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Impact of Environmental, Social, and Governance Disclosure on Firm Performance: A Case of Listed Manufacturing Firms in Nigeria

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Impact of Environmental, Social, and Governance Disclosure on Firm Performance: A Case of Listed Manufacturing Firms in Nigeria

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Signed:

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ABSTRACT

The traditional goal of companies is to maximize shareholders' wealth. However, to achieve this objective, many complementary goals must be pursued alongside the traditional ones. To achieve corporate goals, businesses need to interact with the environment. The continual interaction of the corporation with the environment has definitely come with its costs and benefits, and the global interest in promoting sustainable development has made corporate ESG reporting a crucial issue. The aim of the study is to investigate the relationship between ESG reporting and firm performance among listed manufacturing firms in Nigeria. The data was collected from annual and stand-alone sustainability reports of companies of listed manufacturing firms in Nigeria. The Pooled-corrected standard error and the Generalized Least Square regression analysis employed on 400 firm-yearobservations indicates that that environmental, social, and governance disclosure affect market performance measured by Tobin's Q, while governance disclosure has a positive influence on TQ, social and environmental disclosures have negative effects on TQ. The study also demonstrated that social and environmental disclosure do not affect the operational, and financial performances of firms measured by ROA and ROE, respectively, and finally, it was found that governance disclosure positively affects ROA and ROE. The study recommends integrating ESG into regulatory requirements and educating stakeholders, especially investors on the important of ESG reporting.

Keywords: ESG disclosure, Firm performance, GRI, Manufacturing sector, corporate sustainability.

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LIST OF ABBREVIATION

ROA	Return on Assets
ROE	Return on Equity
TQ	Tobin's Q
GRI	Global Reporting Index
ESG	Environmental, Social, Governance
ED	Environmental Disclosure
SD	Social Disclosure
GD	Governance Disclosure
FS	Firm Size
LEV	Leverage
NSE	Nigerian Stock Exhange

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LIST OF SYMBOLS

e, $\boldsymbol{\varepsilon}$, $\boldsymbol{and}$ $\boldsymbol{\epsilon}$ the error terms

$\boldsymbol{\alpha_0}$, $\boldsymbol{\alpha_1}$, $\boldsymbol{\alpha_2}$ $\boldsymbol{and}$ $\boldsymbol{\alpha_3}$ intercepts for social disclosures, environmental disclosures, and firms' size in equation 1.

$\boldsymbol{\beta_0}$, $\boldsymbol{\beta_1}$, $\boldsymbol{\beta_2}$, and $\boldsymbol{\beta_3}$ intercepst for social disclosures, environmental disclosures, and firms' size in equation 2.

$\boldsymbol{\theta_0}$, $\boldsymbol{\theta_1}$, $\boldsymbol{\theta_2}$, and $\boldsymbol{\theta_3}$ intercepts for social disclosures, environmental disclosures, and firms' size in equation 3.

Subscript(it) observation of 40 firms across eight years (2014-2021).

$\mathbf{R^2}$ Coeficient of Determination

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CHAPTER ONE

1.1 Introduction

The traditional goal of companies is to maximize shareholders' wealth. However, to achieve this objective, so many complementary goals must be pursued alongside the traditional one. To achieve corporate goals, businesses need to interact with the environment.

As business organizations do not operate in a closed system or vacuum, they have continuous interaction with the environment and humans, as a result of this interaction, different impacts are made on the human and natural resources within the environment. Corporations continue to engage in activities that have either a positive or negative impact on the environment, as they seek expansion, this level of activities also tends to increase, and the cumulation of increased activities from different organizations has led to the industrialization we have today. Even though industrialization is said to have made the world become more livable through the provision of advanced products and services that never existed in the past. The process of industrialization has been associated with various economic, social, and economic damages like environmental degradation, and various types of pollution which have significantly increased deforestation and shortage of habits for aquatic and terrestrial animals (Utile, 2016).

The human population continues to grow, leading to rising in the demand for goods and services. to meet up with these growing demands, organizations need materials to convert into goods. Productions of goods will lead to the consumption of environmental resources which then affect the quality and quantity of these resource sources in the long run. Also, Energy is a major requirement in all industries, the form of energy technology adopted by a firm will impact the

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environment; the use of fossil fuels and other non-renewable energy has negatively impacted the quality of the environment.

Corporations maintain relationships with stakeholders, including, Government, Employees, Suppliers, etc. Amongst these groups, the shareholders are the most important of them because their money is used to run the organization, and they are the owner of the business. Due to these relationships, corporations must periodically publish annual financial reports communicating to stakeholders how they have fared financially in a particular year or quarter. Many analysts and investors based their evaluation oevaluatedthese financial disclosures. Financial variables like income, cash flow, assets, and liabilities, equity, and debts are presented. However, over the past years, conventional financial reporting has been condemned for not representing multiple dimensions of a corporation's value (Simnet, Vanstraelen & Chua ,2009). The argument is that many qualitative or non-financial disclosures are equallycrucialt for stakeholders in determining the true value of a corporation. Many corporations might appear to perform well on financial terms, however, the negative impacts they have had on humans and the environment is not measurable or compensable with any monetary value.

The concept of sustainability became popular after the 1987 Brundtland Report on solidifying the between environmental and human development concerns (Bebbington & Larrinaga, 2014; Bebbington & Unerman, 2017). The main idea of sustainable development is a development agenda that covers the social, economic, and environmental aspects of humans' lives without sacrificing the future ability to achieve such developments in the future. The concept was brought to the global limelight when the countries of the world under the umbrella of the United Nations agreed to replace the Millennium development goals (MDGs) with the sustainable development goals (SDGs). The SDG agenda 2030 is a combination of 17 interrelated goals that cover the three

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pillars of sustainability, that is, economic, social, and environmental. It is not rocket science to conclude that the previously adopted model of development is not sustainable and has brought the world to the current state of the mess we are. Capitalism and other human activities have done enough damage to our environment through the uncontrolled use of natural and human capital. Climate change is one of the end-products of these activities, climate change has various catastrophic impacts on humans and the environment, ranging from flooding, drought, forced migration, harsh weather conditions which are very dangerous for human health, etc.

Sustainability continues to attract the interest of many people including scientists, policymakers, researchers, business owners, managers, etc., this is because of its importance. Corporations represent one of three important economic units of the society, alongside households and governments. Their activities have direct positive and negative impacts on the people and the planet. Apart from human resources, for businesses to operate, they need to consume certain resources from the environment including energy, and materials.

The above narrative gave rise to the concept of ESG or sustainability reporting, even though it can be linked to previous concepts like the accounting for human resource and social audits postulated in the 1970s and triple bottom line reporting and environmental reporting in the 1990s, corporate social responsibility reporting and several versions of the GRI (Global Reporting Initiative) guidelines on reporting (Simnet, Vanstraelen & Chua, 2009). Sustainability reporting is defined as the process whereby companies disclose their economic, environmental, and social impacts on society and the environment because of their daily business activities (Global Reporting Initiative [GRI], 2019). ESG have become popular in both developed and developing countries since investors and other stakeholders are becoming more environmentally sensitive. ESG reporting afford corporations the opportunity to describe how they are impacting people and the planet in

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both positive and negative ways by explaining what their economic, social, and environmental activities have been like in a particular year or period. This allows stakeholders to make a further valuation of the corporation, apart from the financial disclosures that are accessible on the annual reports. This reporting has been adopted to appraise the quality of a firm's corporate governance and strategic management toward sustainable development (Isa, 2014). Sustainability reporting is important in all countries of the world considering the increased efforts and determination in achieving a sustainable future. For example, Nigeria is one of the leading oil producers in the world, to this effect, the Nigerian economy is seriously tied to the oil sector, however, many of the oil and gas corporations have been accused of bad transparency, neglecting stakeholders' concern, environmental damage and have continually contributed to the community and public unrest (Asaolu et al., 2011).

The globalization process has made stakeholders more informed than they used to be in the previous centuries. The demands from stakeholders have also gone beyond financials and they request for more information to employ a holistic approach in appraising corporations' performance.

Corporations have begun to realize that to be part of the sustainable future that the world is clamoring they must also incorporate sustainability in their operation to stay competitive. One of the best ways of communicating the corporate sustainability direction is through sustainability reports. The Global Reporting initiative (GRI) provides a standardized framework for sustainability reporting that have been agreed by stakeholders across different sectors. The GRI is the most adopted framework for sustainability reporting (Aifuwa, 2020). This framework provides sections for reporting the three sustainability pillars- economic, environmental, and social disclosures.

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1.2 Research Hypotheses

- Social disclosure has no significant relationship with return on asset. H_0
- Environmental disclosure has no significant relationship with return asset. H_0
- Governance disclosure has no significant impact on return on asset. H_0
- Social disclosure has no significant impact on Tobin's Q. H_0
- Environmental disclosure has no significant impact on Tobin's Q H_0
- Governance disclosure has no significant relationship with Tobin's Q. H_0
- Social disclosure has no significant impact on return on equity H_0
- Environmental disclosure has no significant impact on return on equity. H_0
- Governance disclosure has no significant impact on return on equity. H_0

1.3 Research Objectives

- To examine if social disclosure has a relationship with return on asset.
- To determine if environmental disclosure has a relationship with Tobin's Q.
- To examine if governance disclosure has a relationship with return on asset
- To investigate if social disclosure has an impact on Tobin's Q.
- To investigate if governance disclosure has an impact on return on equity
- To determine if environmental disclosure has an impact on return on asset
- To determine if social disclosure has an impact on return on equity
- To examine if environmental disclosure has an impact on return on equity
- To examine if governance disclosure has an impact on Tobin's Q

1.4 Research Questions

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- Does social disclosure have a relationship with return on asset?
- Does environmental disclosure have a relationship with return on asset?
- Does governance disclosure have a relationship with return on asset?
- Does social disclosure have an impact on Tobin's Q?
- Does environmental disclosure have an impact on Tobin's Q?
- Does governance disclosure have an impact on Tobin's Q?
- Does social disclosure have a relationship with return on equity?
- Does environmental disclosure have an impact on return on equity?
- Does governance disclosure have an impact on return on equity?

1.5 Statement of Problem

The attention given to sustainability has been burgeoning all over the globe, Stakeholders' interest in sustainability disclosure has increased ever than before and issues around sustainability generally have become ubiquitous. The Global Reporting Initiative, (2011) declared that thousands of corporations have adopted sustainability report, Also the 2011 international studies conducted by KPMG confirms that more than 90% of the global companies now provide sustainability disclosures. This compliance can be attributed to stakeholders' demand and the need to stay competitive through a responsible corporate image. It's expected that sustainability reporting would communicate the level of corporate responsibility of the firm, however the impact of this communication on firms' performance is still vague. The manufacturing industry in Nigeria

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represents the largest in the country with many of the sectors falling under this category. The manufacturing industry in known to be associated with high level of greenhouse gas emissions due to the nature of production. Research on the impact of ESG disclosures on firm performance is still inconclusive as empirical findings range from significant to insignificant, and positive to negative.

The need to explore this research area is felt and most especially within the Nigerian manufacturing sector context. The manufacturing industry represents a perfect case study because of its relevance to most of the sustainability issues**.**

CHAPTER TWO

LITERATURE REVIEW

2.1 Empirical Review Accross the Globe

Research on ESG / sustainability reporting has gained wide attention from numerous researchers across different regions. The reason for this might be attributable to the global campaign for sustainable development and the need for corporations to embrace a more socially responsible approach to their operations.

Based on the empirical literature review, it became apparent that researchers have approached studying sustainability reporting and corporate performance from different approaches and mixed results have been reported. While some studies have reported a relationship between sustainability reporting and corporate performance, some have also nullified this claim. The following represent some of the results that have in the literature.

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A South-Eastern Asia study conducted by Burhan and Rahmanti (2012) on Indonesian firms examined the relationship between sustainability reporting and each pillar of sustainability reporting with company performance. The results depict that sustainability reporting affects company performance. However, among the elements of sustainability reporting - economic, environmental, and social, only social disclosure is considered to affect corporate performance. The independent variables are measured by estimating the disclosure index. The Global Reporting Initiative (GRI) guideline on sustainability reporting was used as the foundation for calculating the index score.

