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SUSTAINABILITY REPORTING AND SHAREHOLDERS' INVESTMENT DECISIONS IN AFRICA

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ABSTRACT

Shareholders' investment decisions are fraught with several challenges that undermine their optimality and pose detrimental effects to firms on the long run. Sustainability reporting by firms is advanced as a mechanism that drives the efficacy of investors' decisions. This study investigates the effect of sustainability reporting on shareholders' investment decisions in Africa. Quantitative research was employed using panel data sourced from the year end reports and financial statements of the sampled firms for a period of 20 years spanning 2004-2023. Descriptive and inferential statistics was deployed to test the collated data and multiple regression was used to estimate the model. The measures of sustainability reporting used are environmental sustainability performance disclosure, social sustainability performance disclosure and governance sustainability disclosure. Shareholders' investment decisions was proxied by dividend payout ratio and return on equity. Management quality was adopted as a moderating variable. The findings of the study reveal that environmental sustainability performance disclosure and governance sustainability performance disclosure have insignificant positive effect on return on equity, social sustainability performance disclosure has insignificant negative effect while management quality has significant negative effect on return on equity. Environmental Performance Disclosure has insignificant positive effect on dividend payout ratio, social performance disclosure has insignificant negative effect on dividend payout ratio, and governance performance disclosure has significant positive effect while management quality has significant negative effect. The results depict that the measures of sustainability reporting jointly have significant effect on return on equity and dividend payout ratio in models 1 & 2 respectively. The findings demonstrate that sustainability reporting is a significant factor that enhances shareholders' investment decisions.

INTRODUCTION

Shareholders' investment decisions play a critical role in motivating existing investors and enticing potential ones, thereby significantly influencing a company's financial trajectory. Inspite of this overwhelming significance, meeting the expectations of shareholders has increasingly become a daunting challenge, intensifying the complexity and multifaceted nature of investment decisions. The ability to accurately gauge and assess shareholder value is non-negotiable for the sustained success of any organization. The evaluation of shareholder value necessitates the implementation of diverse metrics, each offering unique insights into a company's performance. However, the selection of these metrics require meticulous consideration of the strategic objectives of the company. Employing metrics that align closely with the objectives of the company, ensures a holistic perspective on the company's performance and its capacity to create value for its shareholders. Such an approach not only facilitates informed decision-making within the organization but also serves as a magnet for potential investors seeking assurance and clarity (Akintoye & Kassim, 2022; Adegbie & Adesanmi, 2020; Dahiyat et al., 2021).

Shareholders and intending investors in all respects seek opportunities that promise stable and robust returns (Aguguom et al., 2018). Abosede and Akintoye (2022) opined that a key consideration influencing investment choices and decisions is the potential for either capital appreciation or reliable income. Risk management is therefore paramount for investors alongside the pursuit of attractive rewards. While investors aspire for favorable returns, they also prioritize effective risk control. Akpan and Uwakmfonabasi (2021), posits that striking the right balance between reward and risk is essential and to safeguard their investments, investors often opt for diversified portfolios, through due diligence and risk mitigation strategies. Transparency in transactions is highly valued by investors and shareholders greatly appreciate open

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and transparent communication from investment managers or company executives. Building trust between investors and their investments is fostered through regular updates, performance reports, and honest assessments (Orazalin, 2020).

Sustainability reporting has become a global trend as investors and stakeholders increasingly demand transparency regarding environmental, social, and governance (ESG) practices. Companies worldwide are under pressure to demonstrate their commitment to sustainability and responsible business practices. In Africa, this trend is gaining momentum, with more companies beginning to adopt sustainability reporting practices. However, the region faces unique challenges that affect how these reports are developed and utilized. Global investors are increasingly considering ESG factors in their investment decisions. There is a growing recognition that sustainable practices can impact long-term financial performance and risk management. The discussion on sustainability reporting and shareholders' investment decisions in Africa must consider the region's unique economic, social, and regulatory context. Addressing the challenges of inconsistent reporting, regulatory variability, and investor awareness is crucial for aligning sustainability practices with investment strategies. By improving reporting standards and fostering greater transparency, African companies can better meet investor expectations and contribute to sustainable development in the region.

