FUDMA JOURNAL OF ACCOUNTING AND FINANCE RESEARCH [FUJAFR]
ISSN: 2992-4693 (ONLINE); 2992-2704 (PRINT); VOLUME 1, ISSUE 1

Value Relevance of GRI Economic and Ethics/Integrity Disclosure among Listed Manufacturing Firms in Nigeria: The Role of Ownership Concentration

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https://doi.org/10.33003/fujafr-2023.v1i1.1.96-113

Abstract

This study evaluates the value relevance of GRI Economic and Ethics/Integrity Disclosures among listed Manufacturing Firms in Nigeria. It also investigates the role of ownership concentration in influencing the value relevance of GRI disclosures. The study adopted the purposive sampling technique to select a sample of 43 listed Manufacturing Firms on the Nigerian Exchange Group (NGX) for the 8-year period from 2014–2021. The study used the Ohlson (1995) model to analyze the value relevance of GRI Economic and Ethics/Integrity Disclosures. The results of the study showed that GRI Economic Disclosure, Ethics/Integrity Disclosure and Ownership Concentration are value relevant in the Nigerian listed Manufacturing Firms. Further, the study found that ownership concentration has a significant moderating influence on the value relevance of GRI Economic and Ethics/Integrity Disclosures among listed Manufacturing Firms in Nigeria. The results of the study provide evidence that listed Manufacturing Firms should pay special attention to GRI Economic and Ethics/Integrity Disclosures in order to enhance firm value and investor decision-making. The study contributes to the extant literature by being the first to investigate the value relevance of GRI Economic and Ethics/Integrity Disclosures and the role of ownership concentration among listed Manufacturing Firms in Nigeria. The study recommends that listed Manufacturing Firms should respond to the GRI Economic and Ethics/Integrity Disclosure requirements in order to enhance firm value.

Keywords: GRI sustainability reporting, Economic and ethics/integrity disclosures, Value relevance, Ownership concentration, Manufacturing firms in Nigeria.

1.0 Introduction

The value relevance of reported information is associated with the extent to which the reporting of such information imposes changes in firm value, as perceived by market participants (Kousenidis et al., 2010; Badu & Appiah, 2018; Perveen, 2019). In an era marked by increasing demand for corporate transparency and social responsibility, organizations worldwide

have recognized the importance of disclosing non-financial information alongside their traditional financial reports (Saha & Bose, 2017). Consequently, the Global Reporting Initiative (GRI) has emerged as a leading framework for sustainability reporting, providing guidelines for companies to disclose, among others, their economic, environmental, social, governance, ethics and integrity, strategy and analysis performance. Such disclosures are believed to enhance stakeholders' understanding of firms' activities, contribute to their decision-making processes, and ultimately impact firm value (GRI, 2002, 2006, 2013).

In the Nigerian context, manufacturing firms constitute a vital component of the country's economy, contributing significantly to employment, industrial output, and foreign exchange earnings. However, despite the acknowledged relevance of sustainability reporting, limited research has investigated the value relevance of GRI disclosures, with more attention focused on environmental, social and governance information, among listed manufacturing firms in Nigeria. Furthermore, while ownership concentration is known to influence firms' reporting practices and strategic decision-making (Crisostomo et al., 2013), its role in shaping the value relevance of GRI disclosures in this context remains largely unexplored. Therefore, by investigating the relationship between GRI economic and ethics/integrity disclosures, ownership concentration, and firm value, this study seeks to shed light on the factors that contribute to the effectiveness of sustainability reporting practices in Nigeria's manufacturing sector. The article aims to bridge this research gap by examining the value relevance of GRI economic and ethics/integrity disclosures among listed manufacturing firms in Nigeria, with a specific focus on the potential moderating effect of ownership concentration.

To achieve these research objectives, the study will draw upon a sample of listed manufacturing firms in Nigeria, considering multiple years of financial and sustainability reports. The value relevance of GRI disclosures will be assessed using econometric models that incorporate financial performance metrics, market-based indicators, and disclosure-related variables. Additionally, ownership concentration of these firms is examined, considering shareholders that own a block of shares of the firms. This study's findings are expected to provide valuable insights for various stakeholders, including policymakers, investors, and corporate managers, by highlighting the significance of GRI disclosures and ownership structure in the Nigerian manufacturing sector. Understanding how ownership structure influences the value relevance of sustainability reporting can inform efforts to improve corporate governance practices, enhance transparency, and stimulate sustainable economic development in Nigeria.

