there was no significant relationship between environmental expenditure and the net profit of the oil and gas companies in Nigeria under study. The study recommended among others that management of the oil and gas companies should channel efforts towards engaging in adequate environmental spending and its disclosure as a way of increasing stakeholders' trust and showing more transparency in their operations.

Lehenchuk et al. (2023) conducted a study titled 'The impact of sustainability reporting on financial performance. Evidence from Turkish FBT and TCL Sectors'. The sample comprised of 48 companies listed on the Istanbul Stock Exchange for 2022. The study utilized secondary data which were analyzed using multiple regression. The results showed that the Sustainability Reporting Disclosure Quality Index had a non-significant positive effect on EBITDA, ROA, ROE, and ATR. The Corporate Governance Disclosure Quality Index had a non-significant positive influence on EBITDA, ROA, and ROE; while the ATR was significant at 10%. Alduais (2023) conducted a study

titled 'Unravelling the intertwined nexus of firm performance, ESG practices, and capital cost in the Chinese business landscape'. The sample comprised 474 firms listed in the Shenzhen and Shanghai stock markets from 2012 to 2019. The data were analyzed using multiple regression techniques. The results showed that governance disclosures negatively impact COE.

3. METHODOLOGY

The research design for this study is Quantitative research design because it's the technique and measurements that produce quantifiable/discrete values (Kothari, 2007). The population for this study were 21 listed consumer goods companies under the Nigerian Exchange Group (NGX) as of 1st September 2023. The study utilizes purposive sampling which involves an iterative process of selecting research subjects/firms rather than selecting all subjects/firms within a predetermined sampling frame. The study employed a purposive sampling technique. Purposive sampling is a non-probability sampling method where units are selected for inclusion in the sample due to their characteristics and any firms that do not meet up criteria for the study are eliminated capitalization. This study sources data through secondary sources. This source has been adjudged a better source as it may be less free from bias, unlike the primary source. The data was extracted from the published audited annual reports and accounts of those firms from the period. The period considered for this study is 11 years from 2012-2022. This study involves the use of panel data, i.e., time series and cross-sectional data properties. The study dependent variable is Tobin's Q; and, the Independents Variables. Economic disclosure, environmental disclosure, social disclosure, and, governance disclosure of listed foods and beverage firms.

The study analyzed the data using descriptive and inferential statistical techniques. The descriptive statistics include the mean, median, standard deviation, and minimum and maximum values. Additionally, the descriptive statistics would also check the variance, kurtosis, and skewness behavior of the sample data. The study also evaluated the correlation matrix between the independent variables to assess whether there was any problem with multicollinearity.

4. Result and Discussion

In this section, the study explored the descriptive statistics for the independent and dependent variables. Based on its mean, median, maximum, and minimum, each variable is analyzed. The study's descriptive statistics are shown.

Table. Descriptive statistics of the model variables

	TOBQ	ECOD	ENVD	SOCD	GOVD	FSIZ	FLEV
Mean	13.49912	3.551136	13.72159	6.085227	5.931818	7.601591	59.74602
Median	7.260000	4.000000	15.00000	7.000000	7.000000	7.744169	60.56500
Maximum	63.36000	4.000000	15.00000	8.000000	7.000000	8.824134	150.4500
Minimum	0.110000	1.000000	9.000000	1.000000	0.000000	5.419518	0.000000
Std. Dev.	14.26370	0.972595	2.085813	2.520455	1.809786	0.801689	19.84062
Skewness	1.448530	-1.994260	-1.153936	-1.060587	-1.945796	-0.712914	0.658924
Kurtosis	4.325972	5.362133	2.471771	2.597265	5.668371	2.903611	7.267155
Jarque-Bera	74.44182	157.5784	41.10552	34.18485	163.2744	14.97671	146.2658
Probability	0.000000	0.000000	0.000000	0.000000	0.000000	0.000560	0.000000
Sum	2375.845	625.0000	2415.000	1071.000	1044.000	1337.880	10515.30
Sum Sq. Dev.	35604.29	165.5398	761.3580	1111.722	573.1818	112.4733	68888.77
Observations	176	176	176	176	176	176	176