Shareholders' investment decisions are fraught with challenges that stem from information asymmetry, market volatility, regulatory risks, and evolving ESG considerations, among other factors. Addressing these challenges require a combination of thorough research, careful analysis, and strategic risk management. By improving transparency, standardizing reporting practices, and staying informed about market and regulatory changes, shareholders can enhance their decision-making processes and better align their investments with their financial goals and values.

In the light of the development and advancement of many African economies examining the role of sustainability reporting in influencing shareholder decisions can provide crucial insights into how these markets are integrating sustainable practices. Improving the quality and consistency of sustainability reports and fostering a better understanding of their implications can help align shareholders' investment decisions with long-term sustainable growth in Africa. The study can reveal insights into how sustainability affects perceived corporate risk and performance in the African context. Understanding how sustainability reporting impacts investment decisions is crucial for strategic planning and competitive advantage. This topic is justified by the need to understand and improve how sustainability reporting affects shareholder decisions in a rapidly developing region, ultimately contributing to more sustainable and responsible investment practices. The aim of the study is therefore to provide insights into how improved sustainability reporting could influence investor confidence and decision-making, and suggesting best practices for African companies. Overall, the study aims to bridge the gap between sustainability reporting and investment decisions, helping companies and investors align their goals with sustainable development in the African context. As global awareness of environmental and social issues rises, sustainability reporting has become an essential component for businesses worldwide. This trend is increasingly influencing investment decisions, making it a key area of study for understanding how it impacts shareholders, particularly in emerging markets like Africa.

While the trajectory of finding an absolute empirical driver of shareholders' investment decisions in manufacturing companies has remained aversive, complex, and problematic in the literature, many empirical studies have failed to establish in clear terms, the possible causes of the problem and the complexities of shareholders' investment decisions in the manufacturing companies operating in Africa.

With particular reference to Nigeria, while there are studies that have underscored manufacturing companies in the light of contributory factors to shareholders' investment decisions (Yakubu, 2016; Zabolotnyy & Wasilewski, 2019; Maina & Udolty, 2019; Hassan et al., 2020) there is limited research integrating the significance of sustainability reporting to enhance shareholders' investment decisions. Globally, the issue of sustainability reporting is held high among investors as their ultimate aim is to receive rewards for their investments, in anticipation of optimal performance of the firms where investments are made. Sustainability reporting compliance by firms is a critical factor that influences investments or divestments decisions. More so, the issues surrounding firm performance, managers' ability to recognize and protect the interest of shareholders, investors' preferences and risk affinities, perceived reward systems, all influence investors' attractiveness to firms in Nigeria. These factors justify a need for a comprehensive investigation into the factors influencing shareholders' investment decisions and the linkage with sustainability reporting. The study utilizes panel data from the sampled manufacturing firms and hypothesis were tested using random effect.

The rest of the study is structured in this manner; section 2 presents the literature review which comprises the formulation of hypotheses on the basis of empirical studies. Section 3 explains the materials and methods used in the study. Section 4 presents the output of the analysis of data. Section 5 highlights the discussion of findings while section 6 depicts the conclusion of the study.

LITERATURE REVIEW

Shareholders' Investment Decisions

The reward system in corporate investments is significant and strategic, as this is one guiding principle, explored by investors in making useful investment and divestment decisions. Literature has shown that monitoring market and economic developments are essential to identifying possibilities and hazards in investment decisions. Research indicates that investors' behavior often deviates from rationality, introducing systematic irrationality (Najera-Samchez, 2020). Stock markets become increasingly unpredictable, amplifying investment risks. Aguguom and Salawu (2018) emphasizes that every investment decision hinges on two pivotal factors: risk and return. At the core of all investment choices lies the balance between anticipated returns and risk. Making investment decisions poses a formidable challenge for investors, particularly within the ever-changing landscape of multifaceted options. Relying solely on personal resources or intricate models is inadequate. Investors must therefore remain vigilant and well-informed to attain their objectives (Akintoye & Kassim, 2022; Laskar & Maji, 2018)

The field of behavioral finance offers valuable insights for selecting optimal investment tools and avoiding recurrent errors in shareholders' investment decisions. Studies have extensively considered guiding metrics, the majority of which are profitability measures. Okolie and Igaga (2020) posited that while there is no particular known guiding rule, a vast number of studies have considered return on equity and dividend policies of firms as significant. Behavioral finance highlights the irrational tendencies that influence investment decisions and market prices.