2.0 Literature Review

Theoretical perspectives such as stakeholder theory, agency theory, and signaling theory provide the foundation

for understanding the mechanisms through which sustainability disclosure can impact firm value (Perrini & Tecanti, 2006). Thus, this study is anchored on the stakeholder theory, which proposes that economic performance, ethical behaviour and integrity lead to enhanced stakeholder trust, improved corporate reputation, and reduced agency costs, ultimately contributing to higher firm value (Freeman et al., 2004).

Conceptually, value relevance is an important aspect of financial accounting and reporting. It refers to the extent to which the information disclosed in financial statements is associated with the value of a company's shares or other measures of its financial performance and position (Badu & Appiah, 2018). In other words, value relevance examines the ability of accounting information to capture and communicate relevant information to investors and other users of financial statements (Perveen, 2019). Value relevance has been extensively studied in accounting and finance research. Some studies have focused on examining the association between accounting numbers, such as earnings or book value, and stock prices (Saha & Bose, 2017). These studies analyze whether changes in accounting information are reflected in changes in the market value of a company's shares. Other studies have investigated the relationship between accounting information and various financial performance measures, such as return on assets or return on equity. One influential study on value relevance is by (Ball & Brown, 1968), which examined the relationship between accounting earnings and stock prices. The study found a positive and significant association between earnings and stock prices, suggesting that accounting earnings were value-relevant in explaining market prices.

Another important study (Ohlson, 1995) developed the Ohlson model, also known as the "Ohlson's residual income model." This model incorporates both book value and earnings information to predict stock prices. The study demonstrated the value relevance of accounting information by showing that the residual income component of the model had a significant association with stock prices (Feltham & Ohlson, 1995). Various other studies have contributed to the understanding of value relevance, including studies examining the impact of specific accounting standards, such as International Financial Reporting Standards (IFRS), on value relevance, as well as studies exploring the role of other financial information, such as cash flows or market-based measures, in addition to accounting information.

On the other hand, sustainability disclosure is the practice of providing transparent and comprehensive information about an organization's economic, social, and environmental performance. It encompasses the disclosure of various aspects of sustainability, including economic and ethics/integrity information. This enables stakeholders, such as investors, customers, employees, and communities, to assess the organization's

sustainability practices and make informed decisions (Smith & Jones, 2022). Economic information disclosed by organizations typically includes financial performance, revenue generation, costs, investments, and other economic indicators. This information provides insights into the organization's financial health, profitability, and economic impact. It allows stakeholders to understand the organization's ability to create long-term value and contribute to economic development. In addition, ethics and integrity information disclosed by organizations involves transparency about ethical practices, corporate governance, compliance with laws and regulations, and management of risks and conflicts of interest. This information helps stakeholders evaluate the organization's commitment to ethical conduct, responsible business practices, and integrity in decision-making processes.

Empirically, Kristyanto and Sanjaya (2017), which investigates the impact economic, environmental, labour, human rights, society, and product responsibility disclosure on the value of listed manufacturing companies in Indonesia from 2012 to 2013. The study includes firm size and leverage as control variables and obtained data from a sample of 74 listed manufacturing firms and analyzed using multiple regression techniques. The findings show that economic dimension of sustainability disclosure has an insignificant effect on firm value. On the contrary, Caesaria and Basuki (2017) find that economic sustainability disclosure has a significant and positive effect on the market performance of firms quoted on the Indonesia Stock Exchange from 2013 to 2014. However, the studies are based on the Indonesia Ministry of Environment PROPER Ranks as the basis to proxy economic disclosure, which is at variance with economic sustainability requirements across countries. This finding is consistent with Kurniawan et al. (2018), which examines the effect of sustainability reporting on the value of a sample of 116, comprising 42 Singapore firms and 74 Indonesian firms. Based on the GRI standards The study finds that economic information disclosure has a significant but negative effect on the value of firms in Indonesia and Singapore. Furthermore, the finding is in line with Linh et al. (2022) who find a positive relationship between economic disclosure and value of 360 non-financial firms in Vietnam from 2015 to 2019. The inconsistency in findings of previous studies in this regard trigger the below hypothesis to further examine the effect of GRI economic disclosure on firm value:

Ho_1: GRI economic disclosure has no significant effect on the value of listed manufacturing firms in Nigeria.