Aggarwal (2013) examined the impact of sustainability reporting on corporate financial performance by reviewing existing literature that explored the phenomenon, the research found that most of the work reviewed on sustainability reporting and corporate financial performance reported a positive relationship. The research further suggested that companies should use the service of reputable external firms like KPMG and EY to vet their reports to add more credibility to it.

A study by Khlif, Guidara, and Souissi (2015), investigated the relationship between corporate performance and social and environmental disclosure in two African countries, South Africa and Morocco, with two different law systems. This research showed that social and environmental disclosure has a significant positive effect on firm performance only in the South African setting, which is a common law country as opposed to Morocco , which is a civil law country. This comparison narrative is a pointer that researchers have considered different factors that might affect the efficacy of the sustainability reporting-performance relationship.

An independent study on India has been conducted to also examine the relationship between sustainability reporting and firm performance, in the work of Garg (2015), the study suggest that

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sustainability reporting practices of Indian companies have become better over time, Also, empirical results depict that sustainability reporting practices of a firm affect its performance negatively in the short term while it becomes positively in long term. It is interesting that the researcher employed a holistic approach in looking at the impact of sustainability reporting by comparing it on a short and long-run basis.

A study by Cheng, Lin, and Wong (2016) investigated the relationship between corporate social responsibility reporting and firm performance in China, the study finds that the historical performance of cooperation has a significant positive impact on adopting Corporate social responsibility (CSR) reports. Furthermore, there is also a relationship between present corporate social responsibility disclosure and future performance, and corporate donation increases subsequent performance. This study supports the position that CSR could be a good business strategy that corporations can adopt to achieve their organizational goals. Many organizations channel a considerable number of resources into improving the lives of the people in the environment where they operate- Since the organization is an active member of society, the activities of the organization will have an impact on the communities in both direct and indirect ways. The organization's success is dependent on its relationship with the community: therefore, the firm would strive to make sure that the community has a good perception of its corporate image. CSR is one of the possible ways of improving the corporate goodwill of a firm within the environment and creating a good positioning for the firm amongst its peers in the marketplace.

As shared by Deswantos and Siregar (2018), in a study where they investigate the direct and indirect relationship of environmental disclosures with financial performance, environmental performance, and firm value. The empirical results demonstrated that financial performance does not affect environmental disclosures and environmental disclosures do not have an association

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with firm market value, likewise, they do not mediate the effect of environmental and financial performance on firm value. It can be deduced that the results suggested no relationship between the considered variables. This result disagrees with previous studies that have suggested that environmental disclosure affects firm financial performance. Financial performance is mostly used as a dependent variable when studying ESG reporting, however, this and many other studies have considered ESG reporting as a dependent variable for financial performance.

The state of research on ESG reporting and its impact on corporate performance is still ongoing and researchers continue to adopt different designs in investigating these constructs. Apart from the sectorial dynamics considered in the studies, other researchers have also attempted to compare the level of impacts in one region and the other.

The work of Laskar (2018) analyzed the impact of sustainability reporting on firm performance in four Asian economies – South Korea, Japan, Indonesia, and India. The study further investigated the impact differences of sustainability reporting amongst the developed and developing countries of Asia, the results from this study showed that the average level of disclosure is higher in the case of Japanese companies (90%), followed by India (88%) and South Korea (85%). However, the average level of disclosure is 72% for Indonesian firms. Regression results showed a significant positive association between sustainability reporting and corporate performance. The research results also depicted that the relative impact of sustainability reporting on corporate performance is greater in developed countries than the developing countries.

It's practically possible that the ways or levels in which sustainability reporting might affect an organization might be dependent on the short or long term. A good sustainable practice might start paying off for the organization after a while, however, it might lead to an increased cost in the short term, which might affect certain performance parameters.

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Along this line, another study from the South-East Asian continent has also investigated the association between sustainability reporting and corporate performance. Johari and Komathy (2019), considered a sample of 100 firms that are considered best in sustainability disclosure in Malaysia. Return on equity, return on asset, dividend per share and market share were adopted in measuring performance, . The empirical results suggested that sustainability reporting has a positive relationship with corporate performance when using return on asset and earnings per share only.

In a study conducted by Buallay (2019), the research considered data from 932 manufacturing firms and 530 banks, The paper tries to provide a sectorial comparison between manufacturing and banking sectors with regards to the level of sustainability reporting (environmental, social, and governance) and its impact on firm performance. Results from this research suggested a contradictory impact across two different sectors; They demonstrated that ESG positively affects the operational, financial, and market performance in the manufacturing sector. However, contradictorily, ESG has a negative impact on the operational, financial, and market performance in the banking sector. Results from this study suggest that the impact of sustainability reporting on firm performance can distinctively vary from one sector to another based on several factors that are peculiar to each sector.

Bullay, Fadel, Alajmi, and Saudagaran (2020) in a study where they examine the relationship between sustainability reporting and bank performance after financial crises in developed and developing Nations using data from 2008-2019 found that ESG improves banks' performance based on accounting and market-based parameters in developed countries, this agrees with the value creation theory

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Bansal, Samad, and Bashir (2021), used Hansen's threshold framework to investigate the relationship between firm performance and sustainability reporting using a sample of 210 Bombay-listed firms spanning 2010-2019. Empirical results show that Sustainability reporting has a differential threshold impact on the different variables of corporate performance. Additionally, results illustrate that the firms' operating performance is positively impacted if and only if the sustainability reporting crosses a certain threshold. however, sustainability reporting positively impacts firms' market performance only up to a cut-off point.

Prashar (2021) conducted a study trying to look at how sustainability reporting affects firm performance, based on the quality of the report, the moderation of internal and external factors on the effect of sustainability reporting on firm performance, and the extent to which the presence of publication bias affects this relationship. The results showed that sustainability reporting affects a firm's market, accounting, and operational performance. Meta-regression results showed that for big, matured firms, or the firms that have institutional investors as board members or the firms that participate well in sustainability reporting quality awards, sustainability reporting brings better firm performance. Subgroup analyses demonstrate that the

sustainability reporting–firm performance relationship is moderated by the corporate governance approach of the country and the firm's linkage to environmentally sensitive industries.

Some studies have also investigated why some firm might choose to adopt sustainability reporting and why others might not, Giron, Kazemikhasragh, Cicchiello and Panetti (2021) in their study that adopted data from African and Asian countries provided insight in respect to this when they investigated the factors that impact the adoption of sustainability reporting practices and external assurance. The findings showed that companies that operate in the manufacturing sector and companies that have a higher percentage of women directors in the company's management

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structure are more likely to adopt sustainability reporting and external assurance. Also, the study negates previous studies that suggest that the age of the company's board of directors has an influence on the use of sustainability reporting.

In a study conducted by Alhawaj, Buallay, and Abdallah (2022), where they looked at the relationship between the level of sustainability reporting and sectorial energy performance across both developed and emerging economies covering 3,311 observations across 50 countries, the results of this study revealed that there is a significant relationship between ESG and operational performance (operation ratio). However, there is no significant relationship between ESG and financial performance (return on equity) and market performance (Tobin's Q) and the relationship between ESG and operation ratio is stronger in emerging than in developed economies. The study adopted a multi-dimensional approach to measuring performance; financial, operational and market indicators were all considered in the study.

Buallay (2022) considered 2008-2017 data from the Middle East and North African (MENA) region where the study investigated the relationship between the level of sustainability reporting and sectorial performance in the MENA region. The empirical results suggested that there are variations in the impact of sustainability reporting and firm performance between the sectors in the MENA region. Performance was measured using the return on asset, return on equity, and Tobin's Q. This is an indication that the sectorial differences are not country-specific but rather, it's a phenomenon that is common in all the countries investigated.

In recent research conducted by Alhawaj and Buallay (2022), they considered a worldwide (3000 firms in 80 countries) effect of sustainability reporting across seven different industries including the agriculture and food sector, manufacturing, energy, banks and financial, tourism, retail, and telecommunication & information technology sector. The results are in conformity with previous

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studies that suggested that there are sectorial differences in the impact of sustainability reporting on corporate performance e.g., Buallay (2019). The results demonstrate that there are differences in the impact of sustainability reporting (ESG) on a firm's performance (operational, financial, and market) between the seven sectors.

It's logical that there is a need to have an individual investigation across sectors since industries have heterogeneous characteristics that might impact how different events affect them.

2.2 Previous Studies in Nigeria

There exist quite a several studies that explored the relationship between sustainability reporting and corporate performance in Nigeria. Many of these studies have adopted different theoretical and methodological approaches in investigating the constructs.

Ekwueme, Egbunike, and Onyali (2013), studied the benefits of triple bottom line disclosures and corporate performance from a stakeholder perspective, the respondents were drawn from managers, employees, consumers, and investors. empirical results from the analysis demonstrated a positive association between sustainability reporting and corporate performance: Consumers and investors prefer product purchases from firms that embrace green operations. This would translate to improving the market share and capitalization of the corporations. Employees preferred to work in green corporations protecting their interests and providing a healthy work environment. And corporate managers agreed that recycling is more cost-effective than new purchases. one Sample t-test and multiple regression techniques (MRT) were used in analyzing the primary data collected from stakeholders

Other studies have also examined sustainability reporting in specific industries, Isa (2014) assessed sustainability reporting among food and beverages companies in Nigeria, and a regression analysis

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was employed in the study to ascertain the predictors of sustainability disclosures. The results revealed that environmental disclosures constitute 0.24 of the total disclosures followed by product 0.197 and human rights disclosures representing 0.128. It is also noted that disclosures are determined by the firm size and can vary based on the size difference.

Nwobu (2015), studied the relationship between Corporate Sustainability Reporting and Profitability and Shareholders Fund in Nigerian Banks, the results indicated that sustainability reporting has become common in the past few years. Furthermore, analysis results reveal a small positive correlation between sustainability reporting and profit after tax and shareholders' funds.

Johnson-Rokosu and Olanrewaju (2016), explored the trend of sustainability in Nigeria, and they found that the selected firms disclose social and governance information more than environmental information in the reports. Companies also attempted to manage their reputation with stakeholders by trying to be language selective and verbally biased in their environmental disclosure. Lastly, it was observed that most companies disclose their social and environmental information in their chairman's statements and Director's report

Joseph, Tarbdo and Ikya (2017), conducted research that examined the effect of erosion control reporting, waste management reporting, and air pollution reporting on the financial performance of listed manufacturing firms in Nigeria. Results showed that erosion control reporting and air pollution reporting have a significant effect on firm financial performance while waste management reporting has a significant negative effect on the firm financial performance of the studied companies. The overall conclusion of the research is that environmental reporting has a significant effect on firms' financial performance.

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In a study conducted by Uwuigbe, Teddy, Uwuigbe, Asiriuwa, Eyitomi, and Taiwo (2018), the researchers investigated the bi-directional relationship between sustainability reporting and corporate performance, panel regression technique was employed to analyze the data. The empirical finding supports the legitimacy theory and analysis results show that market share price has a significant negative effect on sustainability reporting, while sustainability reporting has a significant positive effect on revenue. The study adopted a unique approach by looking at how both constructs influence each other.

Abba, Suleiman, and Yahaya (2018) explored the impact of corporate environmental reputation on the financial performance of selected environmentally sensitive firms in Nigeria. The study was inspired by a need to provide an empirical basis for the argument that environmental reputation aids corporate performance thus serving a strategic function in the organization. The results of the regression analysis demonstrated a significant positive effect on firms' financial performance.

Yahaya (2018), examined the effect of environmental reporting on the financial performance of environmentally sensitive firms in Nigeria, and correlation and regression analyses were carried out. the correlation results revealed that environmental reporting practices and financial performance have a positive and significant relationship. The regression results demonstrated that environmental reporting has a positive significant effect on financial performance.

Asuquo, Dada, and Onyeogaziri (2018), conducted a study on the effect of Sustainability Reporting on Corporate Performance of Selected Quoted Brewery Firms in Nigeria. Environmental, economic, and social disclosures were used to measure sustainability reporting while return on asset was used as the proxy for corporate performance. Results showed that sustainability reporting has no significant effect on corporate performance.

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Amedu, Iliemena, and Umaigba (2019) examined the value relevance of sustainability reporting in the Nigerian manufacturing sector using a sample of 30 listed companies, The analysis report showed that economic sustainability and social sustainability reporting were valued in the companies examined, whereas environmental sustainability disclosure has not received the required attention despite the global campaign for environmental sustainability. Even though social sustainability disclosures were prioritized, some key concepts within the framework were still silent - anti-corruption policy, labor, and management relation, freedom of association, and collective bargaining.