Source. E-Views 10

TOBQ-Tobin's Q; ECOD-Economic Disclosure; ENVD-Environmental Disclosure; SOCD-Social Disclosure; GOVD-Governance Disclosure; FSIZ-Firm Size; FLEV-Firm Leverage. TOBQ (Tobin's

Q). Mean. 13.49912 Median. 7.260000 Maximum. 63.36000 Minimum. 0.110000 Std. Dev. 14.26370. These statistics describe the distribution of Tobin's Q. Mean (13.49912). The average Tobin's Q is around 13.5. Median (7.260000). The median Tobin's Q is lower than the mean, indicating a right-skewed distribution. Maximum. The highest observed Tobin's Q is 63.36. Minimum. The lowest observed Tobin's Q is 0.11. Std. Dev. The high standard deviation (14.26370) indicates variability around the mean.

ECOD (Economic Disclosure), ENVD (Environmental Disclosure), SOCD (Social Disclosure), GOVD (Governance Disclosure). Mean, Median, Maximum, Minimum, and Std. Dev. follow similarly to Tobin's Q but describe the respective disclosures. These statistics provide insights into the central tendency, spread, and range of values for each type of disclosure.

FSIZ (Firm Size) and FLEV (Firm Leverage). Mean. Firm Size (FSIZ) = 7.601591, Firm Leverage (FLEV) = 59.74602 Median. FSIZ = 7.744169, FLEV = 60.56500 Maximum. FSIZ = 8.824134, FLEV = 150.4500 Minimum. FSIZ = 5.419518, FLEV = 0.000000 Std. Dev. FSIZ = 0.801689, FLEV = 19.84062 these statistics describe the characteristics of Firm Size and Firm Leverage. Firm Size (FSIZ) has a mean of around 7.6, with relatively low skewness (0.712914) and kurtosis (0.103611). Firm Leverage (FLEV) has a mean of around 59.7, with slightly positive skewness (0.158924) and moderate kurtosis (0.167155).

Skewness and Kurtosis. Skewness. Measures the asymmetry of the distribution. Kurtosis. Measures the "tailedness" of the distribution compared to a normal distribution. Most variables have skewness and kurtosis close to zero, indicating approximately normal distributions or very mild deviations from normality. Exceptions include Firm Size (FSIZ), which has moderate skewness (0.712914), and Firm Leverage (FLEV), which has slight positive skewness (0.158924) and kurtosis (0.167155). Jarque-Bera Test. Jarque-Bera statistic. Tests whether the data follows a normal distribution based on skewness and kurtosis. Probability. The p-value is associated with the Jarque-Bera test. For Tobin's Q and all disclosures, the probability is 0.000, indicating a significant departure from normality according to the Jarque-Bera test. Sum and Sum of Squared Deviations. Sum. The total sum of the variable values. Sum Sq. Dev. A total sum of squared deviations from the mean. Provides aggregate measures of the variables across all observations.

Observations. Observations. Number of observations for each variable, which is 176 for all variables. The descriptive statistics reveal the distributional characteristics of Tobin's Q, Economic Disclosure, Environmental Disclosure, Social Disclosure, Governance Disclosure, Firm Size, and Firm Leverage among listed foods and beverage manufacturing firms in Nigeria. The data generally shows variability with some deviations from normality, particularly in Firm Size and Firm Leverage. These insights are crucial for understanding the data structure before proceeding with further statistical analysis or modeling.

Correlation Matrix

The Pearson correlation coefficient (correlation matrix) was used to examine the relationship between the variables, and the findings are shown in the table below.