Moreover, there is paucity in studies investigating the relationship between the ethics and integrity dimension of sustainability disclosure and value of firms in extant literature. However, ethics and integrity play a crucial role in driving firm value by contributing to long-term sustainability, reputation, and stakeholder trust. Several studies have emphasized the importance of ethical behaviour and integrity in enhancing

financial performance, attracting investors, and fostering positive relationships with customers and employees. Ethical behaviour and integrity are instrumental in building a positive reputation and brand image for a company. (Barnett & Salomon, 2006) found that companies with a strong ethical culture were more likely to have a favourable reputation, which positively influenced their financial performance. A good reputation attracts customers, investors, and talented employees, leading to increased firm value. In the same vein, Ethics and integrity are key drivers of stakeholder trust and loyalty. When a company consistently demonstrates ethical behaviour and upholds its commitments, it earns the trust of its stakeholders, including customers, employees, suppliers, and the community. According to a study by (McWilliams & Siegel, 2001), trust is an essential element in creating value for stakeholders. Trust encourages repeat business, customer loyalty, and positive word-of-mouth, thereby enhancing firm value.

In addition, ethics and integrity are vital in attracting and retaining investors. Investors prefer companies with a strong ethical foundation, as it signals a lower risk of financial and reputational damage. A study by (Heugens & Scherer, 2010) found that ethical behaviour positively influenced a firm's ability to raise capital. Investors are more likely to invest in companies with a reputation for ethical conduct, thereby driving firm value. Furthermore, ethics and integrity are linked to employee engagement and productivity, which, in turn, impact firm value. When employees perceive that their organization operates with integrity and adheres to ethical standards, they are more likely to feel engaged and committed to their work. A study by (Treviño & Brown, 2004) found that ethical leadership positively influenced employee job satisfaction and commitment. Engaged and satisfied employees contribute to increased productivity and innovation, ultimately driving firm value. Thus, the study finds it worthwhile to formulate a hypothesis to test the relationship between ethics and integrity on firm value as follows:

Ho_2: GRI ethics and integrity disclosure has no significant effect on the value of listed manufacturing firms in Nigeria.

Ownership structure refers to the distribution of ownership rights among shareholders in a company, including the concentration of ownership and the presence of different types of shareholders such as institutional investors or family owners (Wruck, 1989; Selarka, 2005). Thus, ownership concentration is a situation where a limited number of shareholders own substantial units of shares in a firm. In relating ownership concentration to firm performance, some studies have revealed that it has a significant influence on firm value (Vintila & Gherghina, 2014; Kim et al., 2018). Another study by Rodriguez-Valencia and Lamothe-Fernandez (2023) investigated the effect of managerial concentration and ownership concentration on firm value

among small and medium scale enterprises in Spain. They also found that the ownership concentration positively improves firm value. However, Abdullah et al. (2019) examined the influence of ownership concentration on the value of KSE listed insurance firms, commercial banks and leasing companies in Pakistan and found a negative effect of ownership concentration on firm value. Furthermore, Crisostomo et al. (2013) found ownership concentration as having a favourable influence on social responsibility disclosure in impacting firm performance and the effect was stronger in Brazilian companies with a higher concentration of ownership. This suggests that when ownership is concentrated in the hands of a few shareholders, sustainability disclosure has a more significant impact on firm value. Thus, it is pertinent that investors with units of share ownership equal to or greater than five percent tend to be more concerned about the sustainability of their investments, and their presence as shareholders can amplify the value-enhancing effects of non-financial disclosures generally and economic and ethics/integrity disclosures in particular. This implies that ownership concentration has the ability to influence the extent to which sustainability disclosures affects firm value hence, the following hypotheses are formulated to test the effect:

Ho_3: *Ownership concentration has no significant relationship with the value of listed manufacturing firms in Nigeria.*

Ho_4: *Ownership concentration does not significantly moderate the relationship between GRI economic and ethics/integrity disclosures and the value of listed manufacturing firms in Nigeria.*

3.0 Methodology

The study adopts descriptive-correlational research design in order to determine whether the direction of relationship between the dependent and independent variables is either direct, inverse or there is no correlation. The study population is made up of the fifty-six (56) manufacturing firms listed on by the Nigerian Exchange Group (NGX), comprising 4 agriculture firms, 3 conglomerates, 20 consumer goods firms, 8 healthcare firms, 11 industrial goods firms, 3 natural resources firms and 7 oil and gas firms. However, delisting and technical suspension by the NGX are applied as filters, eliminating thirteen (13) firms from the population: 11 Plc, Anino International Plc, B.O.C. Gases Nigeria Plc, Cement Company of Northern Nigeria Plc, Dangote Flour Mills Plc, Evans Medical Plc, First Aluminium Nigeria Plc, Golden Guinea Breweries Plc, Nigeria German Chemicals Plc and Portland Paints and Products Nigeria Plc (on the basis of delisting) as well as Multi-Trex Integrated Foods Plc, Oando Plc and Union Dicon Salt Plc (on the basis of suspension by the NGX), resulting to a sample frame of 43 firms, which also serve as the sample of the study (see Appendix A).