Other researchers have also explored this area within the Nigerian space, Chikwendu, Okafor, and Jesuwunmi (2019), studied the effect of sustainability reporting on the performance of listed firms in Nigeria, the study adopted multiple regression techniques to test the hypothesis. The empirical results revealed that not all sustainability disclosures have an impact on firm performance: social disclosure has a significant positive impact on firm performance, however, economic, and environmental disclosure have no significant effect on return on asset.

A recent study also considered the impact of sustainability reporting on performance in a specific industry in Nigeria. Amahalu (2019), studied the impact of sustainability reporting on the corporate performance of quoted oil and gas firms in Nigeria, and the results showed that sustainability reporting (measured with environmental, social, and economic disclosure indices} has a significant positive impact on earnings per share, net profit margin, and the return on equity.

Iredele (2019), studied the level of corporate environmental reporting in Nigeria, the study used data from the top 40 companies on the Nigerian Stock Exchange based on market capitalization as of 31st December 2017, and the results demonstrated that there is still a low level of compliance as regards corporate environmental reporting, majority of firms report environmental issues on

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their websites. Last, a relationship is found between corporate environmental reporting and firm size.

Awa, Olutola, and Mary (2020), studied the effect of sustainability reporting on the financial performance of selected listed manufacturing firms in Nigeria, panel least square regression was used to analyze the data derived from the annual reports. The results depict that both employee relations disclosure and community relations disclosure have a significant negative effect on return on assets. On the other hand, environmental disclosures and board composition are found to have a significant positive effect on return on assets.

Gold and Talib (2020) conducted a literature review on the impact of sustainability reporting on corporate performance, The study reviewed 35 papers and found a total of 13 studies that reported positive outcomes, 8 studies reported that sustainability reporting has a significant negative outcome on corporate performance, 9 studies reported mixed results while 5 studies found no significant relationship between sustainability reporting and corporate performance. It's on the premise of the reviewed works that the researcher concluded that it is advantageous for companies to embrace sustainable business practices and report because it provides benefits for the firm.

Festus, Rufus, and Janet (2020) examined the effects of sustainability reporting on turnover growth of listed companies in Nigeria, the study conducted a multivariate regression on data from 26 companies, and the empirical results reveal that the compliance level of the studied firms with sustainability reporting requirements for the four dimensions considered (social, economic, environmental and governance) is not less than average. owever, regression result shows that sustainability reporting has a significant effect on turnover.

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Aifuwa (2020), reviewed literature on sustainability reporting and firm performance in developing climes, the researcher made three observations from the literature. First, most researchers use return on asset, return on equity, dividends per share, and earnings per share to measure performance. Second, the fourth version of the Global Reporting Initiatives (GRI) is often used in estimating the sustainability reporting index. Lastly, the level of sustainability reporting in developed countries is high when compared to developing countries.

The work of Nzekwe, Okoye, and Amahalu (2021), examined the effect of sustainability reporting on the financial performance of quoted industrial good companies in Nigeria, the study adopted both descriptive and inferential statistics. Inferential statistics were carried out using Pearson correlation coefficient, panel least square regression analysis, Granger causality test, and Hausman specification test. The results depict that sustainability reporting (environmental, economic, and social disclosures) has a significant positive effect on cash value added respectively at a 5% level. It's imperative to note that the study has only studied corporate performance from a financial perspective. However, to have a holistic measurement of performance the researcher needs to consider other performance parameters like market and operational proxies. Many researchers have taken this approach and their work would be given precedence when reporting sustainability reporting and performance literature.

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Taiwo and Owolabi (2021) study examined the effect of sustainability reporting on market value growth of quoted firms in Nigeria, the results show that the compliance level of the understudied firms with sustainability reporting requirements is below average, also, sustainability reporting is found to have an insignificant effect on Market value growth.

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Umar, Mustapha, and Yahaya (2021), examined the effect of sustainability reporting on the financial performance of 26 consumer goods firms in Nigeria. The results reveal that social environmental disclosures have a significant positive effect on financial performance. However, economic disclosure was reported to have a significant negative effect on financial performance.

It is noticeable that the above literature reported mixed results- different results have been reported by different researchers based on the content and scope of their analyses. The three pillars of sustainability have also affected performance heterogeneously in some studies. This is indicative of how dynamic the research area is and a pointer to the need to explore more.

Alhassan, Islam, and Haque (2021), focused on the impact of sustainability reporting on financial performance in the industrial goods sector, secondary data were collected from companies' facts books and financial statements. The researcher employed the Pearson correlation coefficient and multiple regression analysis in analyzing the data. Analysis results show that sustainability reporting (operationalized by economic, social, and environmental variables) has a positive significant effect on return on asset, earnings per share, and return on equity.

Bala and Ibrahim (2022) examined the to which ESG disclosure affects in ROA among selected listed firms in Nigeria, the studies used pooled and panel linear regression econometric method to test the hypothesis. Results from this study showed that environmental and governance disclosures do not affect ROA, while social disclosure affects ROA.

It is observed that most studies did not include governance while studying sustainability reporting, even though, according to the GRI4 disclosure framework, governance falls under the general standard disclosures. Umoren, Udo and George, (2015) assessed the level of ESG reporting practices among selected Nigerian firms, and the results revealed that governance is the most

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reported among the three variables (environmental, social, and governance). It is on this background that the study intends o consider the governance aspect of sustainability since it represents a key pillar of corporate sustainability.

2.3 Theoretical Review

Many existing academic theories can be considered when investigating ESG or sustainability reporting and corporate performance. Some of the postulated social theories have been used by researchers. These theories include stakeholders' theory, legitimacy theory, and signaling theory.

The stakeholder theory was postulated by R. Edward Freeman in 1984, the theory proposes to show the connectivity between an organization and the various stakeholders in the business. The organization would strive to give value to the entire stakeholder and always maintain their interests. The idea encompasses the fact that organizations should consider how to deliver value to the entire stakeholders without focusing on the shareholders only. If the organization is really upholding the values of its stakeholders, it won't operate in a way that contradicts these values. Stakeholders include parties who are affected by the organizational activities directly or indirectly. The organizational stakeholders can be categorized into internal and external.

Internal stakeholders include employees and shareholders. External stakeholders are government, customers, suppliers, creditors, society, etc. since sustainable development is a hot topic now globally, many of the stakeholders are interested in sustainability thus the corporation would be able to communicate their sustainability actions through reporting. The stakeholder theory has been adopted in Nzekwe et al. (2021), Alhawaj et al (2022), and Buallay (2022).

Stakeholders can also be categorized into primary and silent. The silent stakeholders are the environment and future generations who need other bodies to advocate for them (Francisco &

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Zahir, 2014). The incorporation of silent stakeholders in this classification is built on the narrative of sustainable development and the premise that humans should not jeopardize the environment, and our actions should be sustainable to allow future generation to meet their needs. An unsustainable way of business can seriously destroy both present and future potentials. The need to integrate the culture of sustainable production and consumption cannot be overemphasized in the industrial world.

Legitimacy theory focuses on a social contract, indicating that the success of a corporation is highly dependent on how such a corporation can act in accordance with the expectation and norms of the society where it operates. For a corporation's long-term survival in society, it must endeavor to maintain a legitimate status in society. This legitimacy will increase their goodwill in society, thus making their operations easy which will achieve the goals objectively. Contrarily, a corporation that acts against societal values will have trouble achieving its goals because of a lack of societal acceptance. Some members of society may decide to boycott a corporation because of its bad social and environmental practices (Coopers & Lybrand, 1993). Given the global importance given to sustainability issues now, one of the most important societal expectations nowadays is corporate sustainability, and one of the most effective ways corporations can communicate their activities is through sustainability reporting. Legitimacy theory has been considered in the works of Burhan and Rahmanti (2012), Buallay (2019), and Uwuigbe et al. (2018). Non-financial disclosures give the organization an opportunity to communicate to stakeholders how they have been performing regarding the environmental, social, and economic issues that are of major concern to the stakeholders. The communication of this information helps the organization to become more socially responsible thus increasing its legitimacy.

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The signaling theory shed light on the possibility that corporations might be willing to disclose their positive sustainability activities just to show superior performance over others(competitors). In the study of corporate sustainability, Signaling Theory explains how managers communicate the firm's strategic direction through sustainability reporting (Hassan et al., 2020). Organizations frequently send out information to reduce the information gap between the organization and its stakeholders. This information allows the stakeholders to predict the corporate intention, attitude, value, and performance of the organization. The disclosure of financial information alone would not be sufficient for the stakeholders to have a holistic idea of the organizational actions and performance.

2.4 Conceptual Review

There is no unanimous definition that describes what sustainability reporting is, however, it generally refers to the act of a firm communicating its social, economic, environmental, and governance performance to stakeholders. Sustainability reporting is described as the process whereby companies communicate the environmental, social, and economic impacts of their day-to-day activities. The report also highlights a company strategy or model for achieving sustainable development goals. It is perceived that the firm can gain some benefits by doing this – Market Analysts often investigate a company's sustainability report to assess its managerial efficiency and quality, and reporting might give a company an opportunity or access to increased funding (Dhaliwal et al., 2011).

sustainability reporting can be linked to previous concepts like the accounting for human resource and social audits postulated in the 1970s and triple bottom line reporting and environmental

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reporting in the 1990s, corporate social responsibility reporting and several versions of the GRI (Global Reporting Initiative) guidelines on reporting (Simnet et al., 2009).

The concept of sustainability reporting is said to be related to other concepts like corporate social responsibility reporting and triple bottom reporting. It is a voluntary reporting firms make to offer stakeholders additional benefits and disclosure to better understand the true value a corporation represents. By doing this, the company also gain a lot of benefits, these include, good reputation, access to more capital, good governance, attracts quality workforce etc.

The global reporting initiative is an international organization that helps organizations become accountable and transparent about their impacts by providing a unified language to disclose these impacts to the stakeholders. The organization provides a global widely used standard for sustainability reporting. The framework allows organizations to report their impacts in standardized format that is globally understandable. The GRI framework provides performance indicators in each of three performance areas, that is, environmental, social, and economic.

Economic dimension of sustainability reporting encompasses economic success, profit maximization, attaining competitive edge and improving the overall economic status of the organization (Shad, Lai, Fatt, Klemes, & Bokhari). The environmental dimension of sustainability reporting covers aspect of climate change, global warming and other organizational activities that directly or indirectly affect the entire environment. finally, it is the social dimension that explains how the organization influence the social entities that are affected by the organizational activities. The social dimension includes social indicators such as, community well-being, charity, health and safety, organizational behavior, and employment opportunities (Aras, Tezcan, & Kutlu Furtuna, 2018).

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The performance of a corporation can be evaluated using different measurement approaches, this can be from the dimension of growth of its size, that is total assets or, profitability perspective, that is, profit margin, return on asset, return on equity, etc. A firm's performance is often measured using financial, operation, and market approaches. At the beginning of the twenty-first century, a corporation's performance was defined as the capability of the firm to manage its resource properly to achieve its goal and add value to shareholders (Lebans & Euske, 2006).

CHAPTER THREE

METHODOLOGY AND RESULTS

3.1 Research Design: This study shall adopt ex post facto and content analysis research design. Ex post facto shall be adopted since the research is looking at data that are historical. Financial data are historical in nature. The study shall also employ content analysis to quantify the qualitative data from the sustainability reports.

3.2 Data Sources: Secondary data will be derived from annual reports covering the period of 2014-2021

3.3 Data Analysis: Both descriptive and inferential analyses shall be employed in this study. The descriptive analysis will entail tools like summary statistics (mean, standard deviation, minimum and maximum values) and tabulations (frequency and percentage distribution) while the inferential analysis entails the pairwise correlation and regression analyses. Specifically, the panel data regression analysis will be employed for the estimation and to test the hypotheses with the aid of stata software.

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3.4 Population and sampling: The total population of the study includes all listed companies on the Nigerian stock exchange (NSE) that falls into the manufacturing sector category. The total number of manufacturing firms is 64 however, only listed firms with complete annual reports that cover the period of 2014-2021 will be considered. Therefore, the purposive sampling technique shall be adopted. A total number of 40 firms that meet the criteria shall be investigated in answering the research questions and achieving the research objectives.