Sustainability Reporting

The significance of sustainability reporting is manifold, encompassing improved risk management tactics, optimized cost and savings, streamlined decision-making procedures, and reinforced firm credibility and image. Transparency and trust are the foundational principles of a firm that underpin sustainability reporting. It is a widely held notion that encompasses a number of factors, including social, environmental, and corporate performance governance. Sustainability reporting standards incorporate how businesses affect different environmental resources and value chain interactions, the efforts and policies of firms in reducing carbon footprint, air and water pollutions, and social engagement with employees and level of compliances to existing legal and regulatory framework in Nigeria. It also establishes benchmarks for the governance component of the business and the level of performance that the organizations must meet.

Sustainability reporting is linked to investment decisions of manufacturing companies and institutions in diverse sectors, both in the developed and developing economies of the world. Generally, prospective investors and business associates strongly rely on sustainability reporting to access non-financial information outside of the traditional financial statement (Nizam et al., 2019). The extent of sustainability reporting enables companies to gather sufficient information about operational procedures and influence that would not have been previously measured (David-West et al., 2019). Information obtained from companies' sustainability reporting improves stakeholders' decisions, enhances performance and efficiency and prepares companies to mitigate environmental risks that could have resulted in material adverse financial effects (Ari & Koc, 2018).

Various studies have employed diverse measures of sustainability reporting, notable amongst which include; environmental, social, and economic and governance proxies. The key drivers of sustainability reporting are investors, regulatory agencies and other concerned stakeholders, who are willing to hold firms accountable to global sustainability reporting requirements (Azutoru et al., 2017; Amina et al., 2021).

Social Performance

The social component refers to the company's consideration of stakeholders' interests because the company's survival depends heavily on community support. Through social responsibility, businesses must be dedicated to maximizing the advantages from their operations that have an influence on society. Employers are responsible for more than just paying workers' salary; they also need to consider matters like occupational health, retirement plans, open and equitable employment possibilities, a comfortable and safe work environment, and work safety.

Governance Performance

Governance sustainability reporting assists firms to realize the full potential of long-term benefits and sustainable growth. These benefits cut across risk identification, risk management and mitigation, protection of firms, human and capital assets, establishment of conducive investment climate and opportunities, wealth maximization and increase in stock price values (Alshammari, 2015). Effective governance is central and indispensable to improving sustainability reporting as the efficacy of constituted policies is dependent on the strength of the governance framework /structure (Azutoru et al., 2017; Obiora et al., 2022).

The performance of the manufacturing companies' as it concerns sustainability reporting depends on the strategic direction of top level management (Eneisik, 2021). The governance framework ensures that the right managers are recruited, monitoring and oversight functions are efficiently carried out, incorporating the dismissal and disciplinary action against any erring managers/employee, and managerial misconducts, fraud-related issues, and agency cost reduction function. Corporate governance ensures that information asymmetry is minimized. Corporate governance is therefore critical to shareholders' investment decisions as it ensures optimal performance assessment for managers, facilitates growth in the industry, and enhances alignment of shareholders'/stakeholders expectation (David-West et al., 2019; Dahiyat et al., 2021).

Management Quality

The issues of management quality in sustainability reporting have been extensively researched in the literature. While some studies considered this issue from the perspective of quality corporate governance, others including (Buallay, 2020; Obiora et al., 2022); have considered management quality from the lens of effective recruitment ability and internal working system of the top management team of manufacturing companies. Several studies have opined that managerial competence is central to management quality. Management quality in this instance is the controlling variable of sustainability reporting that considers the approach of firm management in being responsive to the continuous improvement of the firm, the employees and stakeholders generally (Atanda et al., 2021; Omaliko et al.,2020). Managerial competence has a bearing on the quality of managerial decisions and consequently on the comprehensive investment decision of any organization as well as those of its shareholders (Dahiyat et al., 2021). Firms operating with strong and quality management team makes a difference in enhancing shareholders' investment decisions in terms of exceptional customer service relationship, quality of customer service delivery, internal and external stakeholder management and effective responsiveness in information disclosure including sustainability reporting (Maundu, 2020). Management quality of firms has also been perceived in literature as the extent of compliance to regulatory requirements including sustainability reporting and other prudential guidelines as may be required from time to time (Malovics et al., 2019).