The dependent variable of the study is firm value, proxied by Tobin's Q (TQ) and share price (SP). Moreover, independent variables include economic sustainability disclosure, proxied by economic disclosure index (ECDI) and ethics/integrity sustainability disclosure, measured in terms of ethics/integrity disclosure index (ETDI). These indices are expressed as the number of sustainability issues disclosed divide by the total number of issues disclosable (Linh et al., 2022). The moderating variable is ownership concentration and it is proxied by block-holder ownership (BLCK). In addition, the study introduced firm size (FSIZ) and capital structure (CAPS) as control variables and industry dummy (i-DUMMY) to estimate industrial contribution to variation in firm value due to the quantum of economic and ethics/integrity information disclosed. This is based on the seven industries that constitute the manufacturing sector in Nigeria, which include: agriculture, conglomerate, consumer goods, healthcare, industrial goods, natural resources as well as oil and gas firms.

Table 1: Variable Definition and Measurement

S/N	Variable	Proxy	Measurement	Justification	A Priori Expectation
1	Firm Value	Tobin's Q (TQ)	Book Value of Debt + Market Value of Equity / Total Assets.	(Utami, 2015).	
		Share Price (SP)	(Opening + Closing Market Price per Share) / 2.	(Amiolemen et al., 2018)	
2	Economic Disclosure	Economic Disclosure Index (ECDI)	ECDI Items Disclosed/Total ECDI Items Disclosable.	(Kurniawan et al., 2018)	+
3	Ethics & integrity Disclosure	Ethics & integrity Disclosure Index (ETDI)	ETDI Items Disclosed/Total ETDI Items Disclosable.	-	+
4	Ownership Concentration	Block-Holder Ownership (BLCK)	Units of Shares owned by Shareholders with ≥5% Shares/Total Units of Outstanding Shares.	(Kim et al., 2018)	+
5	Firm Size (FSIZ)	Total Assets.	Log of Total Assets.	(Diantimala, 2018)	
6	Capital Structure (CAPS)	Debts Capital to Assets.	Total Debt / Total Assets.	(Gherghina & Vintila, 2016)	
7	Industry Dummy	i-DUMMY	"1" for Belonging to an Industry; "0" for Not Belonging to an Industry.	(Crisostomo et al., 2013)	

Source: Field Survey, 2023.

4.0 Discussion and Conclusion

The study obtains data from annual report and accounts of the sampled firms as well as daily price listings of the Nigerian Exchange Group (NGX) from 2014 to 2021, which it analyses using descriptive statistics, correlation, and multiple regression techniques. The scope from 2014 is justified by the fact

that the GRI G4 sustainability reporting guideline, which is the basis of determining economic and ethics/integrity performance disclosure was introduced in May, 2013. Table 2 presents an extract of economic and ethics/integrity issues disclosable by listed manufacturing firms in Nigeria.

Table 2: Economic and Ethics/Integrity Issues Disclosable

ECONOMIC DISCLOSURE:

1. Economic performance.
2. Market presence.
3. Indirect economic impacts.
4. Procurement practices.

ETHICS & INTEGRITY DISCLOSURE:

1. Firm's values, principles, standards & norms of behaviour (code of conduct & ethics);
2. Internal & external mechanisms for seeking advice on ethical & lawful behaviour & issues of integrity;
3. Internal & external mechanisms for reporting unethical or unlawful behaviour & matters related to firm's integrity (whistle blowing mechanism, etc.).

Source: GRI G4 Sustainability Reporting Guideline, 2013.

The study adapts the (Feltham & Ohlson, 1995) linear information model, which is mostly used in firm value related studies in existing literature such as (Berthelot et al., 2012) and (Loh et al., 2017). The model is stated as follows:

$$FV_{i,t} = \beta_0 + \beta_1 BV_{i,t} + \beta_2 EPS_{i,t} + \beta_3 TE_{i,t} + \varepsilon_{i,t}$$

Where:
$FV_{i,t}$ = Value of firm i for time period t;
$BV_{i,t}$ = Opening book value of equity of firm i for time period t;
$EPS_{i,t}$ = Earnings per share of firm i for time period t; and
$TE_{i,t}$ = Transitory earning of firm i for time period t.

According to the model, transitory earning is any other non-financial or extra-financial variable that may affect the value of a firm directly or indirectly (Feltham & Ohlson, 1995). Thus, economic and ethics/integrity disclosures are treated as transitory earning items.