Serial No.	***Industries***	***Population***	***Adjusted Population***
1	*Agriculture*	*5*	*4*
2	*Conglomerate*	*5*	*3*
3	*Consumer goods*	*20*	*16*
4	*Health Care*	*7*	*4*
5	*Industrial Goods*	*13*	*6*
6	*Natural Resources*	*4*	*1*
7	*Oil and Gas*	*10*	*6*
	TOTAL	*64*	*40*

Source: *NSE Main Market Sector Distribution as at 31st Dec 2021*.

3.5 GRI Sustainability Index: The variables for measuring sustainability reporting will be based on the GRI 4 framework. The GRI checklist shall be used, where firms will be scored based on the checklist. When any of the items are under social or environmental disclosure are reported, they will be given a score of one (1) and a score of zero (0) zero when they fail to report (Chikwendu et al., 2019). Therefore, the index score = n/k. where n is the total number reported by the company and k is the actual number of items that should be reported according to the GRI framework. The

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GRI framework was used to measure sustainability reporting because it is one of the most comprehensive framework on sustainability reporting , and many of the past researchers have adopted it, this speaks well of its acceptability.

3.6 Model Specification:

Functional model:

$$ROA_{it=f(SD_{it}ED_{it}GD_{it}FS_{itLV_{it})}}$$

$$ROE_{it=f(SD_{it}ED_{it}GD_{it}FS_{itLV_{it})}}$$

$$TQ_{it=f(SD_{it}ED_{it}GD_{it}FS_{itLV_{it})}}$$

Structural model:

$$ROA_{it} = \alpha_0 + \alpha_1 SD_{it} + \alpha_2 ED_{it} + \alpha_3 GD_{it} + \alpha_4 LFS_{it} + \alpha_5 LV_{it} + e_{it}$$

$$ROE_{it} = \beta_0 + \beta_1 SD_{it} + \beta_2 ED_{it} + \beta_3 GD_{it} + \beta_4 LFS_{it} + \alpha_5 LV_{it} + \epsilon_{it}$$

$$TQ_{it} = \theta_0 + \theta_1 SD_{it} + \theta_2 ED_{it} + \theta_3 GD_{it} + \theta_4 LFS_{it} + \alpha_5 LV_{it} + \varepsilon_{it}$$

Where:

ROA is return on asset

ROE is return on equity

TQ is Tobin's Q

SD is social disclosure

ED is environmental disclosure

GD is governance disclosure

LFS is log of firms' size

LV is leverage

e, $\varepsilon, and\ \epsilon$ denote the error terms

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$\alpha_0, \alpha_1, \alpha_2 \; and \; \alpha_3$ represent the intercepts for social disclosures, environmental disclosures, and firms' size in equation 1.

$\beta_0, \beta_1, \beta_2, and \; \beta_3$ represent the intercepts for social disclosures, environmental disclosures, and firms' size in equation 2.

$\theta_0, \theta_1, \theta_2, and \; \theta_3$ represent the intercepts for social disclosures, environmental disclosures, and firms' size in equation 3.

Subscript(it) represents the observation of 40 firms across eight years (2014-2021).

3.7 Variables Definition: This study proposes two independent variables, three dependent variables and one control variable.

Independent variables	**Dependent variables**	**Control variables**
Environmental disclosure = total level of environmental disclosure / total environmental disclosure	Return on asset = net income/total asset	Firm size which was represented by total asset = non-current assets + current assets
Social disclosure= total level of social disclosure / total social disclosure	Return on equity = net income/ total equity	Leverage which was represented as total debt / total equity.
Governance disclosure = total level of governance	Tobin's Q= (Market value of equity+ book value of equity)/asset book val.	

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disclosure/ total governance disclosure		

3.8 Descriptive Statistics

Descriptive statistics are adopted in research to summarize properly and present data to increase understanding (Chava & Davids, 2009). The descriptive statistic table depicts information for the mean, standard deviation, minimum, and maximum of the independent and dependent variables considered in the study. Table 4.1 contains the summary of descriptive statistics.

Table 3.8 :Descriptive Statistics Table

Variables	Obs	Mean	Std. Dev.	Min	Max
ed	400	.05	.12	0	.735
sd	400	.109	.118	0	.75
gd	400	.252	.185	0	1
Tq	400	1.683	1.51	.417	11.757
roa	400	.05	.145	-.716	1.763
roe	400	.159	3.511	-42.659	50.93
FS(‘000’)	400	117,000 000	260,000 ,000	26,200	2,392,000,000
lev	400	.594	.229	.178	2.478

Source: Author’s Computation using Stata13 Output, (2023)

Table 4.1 shows the descriptive statistics of independent, dependent, and the control variables for this study. Environmental disclosure is measured as ratio where its value ranges from 0 to 1. Mathematically, this could also be expressed in percentages. According to the table above, the mean of the environmental disclosure in the study is (0.05), that is, 5%. The practical implication of this result is that the average level of environmental disclosure among the sampled firms during

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the feature years is considered low. Furthermore, the maximum environmental disclosure recorded in the sample is 73.5%, and the lowest environmental reporting is 0%. These varying reports give insights into the different narratives of environmental reporting among selected manufacturing firms in Nigeria. The standard deviation of environmental disclosure is 12%, greater than the mean of 5%; this means there is a high degree of dispersion in the environmental disclosure data.

For social disclosure of the firms, on average, the level of social disclosure reported by the firms under consideration stands at 0.109, indicating that companies reported 10.9% of their social sustainability performance. This suggests that the average level of the social component of sustainability is low among sampled firms in the given year. The maximum social disclosure for the study is 75% which is lower than what was disclosed for the environmental aspects. The lowest social disclosure reported was 0% and the SD for social disclosure is 11.8%, slightly above the mean.

The maximum governance reporting rate is 100% is the highest reported for all three ESG pillars. The mean stands at 25.2% which suggests that on average, the studied companies report more of their governance than any of the other ESG reporting. The reasons for this might not be far-fetched as the idea of reporting governance performance might not be new to many of these firms even before the popularity of ESG disclosures. The minimum report on governance is 0%, and the standard deviation is 18.5%. The SD result suggests that the average difference in the level of reporting among the companies is not that high. The above summary generally suggest the general attitude of manufacturing firms in Nigeria to ESG reporting.

Moving forward to the dependent variables, the market performance measured by Tobin's Q. Tobin's Q as a measure of market performance is a very important tool for estimation as this

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reveals the relationship between the market valuation of a company and it is intrinsic value. According to the study, this has a mean or average value of 1.68 and a standard variation of 1.51. This implies that the market performance index of our sample during the years of consideration did not vary much across the distribution, as evident that the gap between the mean and standard deviation is not that wide. The maximum of 11.7 and 0.4 represent the highest and lowest TBQ reported in the observation.

Operational performance, one of the most important performance indicators of firm well-being, is measured in this study by their return on assets (ROA). The results, as shown in the table, depict that the average return on asset in the firm is 5%, and the standard deviation is 14.5%. This result suggests a high variability of return on assets among the firms in the distribution. The minimum and maximum ROA of -0.71 and 1.76 indicate that the most profitable listed bank earned N1.76 of net income from a single N1 invested in assets, and the highest loss incurred by a firm is –N0.71 from a single N1 invested in assets.

Financial performance, which is one of the three most common perspectives employed in measuring firm performance in management literature was also considered in this study. The financial performance measured by return on equity (ROE) has an average value of 15.9%, and a standard deviation of 3.5%. This implies that there is a bit of high variability of ROE among the sampled firms. An average of 3.5% ROE gives on an insight into to the positive performance of our sample firms in managing the shareholders' wealth. As expected in this kind of distribution, all the firms cannot be on the same level of performance, and a reasonable level of variability is expected. Thus, the level of variability can be influenced by outliers among other factors. The minimum and maximum are -42.6 and 50.9 respectively. This means that the most profitable

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sampled firm earned N50.9 of net income from a single N1 of equity and a maximum losses of N-42.6 on each N1 of equity.

The two control variables considered in the study are firm size and leverage. Concerning the size, the results show that the biggest firm in the study in terms of assets as a total asset worth N2,392,000,000,000, and the smallest firm has a total asset of N5.234,000. The leverage, which is considered the firms' ability to meet their financial obligations, shows a result of 2.47 as the maximum and 0.17 as the minimum. The maximum of 2.47 means the firm is financing its asset with debt almost 2.5 times more than equity, and the minimum of 0.17 means the firm is financing its asset with 0.17 of debt.

3.9 Normality Test

A data normality test is conducted to ascertain whether the regression equation's dependent and independent variables have a normal distribution or otherwise. Normality is one of the conditions for using the ordinary least square (OLS) technique. Therefore, it becomes incumbent to ascertain the normality of the distribution before estimating our data with OLS. However, it is common for large data set to have issues of normality due to the level of variation that can exist in such dataset.

Table 3.9: Normality Test

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Variables	Obs	Skew.	Kurt.
Ed	400	3.562	16.132
Sd	400	3.537	16.724
Gd	400	1.654	6.144
Tq	400	3.153	14.844
roa	400	3.576	54.169
roe	400	2.91	166.831
FS(‘000’)	400	5.234	36.102
lev	400	2.7	19.467

3.10 Correlation Matrix

The correlation matrix in Table 4 depicts the nature and direction of the relationship between the variables considered in the study. A summary of the association between all the variables is shown in Table 4.3 below.

Table 3.10 Correlation Matrix

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Pairwise correlations

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) ed	1.000							
(2) sd	0.883	1.000						
	(0.000)							
(3) gd	0.700	0.773	1.000					
	(0.000)	(0.000)						
(4) tq	0.001	0.030	0.227	1.000				
	(0.978)	(0.546)	(0.000)					
(5) roa	0.028	0.069	0.183	0.372	1.000			
	(0.571)	(0.170)	(0.000)	(0.000)				
(6) roe	0.017	0.036	0.093	0.048	0.157	1.000		
	(0.735)	(0.473)	(0.063)	(0.341)	(0.002)			
(7) fs	0.439	0.492	0.600	0.110	0.108	0.015	1.000	
	(0.000)	(0.000)	(0.000)	(0.027)	(0.030)	(0.770)		
(8) lev	-0.059	-0.068	-0.037	0.066	-0.370	0.017	-0.045	1.000
	(0.239)	(0.173)	(0.457)	(0.189)	(0.000)	(0.733)	(0.370)	

Source: Author's Computation using Stata13 Output, (2023)

3.11 Multicollinearity Test

An important assumption of linear regression is that multicollinearity should be absent. If the variables are found to have a strongly significant inter-connectivity, incorrect statistical inferences might be derived from such a model. One of the assumptions in linear regression analysis is that multicollinearity should not exist. Tolerance and variance inflation factor (VIF) result is adopted in examining multicollinearity among the variables. The table below shows the multicollinearity test.

Table 3.11: Multicollinearity Test Result

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Variance inflation factor

	VIF	1/VIF
Eds	4.54	.22
Sds	5.76	.17
Gds	2.82	. 35
Lfs	1.39	. 71
Lev	1.01	. 98
Mean VIF	3.11	.

Source: ***Source: Author's Computation using Stata13 Output, (2023)***

According to the results shown in the above table, it can be concluded that there is no issue of multicollinearity between the explanatory variables. The evidence for this is traceable to the conclusion of (Hair et al., 2006), stating that there is an absence of multicollinearity when the variables have their VIFs below 10 and tolerance values above 0.10. In this case, the values of VIF range from 1.01 to 5.76, these are all below 10. A mean VIF value of 3.11 solidifies the argument that there is no collinearity among all the independent and control variables of the study.