Empirical Review

Sustainability Reporting and Return on Equity

Sustainability reporting and return on equity are linked through their impact on a company's long term performance and investor perception. Sustainability reporting can enhance investor confidence by demonstrating a company's commitment to environmental, social and governance (ESG factors. This can attract investors who prioritize ESG considerations and effectively manage ESG risks, potentially leading to higher stock prices and improved market valuation. Sustainability initiatives can result in improved efficiency and market differentiation which can boost profit margins.

Adequate returns are an incentive for equity holders in any corporate entity, and this is a significant consideration in respect of shareholders' investment decisions Return on equity (ROE) is a performance metric, computed by dividing net income by shareholders' equity. It is regarded as a measure of a company's profitability and profit-generating efficiency. The higher, the return on equity, the greater the efficiency of the firm at generating revenue and growth from its equity financing. As a general guideline, firms should aim for a ROE that is comparable to or slightly higher than the industry average for the specific sector (Akpan & Uwakmfonabasi, 2021; Olowolaju & Adelola, 2020). Optimal return on equity, therefore bolsters investors' confidence in the company's ability to deliver returns (Akpan & Uwakmfonabasi, 2021).

Prior studies advance that increasing returns on equity (ROE) entail a multifaceted approach, which may include strategies aimed at bolstering profitability, reducing debt burdens, or augmenting equity levels (Ezejiofor et al., 2016; Mojarad et al., 2018). By honing these strategies, companies not only elevate their ROE, but also enhance their attractiveness to investors seeking lucrative opportunities for investment. In essence, return on equity transcends mere numerical value; it epitomizes a company's prowess in delivering value to its shareholders and serves as a beacon guiding investment decisions in an increasingly dynamic financial landscape.

Several empirical works have explored the link between sustainability reporting and return on equity. For instance, Dahiyat et al. (2021) studied the effect of sustainability reporting and liquidity management on the performance of the manufacturing companies in Jordan. Ex-post-facto research was adopted. A pooled regression analyses and panel data was explored while the random effect was chosen for interpretation for the study. The result proved that liquidity management and sustainability reporting had positive effect on the financial performance of companies in Jordan. The findings align with the work of Ezejiofor et al. (2016), whose work showed that sustainability accounting reporting measures had a positive effect on the performance of corporate organizations investigated in Nigeria.

Conversely, Laskar and Maji (2018) studied the effect of corporate sustainability reporting on liquidity management and financial performance of selected companies in Asian countries. The study employed secondary data, using content analysis of binary 0 & 1 code responses to estimate the disclosure score index of sustainability reporting performance. In addition, the study employed the Global Reporting Indicators (GRI) framework for the checklist of sustainability reporting, while the content analysis was established to ascertain the effect of corporate sustainability. The study found that corporate sustainability reporting had a positive effect on liquidity management and financial performance in the selected and sampled companies in non-specified four Asian countries used in the study. The result obtained by Laskar and Maji (2018) corroborates the findings of Okolie and Igaga (2020) who revealed that sustainability reporting had a significant positive effect on the financial performance of the selected DMBs in Nigeria.

Research works such as Alematu and Ihotu (2023), Mohammed and Hasan (2023),Ogiri and Igo (2022), Mesut and Mustafa (2020), Yusuf et al. (2020), Iheduru and Okoro (2019), Onoh et al. (2023), Okutu and Adegbie (2023),Okerekeoti (2022), Ofoegbu and Megbuluba (2016), Pareek et al. (2019), Khaireddine et al. (2020), and Baalouch et al. (2019) have also reported a positive relationship between sustainability reporting and return on equity. They posit that the practices and improvements that come from effective sustainability efforts can have a positive impact on financial performance and equity returns. Some works such as Nguyen et al. (2020), Halimah and Yanto (2018), and Agyemang et al. (2021) however reported a negative effect. The effect of sustainability reporting on return on equity is therefore broad and multifaceted as several factors such as management quality, regulations and so on can influence the interaction. On the premise of the mixed findings, the hypothesis is stated as:

Ho1: *Sustainability reporting does not significantly affect return on equity of listed manufacturing companies in Nigeria.*