Based on the relationship in Figure 1, three models are developed. Model-1 expresses the relationship between firm value and independent as well as control variables as presented, thus:

$$TQ/SP_{i,\ t} = \beta_0 + \beta_1 BV_{i,\ t} + \beta_2 EPS_{i,\ t} + \beta_3 ECDI_{i,\ t} + \beta_4 ETDI_{i,\ t} + \beta_5 CAPS_{i,\ t} + \beta_6 FSIZ_{i,\ t} + \beta_7 i.DUMMY_{i,\ t} + \varepsilon_{i,t} \ldots\ldots\ldots (1)$$

Moreover, the introduction of the moderating variable, OS results to Model-2, which shows the relationship between proxies of firm value and independent, control and moderating variables, thus:

$$TQ/SP_{i,\ t} = \beta_0 + \beta_1 BV_{i,\ t} + \beta_2 EPS_{i,\ t} + \beta_3 ECDI_{i,\ t} + \beta_4 ETDI_{i,\ t} + \beta_5 CAPS_{i,\ t} + \beta_6 FSIZ_{i,\ t} + \beta_7 i.DUMMY_{i,\ t} + \beta_8 BLCK_{i,\ t} + \varepsilon_{i,t} \ldots\ldots\ldots (2)$$

Furthermore, Model-3 introduces the interaction between independent and moderating variables. It is used to determine the moderating effect or otherwise of ownership structure on the

relationship between economic as well as ethics and integrity disclosure and firm value and stated as:

$$TQ/SP_{i,t} = \beta_0 + \beta_1 BV_{i,t} + \beta_2 EPS_{i,t} + \beta_3 ECDI_{i,t} + \beta_4 ETDI_{i,t} + \beta_5 CAPS_{i,t} + \beta_6 FSIZ_{i,t} + \beta_7 i.DUMMY_{i,t} + \beta_8 BLCK_{i,t} + \beta_9 ECDI{*}BLCK_{i,t} + \beta_{10} ETDI{*}BLCK_{i,t} + \varepsilon_{i,t} \quad (3)$$

4.0 Results and Discussion

This section presents the results of data analysis. It contains descriptive statistics, post-estimation diagnostic tests, panel corrected standard errors (PCSE) regression and hierarchical regression.

Descriptive Statistics

This section presents the descriptive statistics of time-variant variables of the study. It includes number of observations (Obs.), mean, standard deviation (Std. Dev.), minimum value (Min.) as well maximum values (Max.). The result is presented in Table 3.

Table 3: Descriptive Analysis of Variables

Variable	Obs.	Mean	Std. Dev.	Min.	Max.
Dependent Variables					
Tobin's Q (TQ)	330	1.415	1.297	0	8.993
Share Price (SP)	332	57.52	198.55	0.2	1530.75
Independent Variables					
Book Value of Equity (BV)	342	15.52	19.64	-5.12	91.0
Abnormal Earnings (EPS)	334	2.76	7.92	-7.32	57.6
Economic Disclosure Index (ECDI)	343	0.512	0.239	0.25	1
Ethics & Integrity Disclosure Index (ETDI)	343	0.387	0.397	0	1
Moderating Variables					
Ownership Concentration (BLCK)	344	0.49	0.216	0	0.91
Control Variables					
Capital Structure (CAPS)	328	0.608	0.26	0.04	2.23
Firm Size (FSIZ)	343	7.244	0.901	5.239	9.306

Source: STATA 17.0 Output, 2023.
Legend: *** Significant @ 1%; ** Significant @ 5%; * Significant @ 10%.

Table 3 shows that the proxy for firm value (TQ) has a mean of 1.415 with a standard deviation of 1.297, which implies that the data for TQ of sampled firms is not widely dispersed from the mean as supported by the minimum and maximum values of 0 and 8.993 respectively. However, the data for firm value (SP) is widely spread from its mean value of ₦57.52 based on the standard deviation of ₦198.55. this is justified by the minimum and maximum values of ₦0.20 and ₦1,530.75 respectively. On the part of explanatory variables, data for BV, which is expressed on per share basis, reveal an average value of ₦15.52 and deviation from this mean value stands at ₦19.64. This implies a wide spread evidenced by a negative minimum value of ₦5.12 and maximum value of ₦91.0. Similarly, the negative minimum value of ₦7.32 and maximum value of ₦57.63 in respect of data for EPS supports the considerable spread of the data from the mean value of ₦2.76 and the standard deviation of ₦7.92. In the same vein, the data for ETDI has a mean value of 0.387 and a standard deviation

of 0.397, which implies that ETDI is mildly spread from it mean value. It means that at least one of the sampled manufacturing firms in Nigeria disclose 0% of ethics/integrity sustainability information in any of the study years (minimum value of 0) up to as high as 100% (maximum value of 1). However, data for ECDI is not widely spread from its mean value of 0.512, given the standard deviation of 0.239 and minimum and maximum values of 0.25 and 1 in that manner. It implies that the sampled firms disclose at least 25% of GRI economic items up to the maximum of 100%.