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3.12 EXAMINING THE IMPACT OF ESG DISCLOSURE ON OPERATING PERFORMANCE

This part of the thesis examines the relationship between Environmental, Social, and Governance (ESG) and the operational performance of the listed manufacturing firms in Nigeria. The developed hypothesis relating to ESG reporting and operational performance will be tested based on the independent and the independent variables identified and also the control variables. The model developed to investigate this relationship is written below.

$$ROA_{it} = \alpha_0 + \alpha_1 SD_{it} + \alpha_2 ED_{it} + \alpha_3 GD_{it} + \alpha_4 LFS_{it} + \alpha_5 LV_{it} + e_{it}$$

3.12.1 Presentation, Analysis, and Discussion of Regression Results

The relationship between the dependent variable (ROA) and the independent variables (ESG components) is presented in the section. ROA was used to measure operational performance, as found in much of the visited literature. The relationship between ROA and each of the pillars of ESG was individually considered. The summary of the generalized least squares (GLS) regression results is presented in Table 4.5 below. Since the study observed the problem of heteroscedasticity, GLS was then adopted to correct the problem of heteroscedasticity and autocorrelation found in the random effect selected after the Hausman test was conducted. GLS can be adopted as an alternative when a heteroscedasticity issue is detected (Boslaugh & Watters, 2008). Different scholars have supported the usage of GLS in dealing with the problem of heteroscedasticity (Cameron & Trivedi, 2009; Westerlund & Narayan, 2012). The heteroscedasticity issue will make it difficult for the random effect to provide the Best Linear unbiased estimate (BLUE). However,

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adopting GLS will make it possible to provide the BLUE (Gujarati & Porter, 2009) by correcting the identified problem.

Table 3.12: Generalized Least Squares model (GLS) Regression

Variables	**Coefficient**	**Std. Err**	**Z-values**	**Sig**
CONSTANT	0. 095	0. 099	0. 96	0. 338
ED	-0. 206	0. 116	-1.78	0. .075
SD	-0. 090	0. 132	-0.68	0. 495
GD	0. 260	0. 059	4.40	0. 000
LFS	0. 004	0. 009	0.47	0. 636
LEV	-0. 236	0. 028	-8.26	0. 0.000
Wald chi^2	94.61			
Prob Wald chi^2	0.0000			
No of Observation	400			
Panels:	Correlated(balanced)			
Correlation:	No autocorrelation			

Author's Computation using Stata13 Output, (2022)

4.12.2 Interpretation of the Model

From table 4.5, the ROA model previously written in chapter three can now be represented as,

Model:

$$\boldsymbol{ROA_{it} = 0.095 - 0.090\, SD_{it} - 0.206\, ED_{it} + 0.260\, GD_{it} + 0.004\, LFS_{it} - 0.236\, LEV_{it}}$$

This section of the thesis explains the relationship between ESG disclosure and the return on assets of listed manufacturing firms in Nigeria. The direction and strength of the association between the

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two constructs are estimated using the coefficient values, z-values and probability values. The results show that the model has a chi-square of 94.61, and p-value equals 0.000, this means that the overall model is significant as 1%. This implies the model's significance and the explanatory variables' capacity and fitness in predicting the operational performance of the listed manufacturing companies in Nigeria.

3.12.3 Testing of Hypothesis and Discussion of Findings

3.12.3.1 Environmental Reporting and Operational Performance

The between environmental reporting and ROA, as shown in Table 4.5, is negative by the - 0.2 coefficient, which is statistically insignificant (from a p-value of 0.07, greater than 5%). This study adopts a 5% p-value decision rule. Any p-value above 5% counts as an insignificant result, and thus, we fail to reject the null hypothesis. From an analysis point of view, this implies that the increase in environmental disclosure will lead to an insignificant decrease in operational performance. Factors suggesting that environmental disclosure has an insignificant relationship with the operational performance of listed manufacturing firms in Nigeria could be attributed to low environmental disclosure among these firms (as the descriptive result showed an average of 5%). Environmental disclosure allows stakeholders to access information on how the firm manages its environmental activities, like water, waste, energy, pollution, etc. This information is important to stakeholders in making quality decisions regarding their relationship with any corporate entity.

Since there is no legal or statutory demand for compulsory disclosure of environmental activities, many firms might not prioritize reporting environmental activities. Furthermore, the GRI framework for sustainability reporting is still in its early adoption, and even firms that report

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environmental activities might still have a low disclosure level since they did not follow the GRI guideline we used as our checklist. The negative coefficient in the table also indicates that the cost incurred in environmental disclosure outweighs the operational benefit.

The p-value is greater than 5%, which provides sufficient evidence for the study to fail to reject the null hypothesis, which states that there is no relationship between environmental disclosure and the operational performance of listed manufacturing firms in Nigeria. The result of this study agrees with the findings of Nor et al. (2016) and Kalash (2020), who also found no significant relationship between environmental disclosure and ROA. However, the result contradicts other reports that suggest a significant relationship between environmental disclosure and ROA (Gerged et al., 2021; Setyorini & Ishak, 2012)

3.12.3.2 Social Reporting and Operational Performance

The relationship between social operational performance measured with ROA, as shown in Table 4.5, is negative by the - 0.09 coefficient, which is statistically insignificant (from a p-value of 0.49, greater than 5%). The p-value indicated in the result is above the 5% baseline adopted in this study, and thus, we fail to reject the null hypothesis. The technical interpretation of the result implies that the increase in social disclosure will lead to an insignificant decrease in operational performance. Factors suggesting that social disclosure has an insignificant relationship with the operational performance of listed manufacturing firms in Nigeria could also be attributed to low environmental disclosure among these firms (as the descriptive result showed an average of 10.9%).

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ESG disclosure remains voluntary in Nigeria; therefore, corporations are expected to use their discretion in disclosing ESG-related matters since they are not legally required to follow any particular framework. Many firms that report social disclosure might not necessarily report with the GRI framework, which provides a comprehensive framework for disclosing all social issues related to organizational activities. A company will continue to interact with internal and external persons; this suggests that having this information known to stakeholders is significant and relevant.

However, good social disclosure is expected to improve the firm's image as a socially responsible organization and yield a better return. However, it is important to note that ESG activism is not embedded in the Nigerian corporate landscape compared to other developed nations. Also, many of the stakeholders might not find that as a necessity to do; thus, the expected results from ESG disclosure might not be achieved. The summary of the above explanation now is that the investment in social disclosure super passes the benefit from it from an operational performance point of view.

The result agrees with Asuquo et al. (2018), who also concluded that social disclosure has no significant relationship with ROA. This contradicts Emuebie et al. (2021), which found a significant relationship between social disclosure and ROA. Therefore, the study fails to reject the null hypothesis that social disclosure has no relationship with return on assets.

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3.12.3.3 Governance Reporting and Operational Performance

As evident in Table 4.5, the relationship between governance disclosure and the operational performance of listed manufacturing firms in Nigeria is positive and significant. The coefficient of the relationship is 0.26, and the p-value is 0.00, indicating that the relationship is significant at 1%. This means an increase in governance disclosure will lead to a 26% increase in the return on assets.

Governance disclosure among manufacturing firms in Nigeria based on the GRI framework averages 25%. This does not support a high level of disclosure. However, this is still fairly better than the level of reporting on environmental and social issues. This might be because governance disclosure has been an integral component of many companies' annual reports, even before the popularity of ESG reporting demands. Many of the shareholders who are the owners of the company will have a special interest in how their wealth is being governed, so automatically, there is internal pressure on the firm to be transparent in this regard.

The results suggest that an increase in governance disclosure will also lead to a corresponding positive return on assets. It is expected that any company that takes its stakeholders seriously by giving them access to important information will experience success managing the relationship of the stakeholders, who are also germane and important to the organization's success. This implies that corporate governance disclosure reduces information asymmetry among stakeholders and attracts more stakeholders to the firm, which also ensures the firm's operational efficiency. This is in line with the result of Alareeni and Hamdan (2020), who also reported that corporate governance disclosure has a significant positive relationship with ROA.

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The p-value of 0.000 gives us enough statistical evidence to reject the null hypothesis that governance disclosure has no significant relationship with the operational performance (ROA) of listed manufacturing firms in Nigeria. The ability to manage stakeholders' demands helps ensure the ongoing nature of the firm. Since the corporation does not live in a vacuum, it will continually interact with different agents in its internal and external environment. The ability to manage this relationship properly and effectively becomes a survival strategy for the firm.

3.13 EXAMINING THE IMPACT OF ESG DISCLOSURE ON FINANCIAL PERFORMANCE

This part of the thesis examines the relationship between Environmental, Social, and Governance (ESG) and the financial performance of the listed manufacturing firms in Nigeria. The developed hypothesis relating to ESG reporting and operational performance will be tested based on the independent, explanatory, and control variables identified. The model developed to investigate this relationship is written below.

$$ROE_{it} = \alpha_0 + \alpha_1 SD_{it} + \alpha_2 ED_{it} + \alpha_3 GD_{it} + \alpha_4 LFS_{it} + \alpha_5 LV_{it} + e_{it}$$

3.13.1 Presentation, Analysis, and Discussion of Regression Results

The relationship between the dependent variable (ROE) and the independent variables (ESG components) is presented in the section. ROE was adopted as a measure of financial performance as suggested in many firm performance literature. The relationship between ROE and each of the pillars of ESG was individually considered. The summary of the Panel Corrected Standard Error

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(PCSE) is presented in Table 4.6 below. Since the study observed the problem of heteroscedasticity for the model, PCSE was then adopted to correct the problem of heteroscedasticity and autocorrelation found in the fixed effect selected after the Hausman test was conducted. PCSE can be adopted as an alternative when a heteroscedasticity issue is detected Gujarati and Porter (2017).

Running the PCSE model allowed us to bypass the problem of heteroscedasticity found in the fixed effect model, thus making our model fit for regression estimation. The summary of the ROE's PCSE model result can be found the table below.

Table 3.13: Panel Corrected Standard Error Model Regression Result for ROE

Variables	**Coefficient**	**Std. Err**	**Z-values**	**Sig**
CONSTANT	-.7014815	1.496587	-0.47	0.639
ED	-2.358298	3.262702	-0.72	0.470
SD	-.5643853	3.391922	-0.17	0.868
GD	3.096966	.898529	3.45	0.001
LFS	.009878	.1756324	0.06	0.955
LEV	.261237	1.278914	-0.47	0.639
R^2	0.0135			
Wald chi^2	19.01			
Prob Wald chi^2	0.0019			
No of Observation	400			
Panels:	Correlated(balanced)			
Correlation:	No autocorrelation			

Source: ***Author's Computation using Stata13 Output, (2023)***

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3.13.2 Interpretation of the Model

From Table 4.6, the ROA model previously written in Chapter three can now be represented as the model**:**

$$\boldsymbol{ROE_{it} = -0.701 - 0.564\, SD_{it} - 2.358\, ED_{it} + 3.096\, GD_{it} + 0.009\, LFS_{it} + 0.261\, LEV_{it}}$$

This part of the paper investigates the association between ESG disclosure and financial performance measured with the return on equity among listed manufacturing firms in Nigeria. We would like to provide an evidence-based discussion on the nature of the relationship between ESG reporting and financial performance among listed manufacturing firms in Nigeria. The direction and strength of the association between the two constructs are estimated using the coefficient values, z-values, and probability values. The R^2 and the wald chi^2 provide a useful suggestion in assessing the aggregate impact of ESG variables on ROE and the model's fitness in using the explanatory variables in predicting the dependent variables. While the R^2 result suggests the former, wald chi^2 result suggests the latter. The PCSE's wald chi^2 is equivalent to the F-statistic in OLS and GLS. R^2 Of 0.013 means that our explanatory variables is only responsible for 1.3% of the variation in financial performance of listed manufacturing firms in Nigeria. The model demonstrated a wald chi^2 of 19 which is okay since it is greater than 2 (Gujarati, 2004). By implication, this means that the model is good in estimating the relationship between ESG disclosure and financial performance.

The R^2 is used to test the cumulative effect of sustainability disclosure variables on return on asset, while the wald chi^2 and its significant values were used to ascertain the fitness and the predictability of the independent variables on the dependent variable in the study models. The

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model is significant at 1% and means that there is 99% chance that the estimation made from the variables in the regression model can be trusted in investigating the relationship between ESG disclosure and financial performance of listed manufacturing firms in Nigeria.

3.13.3 Testing of Hypothesis and Discussion of Findings

3.13.3.1 Environmental Reporting and Financial Performance

The relationship between environmental reporting and ROE, as shown in Table 4.6, is negative by the - 0.2 coefficient, which is statistically insignificant (from a p-value of 0.47, greater than 5%). This study adopts a 5% p-value decision rule. Any p-value above 5% counts as an insignificant result, and thus, we fail to reject the null hypothesis. From a practical sense, this implies that the increase in environmental disclosure will lead to an insignificant decrease in financial performance. Factors suggesting that environmental disclosure has an insignificant relationship with the financial performance of listed manufacturing firms in Nigeria could be attributed to low environmental disclosure among these firms (as the descriptive result showed an average of 5%). Environmental disclosure represents an important aspect of corporate information that stakeholders should be interested in, because actions emerging from environmental activities could threaten our safety as humans and the safety of other living and non-living resources in the ecosystem. Disclosing these issues allows stakeholders to access information on how the firm manages its environmental activities, like water, waste, energy, pollution, etc. This information is important to stakeholders in making quality decisions regarding their relationship with any corporate entity.