Sustainability Reporting and Dividend Payout Ratio

A firm's commitment to sustainability reporting can enhance its financial stability and profitability, which can positively influence its dividend payout ratio. The interconnection between sustainability reporting and dividend policy is characterized by how a company's commitment to sustainability influences its dividend decisions and how its dividend policy can affect the resources available for sustainability initiatives. This relationship reflects a broader strategy of balancing immediate shareholder returns with long-term value creation through sustainable practices. Dividend payout ratio, connotes total dividend paid out to shareholders as a proportion of net income. It is the portion of profits distributed as dividends to shareholders. Any money not distributed to shareholders is kept by the business, which uses it to settle debts or is reinvested in into the business (Atanda et al., 2021). Interpreting the dividend payment ratio involves taking into account various factors, central amongst them being the maturity level of the organization (Fadare & Adegbie, 2020; Maundu, 2020; Samuel et al., 2023, Aiyesan, 2022). Diverse works exist on the linkage between sustainability reporting and dividend payout ratio and the nexus is conflicting and divergent. On the grounds of the mixed findings, the hypothesis is stated thus;

Ho2: *Sustainability reporting does not significantly affect dividend payout ratio of listed manufacturing companies in Nigeria.*

The review of research works reveal contrasting findings and therefore necessitate further research in this area. In the light of the importance of shareholders' investment decisions to the financial outlook of firms and the increasing trend of sustainability reporting in this regard, it becomes germane to empirically examine the nexus between them. The varying preferences and priorities of investors regarding sustainability reporting makes it difficult to determine which aspects of sustainability reporting are most influential across different investor groups. This complicates efforts to tailor reports to meet investor needs and may lead to conflicts between sustainability goals and short-term profit expectations. The study will therefore demonstrate how sustainability initiatives align with long-term financial performance and shareholder value creation.

MATERIALS AND METHODS

This current study examined the effect of sustainability reporting on shareholders' investment decisions in Africa. The scope of the study was narrowed down to Nigeria considering the dearth of data from manufacturing companies listed in Africa. The study explored secondary data, extracted from financial statements and sustainability reporting checklist consistent with the Global Reporting Initiative (GRI) indicators for a period of 20 years covering 2004-2023. The population comprised 66 manufacturing companies listed in Nigeria Exchange Group (NGX), from which 35 companies were selected using purposive sampling technique. Data was analysed via descriptive and inferential statistics. The study utilized return on equity and dividend payout ratio as surrogates of shareholders' investment decisions, while sustainability reporting was measured using the proxies of environmental sustainability performance disclosure index, social sustainability performance disclosure index and governance sustainability performance disclosure index. Management quality was adopted as a moderating variable.

Model Specification

$Y_{it} = \alpha_0 + XZ_{it} + \varepsilon_{it}$

Functional Relationship

ROE = (EPD, SPD, GPD ---eqn. 1

DPOR = (EPD, SPD, GPD, MQT ---eqn. 2

Models

$ROE_{it} = \alpha_0 + \beta_1 EPD_{it} + \beta_2 SPD_{it} + \beta_3 GPD_{it} + \beta_4 MQT_{it} + \varepsilon_{it}$ -------------------------Model 1

$DPOR_{it} = \alpha_0 + \beta_1 EPD_{it} + \beta_2 SPD_{it} + \beta_3 GPD_{it} + \beta_4 MQT_{it} + \varepsilon_{it}$ ----------------------Model 2

Where

ROE = Return on equity; DPOR = Dividend payout ratio, EPD = Environmental sustainability performance disclosure, SPD = Social sustainability performance disclosure, GDP = Governance sustainability performance disclosure MQT = Management Quality.

Measurement of Variables

This section presents the definition and measurement of variables explored in the study.

Table 1. Definition and Measurement of Variables

Variables	Abrv.	Definitions	Measurement	Sources
Return on Equity	ROE	The profitability of a company to its equity is gauged by the return on equity.	Net Income / Shareholders' Equity	Adegbie & Adesanmi (2020)
Dividend Payout Ratio	DPOR	The ratio of the total dividends paid to shareholders to the net income of the business is known as the dividend payout ratio.	Dividend paid / Net Income	Akintoye & Kassim (2022)
Environmental Sustainability Performance Disclosure	EPD	Measures the extent of firm compliance to environmental protection and reporting in the course of their operational activities as disclosed in their annual report.	GRI Checklist	Adegbie & Dada (2019)
Social Sustainability Performance Disclosure	SPD	Measures the level of compliance to stakeholders' welfare and interest protection in the course of their operational activities in the annual report.	GRI Checklist	Mojarad et al, (2018)
Governance Sustainability Performance Disclosure	GPD	Measures the extent of corporate governance best practice in place and extent of companies' compliance	GRI Checklist	Okolie & Igaga,(2020)
Management Quality	MQT	Measures managerial competence and operational efficiency.	Operating expenses / Total Assets	Ezejiofor et al,(2016); Omaliko et al,(2020).