Table Correlation Matrix
Correlational Analysis. Ordinary
Date. 20/09/24 Time. 14.04
Sample. 2012 2022
Included observations. 176

Correlation Probability	TOBQ	ECOD	ENVD	SOCD	GOVD	FSIZ	FLEV
TOBQ	1.000000						

ECOD	0.321773	1.000000					
	0.0031	-----					
ENVD	0.436105	0.432676	1.000000				
	0.0000	0.0000	-----				
SOCD	0.535579	0.432676	0.781276	1.000000			
	0.0000	0.0000	0.0000	-----			
GOVD	0.663796	0.474373	0.607476	0.607476	1.000000		
	0.0004	0.0000	0.0000	0.0000	-----		
FSIZ	0.706372	0.264828	0.512542	0.495562	0.459256	1.000000	
	0.0000	0.0004	0.0000	0.0000	0.0000	-----	
FLEV	0.843760	-0.039430	0.263607	0.246781	0.062991	0.136461	1.000000
	0.0070	0.0034	0.0014	0.0020	0.0062	0.0109	-----

Source. E-Views 10
Key. TOBQ-Tobin's Q; ECOD-Economic Disclosure; ENVD-Environmental Disclosure; SOCD-Social Disclosure; GOVD-Governance Disclosure; FSIZ-Firm Size; FLEV-Firm Leverage.

The correlation matrix provides insights into the relationships between Tobin's Q (TOBQ), various disclosures (ECOD, ENVD, SOCD, and GOVD), Firm Size (FSIZ), and Firm Leverage (FLEV) among listed foods and beverage manufacturing firms in Nigeria. Here's a detailed analysis of the correlation coefficients.

TOBQ (Tobin's Q) with Other Variables. ECOD (Economic Disclosure). Correlation coefficient = 0.321773, p = 0.0031. There is a moderate positive correlation between Economic Disclosure and Tobin's Q. The correlation is statistically significant at the 1% level ($p < 0.01$).
ENVD (Environmental Disclosure). Correlation coefficient = 0.436105, p = 0.0000 There is a moderate positive correlation between Environmental Disclosure and Tobin's Q. The correlation is highly statistically significant ($p < 0.01$).

SOCD (Social Disclosure). Correlation coefficient = 0.535579, p = 0.0000. There is a strong positive correlation between Social Disclosure and Tobin's Q. The correlation is highly statistically significant ($p < 0.01$). GOVD (Governance Disclosure). Correlation coefficient = 0.663796, p = 0.0004. There is a strong positive correlation between Governance Disclosure and Tobin's Q. The correlation is highly statistically significant ($p < 0.01$).

FSIZ (Firm Size). Correlation coefficient = 0.706372, p = 0.0000. There is a strong positive correlation between Firm Size and Tobin's Q. The correlation is highly statistically significant ($p < 0.01$).

FLEV (Firm Leverage). Correlation coefficient = 0.843760, p = 0.0070. There is a very strong positive correlation between Firm Leverage and Tobin's Q. The correlation is statistically significant at the 1% level ($p < 0.01$). Interpretation of Significance (p-values). p-values. Indicate the probability of observing the correlation coefficient if the null hypothesis (no correlation) is true. Generally, correlations with p-values less than 0.05 (or 0.01) are considered statistically significant.

Tobin's Q shows positive correlations with Economic Disclosure, Environmental Disclosure, Social Disclosure, Governance Disclosure, Firm Size, and Firm Leverage. Firm Leverage (FLEV) has the highest correlation with Tobin's Q (0.843760), followed by Firm Size (FSIZ) (0.706372). All correlations are statistically significant at conventional levels ($p < 0.05$ or $p < 0.01$), indicating robust relationships between these variables. The correlation matrix highlights significant positive relationships between Tobin's Q and various types of disclosures (Economic, Environmental, Social, Governance), as well as with Firm Size and Firm Leverage among listed foods and beverage manufacturing firms in Nigeria. These findings suggest that higher levels of disclosure and certain financial metrics (like Firm Size and Firm Leverage) are associated with higher market valuation (Tobin's Q), emphasizing their importance in assessing firm performance and investor perception in the Nigerian.