Furthermore, Table 3 shows that, on average, about 49% of units of ownership among the sampled manufacturing firms is owned by block-holders. The standard deviation of 0.216 in this case indicates that the firms have normal variations in the proportion of their equity shares held in block. This is evidenced in the fact that at least one of the firms appear to have no block-holder ownership in a given time period (minimum value of 0), while at least one firm has as high as 91% of its shares held in blocks of 5% and above (maximum value of 0.91). In addition, Table 3 reports that FSIZ has a mean value of 7.244 and standard deviation of 0.901. This shows the dispersion of the data for FSIZ is not widely dispersed from it mean as supported by the minimum and maximum FSIZ values of 5.24 and 9.31 respectively. Similarly, the data for CAPS is not widely spread from the mean value of 0.608 based on the standard deviation of 0.26 as explained by the minimum value of 0.04 and maximum value of 2.23.

Diagnostic Tests

The industry dummies introduced in the study are time-invariant variables. Thus, the fixed effect (FE) model is not feasible since it makes the drawing of inferences from time-invariant effects impossible. Hence, the paper adopts the random effect (RE) model. Consequently, the residuals from the RE regressions are used to conduct tests for normality (Skewness/Kurtosis and Shapiro-Wilk), multicollinearity, Breusch and Pagan Lagrange Multiplier (LM), contemporaneous correlation, panel serial correlation, unit root (Fisher-Type) and group-wise heteroscedasticity. The summary of results of these tests is presented in Table 4.

Table 4 reports that the data for the study is skewed and it is not normally distributed based on the skewness/kurtosis alpha values for each joint adjusted Chi2 and z-scores less than 0.05. The alpha of 0.000 for Breusch and Pagan langrage multiplier Chi2 in respect of fitted values of TQ and SP indicate that the RE model is suitable for the study. In addition, the results show absence of multicollinearity within the panels as a result of the 2.07 mean variance inflation factor. However, there

Table 4: Results of Diagnostic Tests

Test	Statistic	P-value	Interpretation
Normality Test:			
Skewness/Kurtosis (Adj. Chi²)	>1.96	<0.05	Skewed
Shapiro-Wilk (Z-value)	>1.96	<0.05	Abnormally Distributed
Multicollinearity	Mean VIF = 2.07		Absent
Breusch-Pagan LM:			
TQ	198.15	0.000	Random Effect
SP	240.32	0.000	Random Effect
Contemporaneous Correlation	4.274	0.000	Present
Panel Serial Correlation	10.002	0.003	Present
Group-wise Heteroscedasticity	27658.5	0.000	Present

Source: STATA 17.0 Output, 2023.

is presence of group-wise heteroscedasticity, contemporaneous correlation and panel serial correlation, justifying the use of Panel Corrected Standard Errors (PCSE) and hierarchical regression as techniques for data analysis.

Regression of Independent and Dependent Variables

The results of Prais and Winsten PCSE regression between firm value (TQ and SP) and explanatory variables is presented in Table 5.

Table 5 shows that the PCSE regression for fitted values of TQ returns the R^2 of 52.37% as against the RE overall R^2 of 34.7%, which indicates a notable improvement by 17.67%. The table further reveals the Wald Chi² of 930.57 with a significant p-value of 0.000, indicating that the model is fit for the data and the joint contribution of explanatory variables significantly explain variations in TQ. This is similar to fitted values of SP with the R^2 of 81.05% as compared to the RE R^2 of 74.27% and Wald Chi² of 3512.76, which is significant at 1% level of significance.