Source: Researcher's Compilation (2024)

Table 4. Regression Analysis: Sustainability Reporting and Shareholders Investment Decisions

	Model 1: Return on Equity				Model 2: Dividend Payout Ratio				Difference	
	Random-Effects GLS Regression with Driscoll-Kraay Standard Errors				Random-Effects GLS Regression with Robust Standard Errors				Coeff	p-value
	$ROE_{it} = \alpha_0 + \beta_1 EPD_{it} + \beta_2 SPD_{it} + \beta_3 GPD_{it} + \beta_4 MQT_{it} + \varepsilon_{it}$				$DPOR_{it} = \alpha_0 + \beta_1 EPD_{it} + \beta_2 SPD_{it} + \beta_3 GPD_{it} + \beta_4 MQT_{it} + \varepsilon_{it}$					
Variable	**Coeff**	**Std. Err**	**T-Stat**	**p-value**	**Coeff**	**Std. Err**	**T-Stat**	**p-value**		
Constant	4.605	1.99	2.3	0.000	0.780	2.372	0.33	0.748		
EPD	0.385	0.506	0.76	0.461	0.496	0.489	1.01	0.329	+/+. Indiff	Insig/Insig
SPD	-0.410	0.220	-1.86	0.085	-0.436	0.240	-1.82	0.092	-/-. Dec	Insig/Insig
GPD	0.433	0.231	1.87	0.084	0.498	0.222	2.24	0.043	+/+. Inc	Insig/Sig
MQT	-0.645	0.191	-3.38	0.005	-0.707	0.156	-4.53	0.001	-/-.Inc	Sig/Sig
Adj. R^2	0.151				0.212					
F-Stat/Wald Stat	519.19(0.00)				311.02(0.00)					
Hausman Test	6.92 (0.14)				2.38 (0.79)					
Testparm Test/LM Test	160.91 (0.00)				143.12 (0.00)					
Heteroskedasticity Test	5.77 (0.02)				3.39 (0.07)					
Serial Correlation Test	7.825 (0.01)				9.452 (0.01)					
Pesaran CD Test	6.858 (0.00)				5.271(0.00)					

Note: Dependent Variable, Model 1: Return on equity (ROE); **Model 2:** Dividend Payout Ratio (DPOR); **Independent Variables:** Environmental sustainability performance disclosure (EPD), Social performance quality (SPD); Governance sustainability performance disclosure (GPD), Management quality (MQT); **Level of Significance**: @ 5% significance level

Source: Researcher's Work (2024).

Model 1: Sustainability Reporting and Return on Equity

Diagnostic Results

To determine the most suitable estimation technique for Model one, the Hausman test and its associated confirmatory tests were employed; Testparm or the Lagrangian Multiplier test. The result of the Hausman test proved insignificant with a probability value of 0.14 while the LM test is significant with a probability value of 0.00. This outcome implies that the random effect technique is most appropriate for the model. Diagnostic tests were conducted to assess the model's suitability. The heteroskedasticity test, examining the variations in residuals over time, yielded a probability value of 0.02, suggesting the presence of heteroscedasticity in the model. Consequently, the study rejected the null hypothesis and concluded that the model exhibits heteroscedasticity. The Wooldridge test for autocorrelation, showed a probability value of 0.01, signaling that serial correlation exists in the model, as the coefficients and residuals are correlated. The model was also tested for cross-sectional dependence, resulting in a test statistic of -6.858 and a probability value of 0.000, suggesting significant cross-sectional dependence. Given the identified issues of heteroscedasticity and serial correlation in the model, Random Effects GLS Regression with Driscoll-Kraay standard errors was chosen as the appropriate estimating technique for Model one.