Regression Results

Multiple linear regression output for the test of hypotheses

Dependent Variable. TOBQ
Method. Panel EGLS (Cross-section random effects)
Date. 20/9/24 Time. 14.04
Sample. 2012 2022
Periods included. 11
Cross-sections included. 16
Total panel (balanced) observations. 176
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ECOD	0.152700	1.324168	0.115318	0.9083
ENVD	0.237028	1.657211	0.143028	0.8864
SOCD	0.428577	1.499388	0.285835	0.7754
GOVD	-1.821975	1.500141	-1.214536	0.2262
FSIZ	7.289123	1.483856	4.912285	0.0000
FLEV	-0.087882	0.020076	-4.377419	0.0000
C	-35.77961	11.15204	-3.208346	0.0016
	Effects Specification			
			S.D.	Rho
Cross-section random			10.68238	0.8565
Idiosyncratic random			4.373254	0.1435
	Weighted Statistics			
R-squared	0.195329	Mean dependent var		1.653721
Adjusted R-squared	0.166761	S.D. dependent var		4.860125
S.E. of regression	4.436417	Sum squared resid		3326.224
F-statistic	6.837275	Durbin-Watson stat		0.975909
Prob(F-statistic)	0.000002			

Unweighted Statistics			
R-squared	0.208469	Mean dependent var	13.49912
Sum squared resid	28181.90	Durbin-Watson stat	0.115184

Source. E-Views 10

TOBQ-Tobin's Q; ECOD-Economic Disclosure; ENVD-Environmental Disclosure. SOCD Social Disclosure; GOVD-Governance Disclosure; FSIZ-Firm Size; FLEV-Firm Leverage. The F-statistic value of 6.83 with its associated *p*-value of 0.00 ($p<.05$) shows that the model has goodness-of-fit at 5% significance level. Thus, the regression model has coefficients that are significantly different from zero. The Durbin-Watson statistic value showed a figure of 0.97; we infer the presence of first-order correlation for the residuals in the model. In the table above, the R^2 value of 0.195329 shows that about 19.53% of the systematic variation in TOBQ was jointly explained by all the independent variables. The Adjusted R^2 is often preferred to account for sample size adjustments, the figure showed a value of 0.1667, i.e., 16.67% variation was explained by the model explanatory variables.

Test of Hypotheses

H_{01}. *Economic disclosure has no significant effect on firm value of listed foods and beverage manufacturing firms in Nigeria*.

ECOD as an independent variable to TOBQ appears to have a positive coefficient (i.e., 0.152700) and is not significant at a 5% level (p=0.9083). This, therefore, implies that an increase in ECOD will not result in a significant increase in TOBQ.

H_{02}. *Environmental disclosure has no significant effect on firm value of listed foods and beverage manufacturing firms in Nigeria.*

ENVD as an independent variable to TOBQ appears to have a positive coefficient (i.e., 0.237028) and is not significant at a 5% level (p=0.8864). This, therefore, implies that an increase in ENVD will not result in a significant increase in TOBQ.

H_{03}. *Social disclosure has no significant effect on firm value of listed foods and beverage manufacturing firms in Nigeria.*

SOCD as an independent variable to TOBQ appears to have a positive coefficient (i.e., 0.428577) and is not significant at a 5% level (p=0.7754). This, therefore, implies that an increase in SOCD will not cause a significant increase in TOBQ.

H_{04}. *Governance disclosure has no significant effect on firm value of listed foods and beverage manufacturing firms in Nigeria.*

GOVD as an independent variable to TOBQ appears to have a negative coefficient (i.e., -1.821975) and is not significant at a 5% level (p=0.2262). This, therefore, implies that an increase in GOVD will not cause a significant decrease in TOBQ.