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Sustainability disclosure is currently at the early stage of adoption in Nigeria. Since there is no legal or statutory demand for compulsory disclosure of environmental activities, many firms might not prioritize reporting environmental activities, especially when the company feels they are not doing so well. This supports the signaling theory. Furthermore, the GRI framework for sustainability reporting is not been adopted by many of these companies, and even if the firm reports environmental activities, it might still have a low disclosure level since it did not follow the GRI guideline we used as our checklist. The negative coefficient in the table also indicates that the cost incurred in environmental disclosure outweighs the operational benefit. If the stakeholders are not in the real sense concerned about the transparency of firms in their corporate environmental sustainability, the resources channelled into making this information available might not have the positive economic benefit that outweighs the cost.

The p-value is greater than 5%, which provides sufficient evidence for the study to fail to reject the null hypothesis, which states that there is no relationship between environmental disclosure and the financial performance of listed manufacturing firms in Nigeria. The result of this study agrees with the findings of Alareeni and Hamdan (2020) since they also find a negative relationship between environmental disclosure and ROE. However, they found a significant negative relationship. However, the study is total agreement with Nor et al. (2016) , who also concluded that environmental reporting has a negative insignificant relationship with ROE. Iorun (2021), also reported that environmental reporting does not have a relationship with ROE. Contrary to the result of Khandelwal and Chaturvedi (2021), who found a significant relationship between environmental disclosure and ROE.

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3.13.3.2 Social Reporting and Financial Performance

The relationship between social and financial performance measured with ROE, as shown in Table 4.6, is negative by the - 0.09 coefficient, which is statistically insignificant (from a p-value of 0.49, greater than 5%). The p-value indicated in the result is above the 5% baseline adopted in this study, and thus, we fail to reject the null hypothesis. The interpretation of the result in a practical sense means that the increase in social disclosure will lead to an insignificant decrease in operational performance. Factors suggesting that social disclosure has an insignificant relationship with the operational performance of listed manufacturing firms in Nigeria could also be attributed to low environmental disclosure among these firms (as the descriptive result showed an average of 10.9%).

ESG disclosure remains an underdeveloped initiative in the Nigerian corporate landscape. Therefore, corporations disclose ESG-related information of their own choice since they are not legally required to follow any particular framework. Many firms that report social disclosure might not necessarily report with the GRI framework, as there other frameworks adopted in disclosing ESG-related issues. A company will continue to interact with internal and external persons, and thus, there must be an ethically acceptable way of dealing with the different social issues related to the organization; this suggests that having this information known to stakeholders is significant and relevant.

However, good social disclosure is expected to improve the firm's image as a socially responsible organization and yield a better return. However, it is important to note that ESG activism is not embedded in the Nigerian corporate landscape compared to other developed nations. Also, many stakeholders might not find that a necessity; thus, the expected results from ESG disclosure might

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not be achieved and companies might not have their social disclosure justified economically and financially. The above explanation summarizes that the investment in social disclosure super passes the benefit from it from a financial performance point of view.

The result agrees with (Dewi & Monalisa, 2016; Kamatra & Kartikaningdyah, 2015), who also concluded that social disclosure has no significant relationship with . This result is in disagreement with the work of Hira et al., 2023 who found that social disclosure has a significant positive effect on ROE.

3.13.3.3 Governance Reporting and Financial Performance

As evident in Table 4.6, our results demonstrate a significant positive relationship between governance disclosure and the financial performance of listed manufacturing firms in Nigeria. This finding is inferred from the coefficient and p-value. The result has a coefficient of the relationship as 3.09, and the p-value is 0.00, indicating that the relationship is significant at 1%. This means an increase in governance disclosure will lead to a triple increase in the return on equity.

Governance disclosure among manufacturing firms in Nigeria based on the GRI framework averages 25%. This does not support a high level of disclosure. However, this is still fairly better than the level of reporting on environmental and social issues. It is expected that many of the sampled firms will have a higher level of governance disclosure as compared to other variables because most of these firms already have governance disclosure as part and parcel of their annual reports even before the popularity of the advocate for ESG disclosure.

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In developed societies where different stakeholders are properly informed about corporate responsibilities, it is not uncommon to find these stakeholders, including customers, paying close attention to annual reports of companies they have relations with. This information reveals some of the important non-financial disclosures that stakeholders are interested in. The ability to provide this information to stakeholders is expected to improve their relationship. This might also indicate stakeholders' management and engagement, which are important for achieving corporate goals and improving performance. The finding of this research that governance has a significant positive relationship with financial performance agrees with what was reported by Ben Abdallah& and Bahloul (2021), and opposes the finding of Khanifah et al., (2020) concluded that governance disclosure is not significant with ROE. The result thus provide enough statistical evidence to reject the null hypothesis that environmental disclosure does not have relationship with ROE

3.14 EXAMINING THE IMPACT OF ESG DISCLOSURE ON MARKET PERFORMANCE

This last part of the thesis examines the relationship between Environmental, Social, and Governance (ESG) and the market performance of the listed manufacturing firms in Nigeria. The developed hypothesis relating to ESG reporting and market performance will be tested based on the independent and the independent variables identified and also the control variables. The model developed to investigate this relationship is written below.

$$TQ_{it} = \alpha_0 + \alpha_1 SD_{it} + \alpha_2 ED_{it} + \alpha_3 GD_{it} + \alpha_4 LFS_{it} + \alpha_5 LV_{it} + e_{it}$$

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3.14.1 Presentation, Analysis, and Discussion of Regression Results

The relationship between the dependent variable (TQ) and the independent variables (ESG components) is presented in the section. TQ was adopted as a measure of market performance as suggested in many firm performance literature. The relationship between TQ and each of the pillars of ESG was individually considered. The summary of the Panel Corrected Standard Error (PCSE) is presented in Table 4.7 below. Since the study observed the problem of heteroscedasticity for the model, PCSE was then adopted to correct the problem of heteroscedasticity and autocorrelation found in the fixed effect selected after the Hausman test was conducted. PCSE can be adopted as an alternative when a heteroscedasticity issue is detected Gujarati and Porter (2017).

Running the PCSE model allowed us to bypass the problem of heteroscedasticity found in the fixed effect model, thus making our model fit for regression estimation. The summary of the TQ's PCSE model result can be found in the table below.

Table 3.14: Panel Corrected Standard Error Model Regression Result for TQ

Variables	Coefficient	Std. Err	Z-values	Sig
CONSTANT	.9113993	1.006736	1.50	0.133
ED	-1.979866	1.006736	-1.97	0.049
SD	-2.816198	.9485748	-2.97	0.003
GD	4.180903	1.066437	3.92	0.000
LFS	-.0110055	.0707625	-0.16	0.876
LEV	.4012325	.1836995	2.18	0.029
R^2	0.1128			

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Wald chi^2	56.72
Prob Wald chi^2	0.0000
No of Observation	400
Panels:	Correlated(balanced)
Correlation:	No autocorrelation

Source: Author's Computation using Stata13 Output, (2023)

3.14.2 Interpretation of the Model

From Table 4.7, the TQ model previously written in Chapter three can now be represented as the model**:**

$$\boldsymbol{TQ_{it} = 0.911 - 2.816\, SD_{it} - 1.979\, ED_{it} + 4.180\, GD_{it} + 0.011\, LFS_{it} + 0.401\, LEV_{it}}$$

This part of the paper investigates the association between ESG disclosure and market performance measured with Tobin's Q among listed manufacturing firms in Nigeria. The study provides an empirical evidence on the relationship between ESG disclosure and market performance of listed manufacturing firms in Nigeria. The direction and strength of the association between the two constructs are estimated using the coefficient values, z-values, and probability values. The R^2 and

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the wald chi^2 provide a useful suggestion in assessing the aggregate impact of ESG variables on ROE, and also the fitness of the model in using the explanatory variables in predicting the dependent variables. While the R^2 result suggests the former, wald chi^2 result suggests the latter. The PCSE's wald chi^2 is equivalent to the F-statistic in OLS and GLS. R^2 Of 0.11 means that our explanatory variables is only responsible for 11% of the variation in market performance of listed manufacturing firms in Nigeria. The model demonstrated a wald chi^2 of 56.7 which is okay since it is greater than 2 (Gujarati, 2004). By implication, this means that the model is good in estimating the relationship between ESG disclosure and market performance.

The model is significant at 1% and means that there is 99% chance that the estimation made from the variables in the regression model can be trusted in investigating the relationship between ESG disclosure and market performance of listed manufacturing firms in Nigeria.

3.14.3 Testing of Hypothesis and Discussion of Findings

3.14.3.1 Environmental Reporting and Market Performance

The between environmental reporting and Tobin's Q, as depicted in Table 4.7, is negative by the -1.97 coefficient, which is statistically significant (from a p-value of 0.049, less than 5%). This result is significant at 5%; thus, we have the statistical evidence to reject the null hypothesis, which states that there is no relationship between environmental disclosure and Tobin's Q. From a practical sense, this implies that the increase in environmental disclosure will lead to significant decrease market performance of listed manufacturing firms in Nigeria. It is expected that ESG reporting should have a significant impact on market performance because the investors will be keener on companies' disclosures than other stakeholders. The investors are the owners of the firm

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so they are much concerned about the disclosures and performance of the firms than any other group among the stakeholders. Therefore, by implication, it is expected that firms' ESG disclosure and performance would have implications on their market performance. The results suggest that an increase in environmental disclosure will lead to a decrease in market performance. This may be the result of the fact that the cost required to disclose environmental disclosure may be greater than the return on investment also, from the descriptive statistic result, we understand that environmental disclosure is very low in Nigeria; this may then harm how investors react to the stocks of the manufacturing firms in Nigeria. The result obtained from this study agrees with Iorun (2021). However, the result is inconsistent with Caesari and Basuki (2017), who found that environmental disclosure positively impacts market performance.

3.14.3.2 Social Reporting and Market Performance

The relationship social reporting and Tobin's Q, as depicted in Table 4.7, is negative by the - 2.81 coefficient, which is statistically significant (from a p-value of 0.003, less than 5%). This result is significant at 1%; thus, we have the statistical evidence to reject the null hypothesis, which states that there is no relationship between social disclosure and Tobin's Q. This result tells us that an increase in social disclosure will lead to a significant decrease in market performance of listed manufacturing firms in Nigeria. We can logically predict that ESG reporting would significantly impact market performance because the investors will be keener on companies' disclosures than other stakeholders. The investors are the owners of the firm so they are much concerned about the disclosures and performance of the firms than any other group among the stakeholders. Therefore, by implication, it is expected that firms' ESG disclosure and performance would have implications on their market performance. The results suggest that an increase in environmental disclosure will lead to a decrease in market performance. This may be the result of the fact that the cost required

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to disclose social disclosure may be greater than the return on investment also, from the descriptive statistic result, we understand that social disclosure is very low in Nigeria; this may then harm how investors react to the stocks of the manufacturing firms in Nigeria. The result obtained from this study is inconsistent with Caesari and Basuki (2017), who found that social disclosure positively impacts market performance.

3.14.3.3 Governance Reporting and Market Performance

The relationship Governance reporting and Tobin's Q, as depicted in Table 4.7, positive by the -4.18 coefficient, which is statistically significant (from a p-value of 0.000, less than 5%). This result is significant at 1%; thus, we have the statistical evidence to reject the null hypothesis, which states that there is no relationship between governance and Tobin's Q. This result tells us that an increase in governance disclosure will lead to a significant increase in market performance of listed manufacturing firms in Nigeria. Governance disclosure has maintained a consistent impact on all the performance variables identified in this study. Our results in all the three models shows that governance disclosure has a significant positive impact on the performance of listed manufacturing firms in Nigeria from operational, financial, and market perspectives. Since governance issues represent a very strategic and significant area of concerns for many investors, a firm disclosing a sufficient governance information to its investors might have a good competitive edge in the market place. The result obtained from this study is inconsistent with the finding of of Alareeni and Hamdan, (2020), who found that governance positively impacts market performance.

