CHIEF EXECUTIVE OFFICER'S (CEOs) ATTRIBUTES ON ENVIRONMENTAL DISCLOSURE IN NIGERIA.

BY

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DEPARTMENT OF ACCOUNTING

FACULTY OF MANAGEMENT SCIENCES

UNIVERSITY OF BENIN

JUNE, 2025

Title page

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BEING A PROJECT WORK SUBMITTED TO THE DEPARTMENT OF ACCOUNTING IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF BACHELOR OF SCIENCE DEGREE(BSc) ACCOUNTING, UNIVERSITY OF BENIN, BENIN CITY

JUNE, 2025

DECLARATION

I declare that this project work titled Chief Executive Officer's (CEOs) Attributes On Environmental Disclosures In Nigeria. is a study undertaken by me in partial fulfilment of the requirements for the award of Bachelor of science Degree in Accounting at the department of Accounting under the supervision of Prof. A.S. Omoye.This work has not been previously submitted for the award of a degree elsewhere.

All sources of information used in this project have been duly acknowledged.

_____ _____

Hannah APASAN Date

DEDICATION

This project is dedicated to Almighty God, for His enabling strength He bestowed on me for the completion of this project work and the programme also to my lovely and wonderful family, for their moral and financial supports throughout my stay in school.

CERTIFICATION

This is to certify that this research work was carried out by Hannah APASAN and has been closely supervised by Prof. A. S. Omoye in the department of Accounting, faculty of Management Science, University of Benin, Benin City in Partial Fulfillment of the requirement of the award of B.Sc Degree in Accounting.

_____ _____

Prof A. S. Omoye **Date**
Project supervisor

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Project Cordinater

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Prof. O. Obaretin **Date**
Head of Department

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ABSTRACT

The thrust of this study is on the impact of Chief Executive Officer's (CEOs) attributes on environmental disclosure in Nigeria. It specifically examined how CEO tenure, CEO foreign CEO gender and CEO age influence environmental disclosure among Nigerian firms. The study adopted the ex-post facto research design. The sample consisted of thirty (30) companies selected from five environmentally sensitive sectors (construction and real estate, conglomerate, agriculture, natural resources; and health) listed on the Nigerian Exchange Group (NGX) between the periods of 2018 to 2023. Secondary data was used as extracted from the annual reports and accounts of the sampled firms. The data were analysed using descriptive statistics, correlation matrix and panel regression analysis. The findings showed an average environmental disclosure of 17.6%. The result of the regression analysis revealed that while CEO tenure and CEO age have direct and inverse relationship with environmental disclosure respectively, the variables of CEO foreign exposure and CEO gender were statistically non-significant. The study recommends among others that regulators of the non-financial companies should replicate the CEO tenureship requirements applicable to Nigerian commercial banks. It was also recommended that competency; experience and performance in prior engagements should be primary decision-making benchmarks for appointing new CEOs while gender and foreign exposure can be secondary requirements.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Industrialisation has immensely contributed to the upsurge in economic growth and expansion, but contrarily also, has led to increases in environmental degradation globally. The huge changes witnessed in the global business environment in the last two decades, characterised by means of globalisation and technological innovation, have increased the demands by stakeholders on the need for companies to be more environmentally responsive. This cannot be unconnected to the concerns on global warming and environmental degradation as a result of emissions from industrial activities which usually have detrimental effects on the environment (Dang & Tran, 2024).

The accelerated consciousness on environmental problems world-wide led companies to think outside the box to come out with effective ways to lessen the adverse impact of industrial activities and also offer information regarding same in their annual reports. This idea is to demonstrate the extent to which measures have been put in place to fulfil their environmental responsibilities as well as make them accountable for their actions if the need arises (Ali & Khan, 2023). In this light, the traditional mode of financial reporting has been adjudged to be insufficient in meeting the yearning demands of various stakeholders who rely on these disclosures to make decisions (Chatterjee & Nandan, 2024). Traditionally, financial reporting provides information on business fiscal activities with little or no emphasis on its environmental impacts; hence, the need for companies to provide details of their activities on the environment. In response, companies are encouraged disclose their eco-friendly activities and environmental performance (Dang & Tran, 2024). Such environmental disclosure can either be included in the

financial statements, notes to the account, annual reports or in separated environmental or sustainability report (Chen & Lee, 2023). Through this, companies recognise the harmful effect caused by their activities on the environment and are left with little or no choice but must take responsible action to lessen the negative impacts.

Environmental disclosure is a means by which entities discloses her environmental operations to interested parties. Interested parties are entitled proper information about environmental information and performance of companies whether positive or negative. Ahmed and Hasan (2023) opines that environmental disclosure does not solely target internal and external environmental accounting but link environmental and financial performance more visibly. It helps boost the legitimacy of the reports made available to all the interested parties and aids in actualizing the sort after environmental harmony.

Despite the increased consciousness and interest in societal reporting, it however remains mainly optional and uncontrolled particularly in many economies which Nigeria is one of them. However, in South Africa, the regulatory authorities ensure that companies listed in the Johannesburg Stock Exchange (JSE) are mandated to report on the environment in which they operate (Arora & Sharma, 2023). The trend of growth in environmental reporting since 2013, have been predominate mostly in Europe, Asia Pacific countries and United States (US). Scandinavian countries which comprise of Denmark, Norway, Finland and Sweden have the highest level of environmental disclosures in the world (Chen & Lee, 2023). This is because the Government and the regulatory authorities in these countries contribute majorly in ensuring organizations adapt strictly to mandatory environmental disclosures.