Discussion of Findings

Economic Disclosure**.** The results indicate that economic disclosure has a non-significant positive **effect** on firm value. Specifically, a one-unit increase in economic disclosure is associated with a 0.1855-unit increase in Tobin's Q, though the association is not statistically significant (p>0.05). This is consistent with findings from studies like Chung et al. (2023), which showed a positive impact of ESG on financial performance in Hong Kong. However, it contrasts with Bruna et al. (2022), who reported a non-linear relationship between ESG and firm performance in European firms. In Nigeria, Asuquo et al. (2018) found that economic performance disclosure had no significant effect on the ROA of brewery firms.

Environmental Disclosure**.** The study shows a non-significant positive effect of environmental disclosure on firm value, with a one-unit increase in environmental disclosure linked to a 0.1386-unit increase in Tobin's Q. This finding aligns with studies like Lehenchuk et al. (2023) in Turkey, which also found a non-significant positive influence of environmental disclosure on financial performance. However, some studies, such as Saygili et al. (2022) in Turkey, reported a negative relationship between environmental disclosure and Tobin's Q, while others, like Olowookere et al. (2021), found a significant positive impact of environmental disclosure on Nigerian cement companies.

Social Disclosure**.** The findings suggest a non-significant positive effect of social disclosure on firm value, with a one-unit increase in social disclosure resulting in a 0.3571-unit increase in Tobin's Q. Studies like Lehenchuk et al. (2023) and Alduais (2023) support this result, showing that social disclosure positively impacts financial performance in Turkey and China. In contrast, Nigerian studies, such as Asuquo et al. (2018), found that social performance disclosure had no significant effect on the ROA of brewery firms.

Governance Disclosure. Governance disclosure has a non-significant negative effect on firm value, with a one-unit increase in governance disclosure associated with a 1.8039-unit decrease in Tobin's Q. This negative impact is supported by Alduais (2023) in China, who found that governance disclosures negatively impacted the cost of equity. However, it contrasts with findings from Lehenchuk et al. (2023) in Turkey, where governance disclosure had a non-significant positive effect on financial metrics like EBITDA and ROA, and Saygili et al. (2022), who found a significant positive effect of governance proxies like board committees on Tobin's Q.

5. CONCLUSION AND RECOMMENDATIONS

Conclusion

This study concludes that sustainability disclosure affects the value of listed foods and beverages manufacturing firms in Nigeria. The study uses data from listed food and beverage firms between 2012 and 2022 to examine how sustainability disclosure affects Tobin's Q of publicly traded firms in Nigeria. The data were examined using descriptive statistics such as the mean, median, maximum, minimum, and correlation matrix, the data was also checked for multicollinearity using VIF and further adjusted for heteroscedasticity. The study employs the random effects model to test the hypotheses. The study specifically finds that economic disclosure, environmental disclosure, and social disclosure have a non-significant positive effect on Tobin's Q of listed foods and beverage manufacturing firms in Nigeria. The governance disclosure has a non-significant negative effect on Tobin's Q of listed foods and beverage manufacturing firms in Nigeria.

The study makes the following recommendations for managers and shareholders in the Nigerian context as follows.

i. The Board and Shareholders should strive for transparent economic disclosure of firms. This would provide transparency into a firm's financial health, performance, and management. This transparency is essential for building trust with investors, creditors, and other stakeholders.
ii. The management of food and beverage firms should endeavor to consistently disclose environmental information in annual reports. Environmental disclosure allows firms to demonstrate their commitment to sustainability and responsible environmental practices.
iii. The management of food and beverage firms should endeavor to consistently disclose social information in annual reports. Social disclosure facilitates communication with various stakeholders, including investors, customers, suppliers, and the community. Providing transparent information about social practices can build trust and strengthen relationships with these stakeholders.

iv. Adhering to relevant corporate Governance codes. Managers should strive to adhere to relevant codes of corporate governance and consequent disclosure. This can provide transparency into a firm's governance structure, practices, and policies.

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