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3.15 SUMMARY OF THE TESTED HYPOTHESIS

Table 3.15 Summary of the Tested Hypothesis

	Hypothesis	Findings	Decision
H_0a:	Social disclosure has no significant relationship with return on asset	Insignificant	Fail to reject
H_0b:	Environmental disclosure has no significant relationship with return asset	Insignificant	Fail to reject
H_0c:	Governance disclosure has no significant impact on return on asset	Positive and Significant	Reject
H_0a:	Social disclosure has no significant impact on return on equity	Insignificant	Fail to reject
H_0b:	Environmental disclosure has no significant impact on return on equity	Insignificant	Fail to reject
H_0c:	Governance disclosure has no significant impact on return on equity	Positive and Significant	Reject
H_0a:	Social disclosure has no significant impact on Tobin's Q	Significant	Reject
H_0b:	Environmental disclosure has no significant impact on Tobin's Q	Significant	Reject
H_0c:	Governance disclosure has no significant relationship with Tobin's Q	Positive and Significant	Reject

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EXTRA ANALYSIS

ROA

Variables	**Coefficient**	**Std. Err**	**Z-values**	**Sig**
CONSTANT	-0. 013	0. 099	0. 13	0. 895
ESGD	0. 000	0. 056	0.01	0. 993
LFS	0. 019	0. 009	2.01	0. 045
LEV	-0. 237	0. 029	-8.07	0. 000
Wald chi^2	69.19			
Prob Wald chi^2	0.0000			
No of Observation	400			
Panels:	Correlated(balanced)			
Correlation:	No autocorrelation			

ROE

Variables	**Coefficient**	**Std. Err**	**Z-values**	**Sig**
CONSTANT	-1.967	1.291	-1.52	0.127
ESGD	0.555	0.636	0.87	0.383
LFS	0.182	0.157	1.16	0.246
LEV	0.253	1.266	0.20	0.842
R^2	0.0031			
Wald chi^2	7.56			
Prob Wald chi^2	0.056			

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No of Observation	400
Panels:	Correlated(balanced)
Correlation:	No autocorrelation

TQ

Variables	**Coefficient**	**Std. Err**	**Z-values**	**Sig**
CONSTANT	-0.812	0.399	-2.03	0.042
ESGD	-0.000	0.746	-0.00	0.999
LFS	0.215	0.044	4.87	0.000
LEV	0.398	0.174	2.29	0.022
R^2	0.0165			
Wald chi^2	43.09			
Prob Wald chi^2	0.000			
No of Observation	400			
Panels:	Correlated(balanced)			
Correlation:	No autocorrelation			

The three tables above looked at the impact of ESG disclosure on the effects on firm performance from operational, financial, and market perspectives. We also looked at ESG as a combined variable to provide further insights into our study. The results of our analysis show that ESG disclosure as a combined variable does not significantly impact the operational, financial, and market performance of listed manufacturing firms in Nigeria.

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ESG Disclosures among Foreign Firms in Nigeria

Variables	Obs	Mean	Std. Dev.	Min	Max
ED	90	.095	.131	0	.558
SD	90	.141	.129	0	.687
GD	90	.307	.177	0	.714

ESG Disclosures among Indigenous Firms in Nigeria

Variables	Obs	Mean	Std. Dev.	Min	Max
ED	310	.036	.112	0	.735
SD	310	.099	.113	0	.75
GD	310	.235	.184	0	1

9 companies among the 40 companies considered in the sample are foreign, the tables above compare the level of ESG disclosure between the foreign firms and indigenous firms. Based on the means, the results show that the practice of ESG reporting among the foreign companies in our sample is higher than that of indigenous firms across the three pillars of ESG.

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CHAPTER FOUR

CONCLUSIONS

Internationally, there is growing demand from stakeholders for corporations to disclose their ESG information to improve transparency towards firms' sustainable development activities. As an important social unit in society, firms play a significant role in shaping and influencing the lives of people and the ecosystem around them. This study investigated whether the disclosure of ESG information by listed manufacturing firms affects their operational, financial, and market performance. Using panel-corrected standard error and generalized least square regression analysis on 400 firm-year observations, the study finds that environmental, social, and governance disclosure affect market performance measured by Tobin's Q, while governance disclosure has a positive influence on TQ, social and environmental disclosures have negative effects on TQ. The study also demonstrated that social and environmental disclosure do not affect the operational, and financial performances of firms measured by ROA and ROE, respectively, and finally, it was found that governance disclosure positively affects ROA and ROE.

This study enhances the empirical understanding of the relationship between ESG and firm performance, the study provides insights to managers that governance disclosure improves their overall performance, which may be because of the fact governance reporting has been a traditional aspect of corporate reporting even before the popularity of ESG disclosure activism. Managers would also become aware that investors rea to their ESG disclosure significantly affect their market performance. There is a need for regulators to standardize ESG reporting and provides statutory monitoring and reporting guideline for corporations to disclose their ESG information.

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More enlightenment should be given to other stakeholders, especially the investors, to educate them on the importance of social and environmental reporting to make sure they positively react to it.

The importance of this study to the sustainable development discourse cannot be over-emphasized. ESG reporting provides a good monitoring avenue for stakeholders to measure how firms are performing regarding their environmental, social, and economic responsibilities. These three pillars of sustainable development are the some of the important constituents of sustainability reports. For environmental parts, firms report activities such as energy strategy, water, waste, and biodiversity impacts. The social aspects of ESG reports cover issues such as occupational health, labor policies and practices, gender issues, and community development. The economic part gives an organization to communicate how effective they have impacted the local economy through their activities.

Naturally to every study, this study is not free from limitations as well, despite the valuable insights it provides. The study suffered from limitations in the aspect of sample; the study focus on studying the disclosure practice by measuring if affirm disclose certain items or not without focusing on the quality of disclosure, future study should include quality of the disclosure. Also, the study could not cover the entire manufacturing sector in Nigeria, only 40 companies was considered due to data availability. Also, the study only considered data included in sustainability reports and annual reports only, other data sources were not considered. Furthermore, only the GRI framework was used in measuring in measuring ESG reporting, which in reality there are a couple of other frameworks that could be used as well. Future studies may consider a sample in investigating ESG reporting and firm performance among listed manufacturing firms in Nigeria while also considering other sustainability frameworks. While these limitations were observed. This does not

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undermine the insights provided in this study from its scientific measurement methodology .however, its recommended that future studies improve on these limitations.

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APPENDIX

TOTAL POPULATION

1	AGRICULTURAL FIRMS	LIVESTOCK FEEDS PLC
2	AGRICULTURAL FIRMS	OKOMU OIL PALM PLC
3	AGRICULTURAL FIRMS	PRESCO NIG PLC
4	AGRICULTURAL FIRMS	FTN COCOA PROCESSORS PLC
5	AGRICULTURAL FIRMS	ELLAH LAKES PLC
6	CONGLOMERATES	CHELLARAMS PLC
7	CONGLOMERATES	TRANSNATIONAL CORPORATION PLC

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8	CONGLOMERATES	UACN PLC
9	CONGLOMERATES	JOHN HOLT PLC
10	CONGLOMERATES	SCOA NIG PLC
11	CONSUMER GOODS	DANGOTE SUGAR PLC
12	CONSUMER GOODS	NESTLE PLC
13	CONSUMER GOODS	CADBURY PLC
14	CONSUMER GOODS	FLOURMILL PLC
15	CONSUMER GOODS	GUINESS PLC
16	CONSUMER GOODS	NIGERIA BREWERIES PLC
17	CONSUMER GOODS	NORTHERN NIG FLOUR MILL PLC
18	CONSUMER GOODS	UNILEVER PLC
19	CONSUMER GOODS	NASCON PLC
20	CONSUMER GOODS	VITAFOAM PLC
21	CONSUMER GOODS	INTERNATIONAL BREWERIES PLC
22	CONSUMER GOODS	PZ PLC
23	CONSUMER GOODS	HONEYWELL PLC
24	CONSUMER GOODS	CHAMPION PLC
25	CONSUMER GOODS	NIGERIAN ENAMELWARE PLC
26	CONSUMER GOODS	MCNICHOLAS PLC
27	CONSUMER GOODS	DN TYRE AND RUBBER PLC
28	CONSUMER GOODS	GOLDEN GUINEA BREWERIES PLC
29	CONSUMER GOODS	MULTI-TREX PLC
30	CONSUMER GOODS	UNION DICON SALT PLC

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31	HEALTHCARE	FIDSON HEALTHCARE PLC
32	HEALTHCARE	GLAXO SMITHKLINE CONSUMER NIG
33	HEALTHCARE	NEIMETH INTERNATIONAL PHAR
34	HEALTHCARE	PHARMA DEKO PLC
35	HEALTHCARE	EKOCORP PLC
36	HEALTHCARE	MAY & BAKER NIG PLC
37	HEALTHCARE	MORISON INDUSTRIES PLC
	INDUSTRIAL GOODS	
38	FIRMS	BERGER PAINTS PLC
	INDUSTRIAL GOODS	
39	FIRMS	BETA GLASS CO. PLC
	INDUSTRIAL GOODS	
40	FIRMS	CAP PLC
	INDUSTRIAL GOODS	
41	FIRMS	CUTIX PLC
	INDUSTRIAL GOODS	
42	FIRMS	LAFARGE AFRICA PLC
	INDUSTRIAL GOODS	
43	FIRMS	DANGOTE CEMENT PLC
	INDUSTRIAL GOODS	
44	FIRMS	AUSTIN LAZ & CO. PLC
	INDUSTRIAL GOODS	
45	FIRMS	BUA PLC

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	INDUSTRIAL GOODS	
46	FIRMS	GREIF NIGERIA PLC
	INDUSTRIAL GOODS	
47	FIRMS	MEYER PLC
	INDUSTRIAL GOODS	
48	FIRMS	NOTORE CHEMICAL IND PLC
	INDUSTRIAL GOODS	
49	FIRMS	PREMIER PAINTS PLC
	INDUSTRIAL GOODS	PORTLAND PAINTS & PRODUCTS NIG
50	FIRMS	PLC
51	NATURAL RESOURCES	B.O.C. GASES PLC
52	NATURAL RESOURCES	ALUMINIUM EXTRUSION PLC
53	NATURAL RESOURCES	THOMAS WYATT NIG PLC
		MULTIVERSE MINING &
54	NATURAL RESOURCES	EXPLORATION PLC
55	OIL AND GAS	ARDOVA PLC
56	OIL AND GAS	CONOIL PLC
57	OIL AND GAS	ETERNAL OIL PLC
58	OIL AND GAS	JAPAU OIL AND GAS PLC
59	OIL AND GAS	MRS PLC
60	OIL AND GAS	TOTAL PLC
61	OIL AND GAS	CAPITAL OIL PLC
62	OIL AND GAS	OANDO PLC

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63	OIL AND GAS	SEPLAT PLC
		RAK UNITY PETROLEUM COMPANY
64	OIL AND GAS	PLC

SAMPLE SIZE

1	AGRICULTURAL FIRMS	LIVESTOCK FEEDS PLC
2	AGRICULTURAL FIRMS	OKOMU OIL PALM PLC
3	AGRICULTURAL FIRMS	PRESCO NIG PLC
4	AGRICULTURAL FIRMS	FTN COCOA PROCESSORS PLC
5	CONGLOMERATES	CHELLARAMS PLC
6	CONGLOMERATES	TRANSNATIONAL CORPORATION PLC
7	CONGLOMERATES	UACN PLC
8	CONSUMER GOODS	DANGOTE SUGAR
9	CONSUMER GOODS	NESTLE
10	CONSUMER GOODS	CADBURY
11	CONSUMER GOODS	FLOURMILL
12	CONSUMER GOODS	GUINESS
13	CONSUMER GOODS	NIGERIA BREWERIES
14	CONSUMER GOODS	NORTHERN NIG FLOUR MILL
15	CONSUMER GOODS	UNILEVER
16	CONSUMER GOODS	NASCON
17	CONSUMER GOODS	VITAFOAM
18	CONSUMER GOODS	International Breweries
19	CONSUMER GOODS	PZ