Regression Equation Results

$$ROE_{it} = \alpha_0 + \beta_1 EPD_{it} + \beta_2 SPD_{it} + \beta_3 GPD_{it} + \beta_4 MQT_{it} + \varepsilon_{it}$$

$$ROE_{it} = 4.605 + 0.385EPD_{it} – 0.410SPD_{it} + 0.433GPD_{it} – 0.645MQT_{it} + \varepsilon_{it}$$

The findings from the random-effects generalized least squares regression with Driscoll-Kraay standard errors provides insights into the relationships between the return on equity and various independent variables. The constant term, representing the intercept, has a coefficient of 4.605. It is significant at 5% level, as indicated by the p-value of 0.000. This suggests that the intercept has a significant impact on the dependent variable. The coefficient for Environmental sustainability performance disclosure (EPD) is 0.385, and the associated p-value is 0.461. This indicates that Environmental sustainability performance is insignificant at 0.05 significance level. A unit increase in Environmental sustainability performance disclosure, translates to an increase of 0.385 units in return on equity. Social sustainability performance disclosure had a coefficient of -0.410 with a standard error of 0.220. While the variable was statistically insignificant with a p-value of 0.085, the negative coefficient implied that a unit increase in Social sustainability performance disclosure results in a decrease of 0.410 units in return on equity. The coefficient for Governance sustainability performance disclosure (GPD) is 0.433, and the associated p-value is 0.084, implying that Governance sustainability performance disclosure has no significant effect on Return on equity. A one-unit increase in Governance sustainability performance disclosure results in an increase of 0.433 units in Return on equity. Management quality has a coefficient of -0.645 with p-value of 0.005. It therefore has a significant negative effect on Return on equity. A one-unit increase in management quality therefore results in a decrease of 0.645 units in Return on equity.

The adjusted R-squared value of 0.15 connotes that the independent variables in the model, jointly account for 15% of the changes in ROE. The remaining 85% are accounted for by other factors excluded from the model. Moreover, the F-Stat/Wald Stat of $F(5, 218) = 519.19$ with a probability value of 0.00 implies that the overall model was statistically significant.

Model 2: Sustainability Reporting and Dividend Payout Ratio

Diagnostic Results

The results of the Hausman test and LM test suggests the appropriateness of the random effect model. The heteroskedasticity test, yielded a probability value of 0.07, suggesting the presence of heteroscedasticity in the model. The Wooldridge test, for autocorrelation, showed a probability value of 0.01, implying the existence of serial correlation in the model. The model was also tested for cross-sectional dependence, resulting in a test statistic of 5.271 and a probability value of 0.000, indicating cross-sectional dependence.

Given the identified issues of heteroscedasticity and serial correlation in the model, Random Ordinary Least Square Regression with Driscoll-Kraay standard errors was chosen as the appropriate estimation technique for Model Two.

Regression Equation Results

$$DPOR_{it} = \alpha_0 + \beta_1 EPD_{it} + \beta_2 SPD_{it} + \beta_3 GPD_{it} + \beta_4 MQT_{it} + \varepsilon_{it}$$

$$DPOR_{it} = 0.780 + 0.496EPD_{it} - 0.436SPD_{it} + 0.498GPD_{it} - 0.707MQT_{it} + \mu_{it}$$

Interpretation

The findings from the random-effects generalized least squares regression with Driscoll-Kraay standard errors represent the relationship between dividend payout ratio and the surrogates of sustainability reporting. The constant term, representing the intercept, had a coefficient of 0.780 and it is insignificant as indicated by the p-value of 0.748. The coefficient for Environmental sustainability performance disclosure (EPD) is 0.496, and the associated p-value is 0.329. This indicates that Environmental sustainability performance disclosure has an insignificant positive effect on dividend payout ratio. A one-unit increase in Environmental sustainability performance disclosure results in an increase of 0.496 units in dividend payout ratio. SPD has a coefficient of -0.436 with p-value of 0.092. It therefore exerts an insignificant effect on dividend payout ratio. The negative coefficient implies that an increase in Social sustainability performance disclosure results in a decrease of 0.436 units in dividend payout ratio. The coefficient of Governance sustainability performance disclosure (GPD) is 0.498, and the associated p-value is 0.043. GPD therefore has a significant effect on dividend payout ratio. A one-unit increase in Governance sustainability performance disclosure, translates to an increase of 0.498 units in dividend payout ratio. MQT had a coefficient of -0.707 with p-value of 0.001. MQT therefore exerts a significant negative effect on dividend payout ratio. A one-unit increase in MQT results in a decrease of 0.707 units in dividend payout ratio.