Table 5: Summary of Unmoderated Regression Result

Variable	TQ		SP	
	Z	PCSE	Z	PCSE
BV	-0.31	0.004	0.99	0.746
EPS	6.36***	0.015	9.16***	2.405
ECDI	-0.18	0.311	4.18***	22.55
ETDI	-2.01***	0.139	-0.93	17.91
BLCK	2.42**	0.339	-2.47**	29.02
CAPS	5.00**	0.276	6.62***	11.83
FSIZ	-4.06***	0.118	-4.22***	7.60
i-DUMMY$_1$	1.22	0.217	0.21	25.78
i-DUMMY$_2$	0.59	0.194	4.23***	12.02
i-DUMMY$_3$	4.80***	0.123	5.49***	9.70
i-DUMMY$_4$	0.81	0.193	1.91*	11.77
i-DUMMY$_5$	4.13***	0.146	-0.93	8.83
i-DUMMY$_6$	-	-	-	-
i-DUMMY$_7$	-3.28***	0.245	-2.42**	30.31
R^2	0.5237		0.8105	
Wald Chi²	**930.57*** **		**3512.76*** **	

Source: STATA 17.0 Output, 2023.
Legend: ***Significant @ 1%; **Significant @ 5%; *Significant @ 10%.

Furthermore, Table 5 reports that BV, one of the two constant elements of the Ohlson model, insignificantly contributes to variations in firm value (TQ and SP), which is inconsistent with Burnett et al. (2011) as well as Loh et al. (2017) who find a significant relationship between BV and firm value among

global Fortune 500 firms and in Singapore respectively. The result is consistent with Narullia and Subroto (2018) who find insignificant relationship between BV and firm value among firms in Indonesia. However, the second constant element EPS significantly and positively affects firm value (TQ and SP) at p-value less than 0.01. This finding collaborates with Schadewitz and Niskala (2010) among firms in Finland and Loh et al. (2017) in Singapore.

The effect of ECDI on firm value (SP) is positive and significant at the coefficient of 4.18 and p-value less than 0.01. This outcome is in agreement with the a priori expectation and consistent with Abdi et al. (2020). Similarly, the moderating variable BLCK reports a positive significant effect on firm value (TQ) based on the z-statistic of 2.42 and p-value of less than 5%. This position is consistent with the a priori expectation and Crisostomo et al. (2013). However, ETDI demonstrates a negative significant relationship with firm value (TQ), given the coefficient of -2.01, which is significant at 5% level of significance. This finding contradicts the a priori expectation of the study, which may be due to weak enforcement and regulatory environment. Nigeria's regulatory environment and enforcement mechanisms might be perceived as weak or ineffective in addressing unethical behaviour. If stakeholders believe that there are limited consequences for unethical conduct or that regulations are not adequately enforced, they may discount the value of ethics/integrity disclosures. This lack of confidence in the regulatory framework can undermine the positive impact of such disclosures on firm value. In addition, the control variable CAPS exhibit a positive significant effect (p-value < 0.01) on firm value (TQ and SP) collaborating with Diantimala (2018). On the other hand, FSIZE demonstrate a negative significant relationship with firm value (TQ and SP), which is consistent with Emeka-Nwokeji and INSTsioma (2019), who also find a significant effect between size and value of firms. Thus, the results in Table 5 imply that GRI economic, ethics/integrity disclosures and concentrated ownership are significant drivers of firm value.

Moderation of Ownership Concentration on the Relationship between Independent and Dependent Variables

The regression results of the moderating effect of BLCK on the relationship between ECDI and ETDI with firm value (TQ and SP) is hereunder discussed. Table 6 presents the summary of results of the moderation.

The F-value for fitted values of TQ and SP is 15.37 and 63.38 respectively, which are significant at 1% level of significance, which indicate the fitness of the models. Moreover, the R^2 changed to 53.47% and 82.05% respectively when the interaction variables (ECDI*BLCK and ETDI*BLCK) are included, that is a change of 1.1% (ΔR^2 = 0.011) and 1% (ΔR^2 = 0.01).

However, only the change in R^2 for fitted values of SP is significant at p-value < 0.01. The significant moderation result in respect of SP is traced to the z-score of ECDI*BLCK (5.30) and ETDI*BLCK (1.87), which are significant at 1% and 10% levels of significance respectively. It implies that the interference of concentrated ownership strengthens the quality of the effect of sustainable GRI economic and ethics/integrity disclosures on firm value.

Table 6: Summary of Moderated Regression Result

Variable	TQ Z	SP Z
BV	-0.39	1.14
EPS	6.50***	9.01***
ECDI	-0.11	-3.31***
ETDI	-2.13**	-2.56**
CAPS	4.88***	5.94***
FSIZ	-3.75***	-2.65***
i-DUMMY$_1$	0.65	-0.38
i-DUMMY$_2$	-0.07	3.24***
i-DUMMY$_3$	4.90***	4.25***
i-DUMMY$_4$	0.32	0.20
i-DUMMY$_5$	4.56***	-2.39**
i-DUMMY$_6$	-	-
i-DUMMY$_7$	-3.67***	-3.61***
BLCK	4.19***	-9.92
ECDI*BLCK	-1.10	5.30***
ETDI*BLCK	1.34	1.87*
R^2	0.5347	0.8205
R^2 Change	0.011	0.010***
F-Value	15.37***	63.38***

Source: STATA 17.0 Output, 2023.
Legend: ***Significant @ 1%; **Significant @ 5%; *Significant @ 10%.