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20	CONSUMER GOODS	HONEYWELL
21	CONSUMER GOODS	CHAMPION
22	CONSUMER GOODS	NIGERIAN ENAMELWARE PLC
23	CONSUMER GOODS	McNicholas
24	HEALTHCARE	Fidson Healthcare Plc
25	HEALTHCARE	Glaxo Smithkline Consumer Nig
26	HEALTHCARE	Neimeth International Phar
27	HEALTHCARE	Pharma Deko
	INDUSTRIAL GOODS	
28	FIRMS	BERGER PAINTS PLC
	INDUSTRIAL GOODS	
29	FIRMS	BETA GLASS CO. PLC
	INDUSTRIAL GOODS	
30	FIRMS	CAP PLC
	INDUSTRIAL GOODS	
31	FIRMS	CUTIX PLC
	INDUSTRIAL GOODS	
32	FIRMS	LAFARGE AFRICA PLC
	INDUSTRIAL GOODS	
33	FIRMS	DANGOTE CEMENT PLC
34	NATURAL RESOURCES	B.O.C. Gases Plc
35	OIL AND GAS	Ardova
36	OIL AND GAS	conoil

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37	OIL AND GAS	Eternal oil
38	OIL AND GAS	Japau oil and Gas
39	OIL AND GAS	mrs
40	OIL AND GAS	Total

STATA OUTPUT

```
.  corr tq roa roe ed sd gd lfs lev
(obs=400)
```

	tq	roa	roe	ed	sd	gd	lfs	lev
tq	1.0000							
roa	0.3725	1.0000						
roe	0.0477	0.1569	1.0000					
ed	0.0014	0.0284	0.0170	1.0000				
sd	0.0303	0.0687	0.0360	0.8825	1.0000			
gd	0.2270	0.1832	0.0929	0.6997	0.7725	1.0000		
lfs	0.1132	0.0859	0.0503	0.3783	0.4262	0.5255	1.0000	
lev	0.0658	-0.3697	0.0171	-0.0590	-0.0683	-0.0373	0.0478	1.0000

```
. xtset id year, yearly
       panel variable:  id (strongly balanced)
        time variable:  year, 2012 to 2021
                delta:  1 year
. summarize ed sd gd tq roa roe lfs lev
```

Variable	Obs	Mean	Std. Dev.	Min	Max
ed	400	.0497005	.1195797	0	.7353
sd	400	.1090602	.118312	0	.75
gd	400	.2521593	.1850922	0	1
tq	400	1.683236	1.510468	.4171	11.7567
roa	400	.0496717	.1448988	-.716	1.7627
roe	400	.1594052	3.510889	-42.6594	50.9296
lfs	400	10.47654	.773202	8.4179	12.3788
lev	400	.5942163	.2290505	.1778773	2.478466

`

```
. xtreg roa ed sd gd lfs lev, fe

Fixed-effects (within) regression               Number of obs      =       400
Group variable: id                              Number of groups   =        40

R-sq:                                           Obs per group:
     within  = 0.1230                                         min =        10
     between = 0.1682                                         avg =      10.0
     overall = 0.1327                                         max =        10

                                                F(5,355)           =      9.96
corr(u_i, Xb)  = -0.1352                        Prob > F           =    0.0000

------------------------------------------------------------------------------
         roa |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
          ed |  -.1403289   .1464057    -0.96   0.338    -.4282605    .1476027
          sd |  -.1588653   .1612303    -0.99   0.325    -.4759518    .1582213
          gd |   .1945078   .0824629     2.36   0.019     .0323306    .3566849
         lfs |  -.0311759   .0387912    -0.80   0.422    -.1074654    .0451135
         lev |   -.237431   .0362475    -6.55   0.000    -.3087179   -.1661441
       _cons |   .4926264   .4011233     1.23   0.220    -.2962503    1.281503
-------------+----------------------------------------------------------------
     sigma_u |  .07472332
     sigma_e |    .120187
         rho |  .27878164   (fraction of variance due to u_i)
------------------------------------------------------------------------------
F test that all u_i=0: F(39, 355) = 2.92                     Prob > F = 0.0000

. est store fe


.  xtreg roa ed sd gd lfs lev, re

Random-effects GLS regression                   Number of obs      =       400
Group variable: id                              Number of groups   =        40

R-sq:                                           Obs per group:
     within  = 0.1185                                         min =        10
     between = 0.3506                                         avg =      10.0
     overall = 0.1884                                         max =        10

                                                Wald chi2(5)       =      68.39
corr(u_i, X)   = 0 (assumed)                    Prob > chi2        =    0.0000

------------------------------------------------------------------------------
         roa |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
          ed |  -.1669797   .1285502    -1.30   0.194    -.4189335     .084974
          sd |  -.1458798   .1428692    -1.02   0.307    -.4258983    .1341386
          gd |   .2269904   .0683796     3.32   0.001     .0929688     .361012
         lfs |   .0060418   .0143917     0.42   0.675    -.0221654     .034249
         lev |  -.2414941   .0316274    -7.64   0.000    -.3034826   -.1795056
       _cons |   .0968451   .1470131     0.66   0.510    -.1912953    .3849856
-------------+----------------------------------------------------------------
     sigma_u |  .05330295
     sigma_e |    .120187
         rho |  .16436335   (fraction of variance due to u_i)
------------------------------------------------------------------------------

.  est store re
```

`

```
. hausman fe
```

	Coefficients (b) fe	(B) re	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
ed	-.1403289	-.1669797	.0266508	.0700677
sd	-.1588653	-.1458798	-.0129854	.0747235
gd	.1945078	.2269904	-.0324826	.0460907
lfs	-.0311759	.0060418	-.0372177	.0360227
lev	-.237431	-.2414941	.0040631	.0177085

b = consistent under Ho and Ha; obtained from xtreg
B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

chi2(5) = (b-B)'[(V_b-V_B)^(-1)](b-B)
= 6.37
Prob>chi2 = 0.2715

```
. xttest0

Breusch and Pagan Lagrangian multiplier test for random effects

        roa[id,t] = Xb + u[id] + e[id,t]

        Estimated results:
                         |       Var     sd = sqrt(Var)
                 --------+------------------------------
                     roa |    .0209956       .1448988
                       e |    .0144449        .120187
                       u |    .0028412       .0533029

        Test:   Var(u) = 0
                                 chibar2(01) =    39.44
                              Prob > chibar2 =   0.0000
```

```
. xttest3

Modified Wald test for groupwise heteroskedasticity
in fixed effect regression model

H0: sigma(i)^2 = sigma^2 for all i

chi2 (40)  =    1.0e+05
Prob>chi2 =      0.0000
```

`

```
. xtgls roa sd ed gd lfs lev

Cross-sectional time-series FGLS regression

Coefficients:  generalized least squares
Panels:        homoskedastic
Correlation:   no autocorrelation

Estimated covariances      =         1          Number of obs     =       400
Estimated autocorrelations =         0          Number of groups  =        40
Estimated coefficients     =         6          Time periods      =        10
                                                Wald chi2(5)      =     94.61
Log likelihood             =   248.075          Prob > chi2       =    0.0000
```

roa	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
sd	-.0902286	.1322012	-0.68	0.495	-.3493381	.168881
ed	-.206884	.1160801	-1.78	0.075	-.4343967	.0206288
gd	.2602218	.059098	4.40	0.000	.1443918	.3760518
lfs	.0047067	.0099459	0.47	0.636	-.0147868	.0242002
lev	-.2363705	.028616	-8.26	0.000	-.2924568	-.1802842
_cons	.0953221	.0995389	0.96	0.338	-.0997706	.2904149

.

`

```
. xtreg roe ed sd gd lfs lev, fe

Fixed-effects (within) regression               Number of obs      =       400
Group variable: id                              Number of groups   =        40

R-sq:                                           Obs per group:
     within  = 0.0266                                         min =        10
     between = 0.0557                                         avg =      10.0
     overall = 0.0000                                         max =        10

                                                F(5,355)           =      1.94
corr(u_i, Xb)  = -0.7260                        Prob > F           =    0.0876

------------------------------------------------------------------------------
         roe |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
          ed |    2.175722   4.230739     0.51   0.607    -6.144741    10.49618
          sd |   -4.951175   4.659128    -1.06   0.289    -14.11414    4.211788
          gd |    4.065764   2.382958     1.71   0.089    -.6207265    8.752254
         lfs |    -1.79345   1.120963    -1.60   0.111    -3.998013    .4111134
         lev |    2.137521   1.047458     2.04   0.042     .0775178    4.197524
       _cons |    17.08503    11.5914     1.47   0.141    -5.711415    39.88148
-------------+----------------------------------------------------------------
     sigma_u |   1.8566587
     sigma_e |   3.4730864
         rho |   .22226243   (fraction of variance due to u_i)
------------------------------------------------------------------------------
F test that all u_i=0: F(39, 355) = 1.21                     Prob > F = 0.1882

. est store fe

.
```

`

```
. xtreg roe ed sd gd lfs lev, re

Random-effects GLS regression                   Number of obs     =       400
Group variable: id                              Number of groups  =        40

R-sq:                                           Obs per group:
     within  = 0.0087                                         min =        10
     between = 0.0561                                         avg =      10.0
     overall = 0.0135                                         max =        10

                                                Wald chi2(5)      =      5.34
corr(u_i, X)   = 0 (assumed)                    Prob > chi2       =    0.3754

------------------------------------------------------------------------------
         roe |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
          ed |  -2.290547   3.146472    -0.73   0.467    -8.457519    3.876426
          sd |   -.641993   3.579712    -0.18   0.858    -7.658099    6.374113
          gd |   3.112471   1.603918     1.94   0.052    -.0311508    6.256092
         lfs |   .0065074   .2712173     0.02   0.981    -.5250688    .5380836
         lev |   .2911935    .775536     0.38   0.707    -1.228829    1.811216
       _cons |  -.6827827   2.716383    -0.25   0.802    -6.006796     4.64123
-------------+----------------------------------------------------------------
     sigma_u |  .19307218
     sigma_e |  3.4730864
         rho |  .00308083   (fraction of variance due to u_i)
------------------------------------------------------------------------------

. est store re

.

. hausman fe

                 ---- Coefficients ----
             |      (b)          (B)            (b-B)     sqrt(diag(V_b-V_B))
             |       fe           re         Difference          S.E.
-------------+----------------------------------------------------------------
          ed |    2.175722    -2.290547        4.466268        2.828226
          sd |   -4.951175     -.641993       -4.309182        2.982137
          gd |    4.065764     3.112471        .9532929        1.762367
         lfs |    -1.79345     .0065074       -1.799957        1.087658
         lev |    2.137521     .2911935        1.846327        .7040682
------------------------------------------------------------------------------
                           b = consistent under Ho and Ha; obtained from xtreg
            B = inconsistent under Ha, efficient under Ho; obtained from xtreg

    Test:  Ho:  difference in coefficients not systematic

                  chi2(5) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                          =       12.24
                Prob>chi2 =      0.0317
```

`

```
. swilk res

                    Shapiro-Wilk W test for normal data

    Variable |        Obs       W           V         z       Prob>z
-------------+-------------------------------------------------------
         res |        400    0.50356     136.668    11.701    0.00000

. xttest3

Modified Wald test for groupwise heteroskedasticity
in fixed effect regression model

H0: sigma(i)^2 = sigma^2 for all i

chi2 (40)  =    4.6e+07
Prob>chi2 =     0.0000



. xtpcse roe ed sd gd lfs lev

Linear regression, correlated panels corrected standard errors (PCSEs)

Group variable:   id                          Number of obs     =        400
Time variable:    year                        Number of groups  =         40
Panels:           correlated (balanced)       Obs per group:
Autocorrelation:  no autocorrelation                        min =         10
                                                            avg =         10
                                                            max =         10
Estimated covariances      =       820        R-squared         =     0.0135
Estimated autocorrelations =         0        Wald chi2(5)      =      19.01
Estimated coefficients     =         6        Prob > chi2       =     0.0019

------------------------------------------------------------------------------
             |         Panel-corrected
         roe |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
          ed |  -2.358298   3.262702    -0.72   0.470    -8.753076     4.03648
          sd |  -.5643853   3.391922    -0.17   0.868     -7.21243     6.08366
          gd |   3.096966    .898529     3.45   0.001     1.335881     4.85805
         lfs |    .009878   .1756324     0.06   0.955    -.3343551    .3541111
         lev |    .261237   1.278914     0.20   0.838    -2.245389    2.767863
       _cons |  -.7014815   1.496587    -0.47   0.639    -3.634737    2.231774
------------------------------------------------------------------------------

.
```

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