The adjusted R-squared value of 0.21 represents the explanatory power of the model. The model accounts for 21% of the changes in DPOR. The remaining 79% of the changes in DPOR is accounted for by other factors outside of the model. The F-Stat/Wald Stat of $F(4, 219) =311.02$ with a probability value of 0.00 implying that the overall model is statistically significant.

DISCUSSIONS

In Models, 1 & 2, mixed effects were recorded from each of the surrogates. In Model 1: The study found that each of EPD SPD and GPD exerted insignificant effects, while MQT exhibited significant effect on return on equity. In model 2, the study found that EPD and SPD had insignificant effects, while GPD and MQT had significant effect on dividend payout ratio. However, the joint statistics using the combined explanatory variables of the study in each of the models revealed that sustainability reporting had significant effect on return on equity and dividend payout ratio respectively. This result is found to be consistent with the results documented in some prior studies that have found positive effects. For instance, Akindehinde et al. (2022 reported significant effect, likewise the studies by Dahiyat et al. (2021); Akpan and Uwakmfonabasi (2021); Najera-Samchez (2020); Adegbie and Adesanmi (2020); Orazalin (2020); Laskar and Maji (2018). In addition, the studies carried out by Okolie and Igaga (2020) revealed significant effect, Mojarad et al. (2018) and that of Garcia et al. (2017) equally reported significant effects. On the contrary, some other prior studies have revealed insignificant effects (Shuremo, 2016; Adegbie & Dada, 2019).

CONCLUSIONS

This study examined the effect of sustainability reporting on shareholders' investment decisions in Africa, with particular reference to manufacturing companies listed on the Nigerian Exchange Group (NGX) from 2004 to 2023. The motivation for the study was in consideration of the investment decisions dilemma of shareholders and the significance of sustainability reporting in resolving this concern. The study adopted return on equity and dividend payout ratio as constructs of shareholders' investment decisions while environmental sustainability performance disclosure, social sustainability performance disclosure, and governance sustainability performance disclosure were utilized as measures of sustainability reporting. Management quality was adopted as a moderating variable. The study therefore explored two models to test the effect of sustainability reporting on return on equity and dividend payout ratio. The results depict that sustainability reporting significantly affects return on equity in Model 1 and dividend payout ratio in model 2. The study thus concluded that sustainability reporting is a significant determining factor of shareholders' investment decisions.

Consequent to the findings, the study advances that the management of listed manufacturing companies in Nigeria and by extension Africa, should give environmental protection disclosure and stakeholders' welfare as the case of social sustainability reporting a priority. Policy makers in Africa and Nigeria in particular, should exercise monitoring and oversight functions to ensure that laws and policies geared towards the protection of the environment and the social perspective are consistently adhered to and reported as required. Safety and protection regulatory agencies in the region should ensure compliance to environmental, social and corporate governance best practices.

Findings from the study proffers insights to policymakers and regulators about the need for mandatory sustainability reporting requirements or guidelines. This can help shape policies that enhance the quality and comparability of sustainability disclosures, thereby supporting more informed investment decisions. The study therefore contributes to knowledge, policy making and accounting practice. The study deepens theoretical insights into how environmental, social, and governance (ESG) factors are integrated into financial decision-making by showing how non-financial information impacts investor behavior. By understanding the relationship between sustainability reporting and investment decisions, managers can make more informed strategic decisions that incorporate sustainability considerations.

There are however, some observed limitations. First, while the study considered Africa as the focus, the scope was narrowed to listed manufacturing companies' in Nigeria. This is due to paucity of data for the study, especially in compliance with sustainability reporting indicators consistent with Global Reporting Indicators (GRI) which is lacking in many African manufacturing companies. Secondly, the study considered only two measures of shareholders' investment decisions based on the reward system desirability of African shareholders. The study therefore suggests that further studies could extend the frontiers of knowledge and incorporate more countries in Africa, as well as other measures of shareholders' investment decisions. Further research on the subject area may also entail cross country and sectorial comparisons.

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