5.0 Conclusion and Recommendations

Sequel to the findings obtained from the results of data analysis, the study concludes that communication of GRI economic and ethics/integrity performance gives firms an edge to compete favorably and achieve value maximization; similarly, ownership concentration is a significant driver of firm value. Moreover, the interaction of ownership concentration significantly moderates the ability of GRI economic and ethics/integrity disclosures in improving firm value. Based on these conclusions, the study recommends that listed manufacturing firms in Nigeria should to prioritize accountability/transparency on their engagements/performance in sustainable governance issues via the establishment of dedicated sustainable development units or committees, charged with the responsibility of enforcing continued compliance with GRI economic as well as ethics and integrity provisions/standards and consistently disclose same in all ramifications. In addition, the firms should encourage the presence of shareholders with concentrated units of ownership since it has the potential of influencing the effect of GRI economic and ethics/integrity sustainability disclosure on firm value. Furthermore, regulatory agencies should enforce legislation that would mandate the adoption of GRI sustainability issues to boost firm value.

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APPENDIX A
Sample of Listed Manufacturing Firms in Nigeria

S/N	FIRM	SECTOR/INDUSTRY	YEAR OF LISTING
1	Aluminium Extrusion Industries Plc	Natural Resources	1986
2	Berger Paints Nigeria Plc	Industrial Goods	1974
3	Beta Glass Plc	Industrial Goods	1986
4	Cadbury Nigeria Plc	Consumer Goods	1976
5	Champion Breweries Plc	Consumer Goods	1983
6	Chellarams Plc	Conglomerates	1974
7	Conoil Plc	Oil & Gas	1989
8	Cutix Plc	Industrial Goods	1987
9	Dangote Cement Plc	Industrial Goods	2010
10	Dangote Sugar Refinery Plc	Consumer Goods	2007
11	Eterna Plc	Oil & Gas	1998
12	Fidson Healthcare Plc	Healthcare	2008
13	Flour Mills of Nigeria Plc	Consumer Goods	1979
14	FTN Cocoa Processors Plc	Agriculture	2008
15	GlaxoSmithkline Consumer Nigeria Plc	Healthcare	1977
16	Greif Nigeria Plc	Industrial Goods	1969
17	Guinness Nigeria Plc	Consumer Goods	1965
18	Honeywell Flour Mills Plc	Consumer Goods	2009
19	International Breweries Plc	Consumer Goods	1995
20	Lafarge Africa Plc	Industrial Goods	1979
21	Livestock Feeds Plc	Agriculture	1978
22	May & Baker Nigeria Plc	Healthcare	1994
23	McNichols Consolidated Plc	Consumer Goods	2009
24	Meyer Plc	Industrial Goods	1979
25	Morison Industries Plc	Healthcare	1978
26	MRS Oil Nigeria Plc	Oil & Gas	1978
27	NASCON Allied Industries Plc	Consumer Goods	1992
28	Neimeth International Pharmaceuticals Plc	Healthcare	1979
29	Nestle Nigeria Plc	Consumer Goods	1979
30	Nigerian Breweries Plc	Consumer Goods	1973
31	Nigerian Enamelware Plc	Consumer Goods	1979
32	Northern Nigeria Flour Mills Plc	Consumer Goods	1978
33	Okomu Oil Palm Company Plc	Agriculture	1991
34	Pharma-Deko Plc	Healthcare	1979
35	Premier Paints Plc	Industrial Goods	1995
36	Presco Plc	Agriculture	2002
37	PZ Cussons Nigeria Plc	Consumer Goods	1974
38	SCOA Nigeria Plc	Conglomerates	1977
39	Thomas Wyatt Nigeria Plc	Natural Resources	1978
40	Total Nigeria Plc	Oil & Gas	1979
41	UAC Nigeria Plc	Conglomerates	1974
42	Unilever Nigeria Plc	Consumer Goods	1973
43	Vitafoam Nigeria Plc	Consumer Goods	1978

Source: NGX Website (www.nse.com.ng/issuers/listed-securities/listed-companies), 2023.