Generally, disclosure practices are viewed as a strategic and value enhancing activity that can lead to big wins or loses and due to the uncertainty regarding the associated costs and benefits. As such, it is usually left for the upper cadre management to make decisions on disclosures (Alam & Rahamn, 2024). Going by the major roles of CEOs as stated in the new Nigerian Code of Cooperate Governance (CG) of 2018 which includes the responsibility of running the daily operations of the company, it may not be out of place to conjecture that some CEOs attributes could influence several organisational outcomes - such as ensuring that companies disclose environmental information. As a strategic decision, the responsibility for the decision rest on the top management team. The decision - making team of an organisation comprises the CEO and the management team. Based on the prediction of the Upper Echelons theory, it is expected that top management plays key roles when it comes to strategic decision making and such decisions can be influenced by behavioural attributes of the manager who has been delegated with such the responsibility and authority (Ahmed & Hasan, 2023). As Ahmed and Hasan (2023) put it, the influence of CEOs in management decision outcomes cannot be undermined as they have the power and ability to make decisions that can ultimately influence companies' outcomes.

Given the voluntary and evolving nature of environmental disclosure in most developing countries, this study aims to make a literary contribution by examining how some observable CEO attributes (focusing on CEOs tenure, foreign exposure, gender and age) influence environmental disclosures in Nigeria. There lies the motivation behind this study.

1.2 Statement of the Research Problem

A review of extant literature (Bhattacharya & Saha, 2023; Cormier & Magnan, 2023) indicates that the level and quality of environmental disclosure have grown considerably over the last ten

years in most developed countries in Europe, US and Asian countries due to the enforcement of mandatory disclosures by their government. However, the same cannot be said of Nigeria where it is still at its embryonic stage due to low disclosures (Bashir & Sadiq, 2023).

Given the voluntary nature of environmental disclosures in Nigeria, companies are at liberty to decide what information to report or withhold. The decision of what, how, when and to what extent to disclose this information have been a challenge for companies. The first thing that a crop into your thought is what influence companies to disclose their environmental activities? Studies in similar research area majorly focus on the drivers of environmental disclosures. A vast number of studies known to have examined these factors usually focus on: corporate governance (Choi & Kim, 2024; Hoang & Nguyen, 2023; Nguyen & Hoang, 2023), environmental performance (Rahman & Hassan, 2023), firm characteristics (Verma & Jain, 2024), board characteristics (Kim & Lee, 2023, Das & Patel, 2023), etc. Despite the large influx of studies on environmental disclosures, the impact of CEO attributes on environmental disclosure have not received sufficient research attention, especially in developing countries. Majority of the existing studies (e.g. Elsayed & Rashid, 2023; Ghosh & Saha, 2024; Hassan & Khan, 2024) were conducted by foreign authors who relied on data from developed countries, and of which mixed findings exist. This may not be easily generalized for developing countries, such as Nigeria, due to obvious differences in governance structure, reporting, environmental policies and compliance mechanisms etc. Hence, the need to replicate such studies using Nigeria's data.

More so, a handful of prior Nigeria studies related to this study focused on board of directors which are different from the position of the CEO (e.g. Alam & Rahman, 2024). A survey of existing literature also revealed that, among the four CEO attributes proposed for use in this study, only CEO gender appears to have received commendable attention by prior Nigerian

researchers (such as Ali & Khan, 2023; Dang & Tran, 2024; Alam & Rahman, 2024). The variables of CEO age and CEO tenure have not received commensurate attention. In a bid to add to existing knowledge, this study introduced the variable of CEO foreign educational exposure as it relate to environmental disclosure which our survey revealed has scarcely received any attention and empirical effort in the Nigerian context. The idea is that CEOs with foreign educational/work exposure especially in countries where environmental protections are taken seriously could influence their disposition towards comprehensive environmental disclosures despite it being a voluntary requirement in Nigeria. To the best of the researcher's knowledge, the Nigerian setting for this field of study has not been thoroughly investigated.

Based on the foregoing, the study seeks to investigate the impact of CEO characteristics on environmental reporting in Nigeria focusing on the tenure, foreign exposure, gender and age of CEO.

It's against this backdrop that the study came up with the following research questions;

1. What is the correlation between CEO tenure and environmental disclosure in Nigeria?
2. How does CEO foreign exposure influence environmental disclosure in Nigeria?
3. What is the relationship between CEO gender and environmental disclosure in Nigeria?
4. To what extent does CEO age influence environmental disclosure in Nigeria?

1.3 Objective of the Study

This survey will look broadly at the association between CEO characteristics and environmental disclosure in Nigeria. The particular objectives are to:

1. determine the connection between CEO tenure and environmental reporting in Nigeria.

2. determine the link between CEO foreign exposure and environmental disclosure in Nigeria.
3. ascertain the influence of CEO gender on environmental disclosure in Nigeria.
4. determine the extent to which CEO age influence environmental disclosure in Nigeria.

1.4 Research Hypotheses

The hypotheses for this study are stated in their null forms as follow:

H1: CEOs' tenure has no significant relationship with environmental disclosure in Nigeria.

H2: CEOs' foreign exposure has no significant relationship with environmental disclosure in Nigeria.

H3: CEOs' gender has no significant relationship with environmental disclosure in Nigeria.

H4: CEOs' age has no significant relationship with environmental disclosure in Nigeria.

1.5 Scope of the Study

This study focuses on the relationship between CEO attributes and environmental disclosure in Nigeria. The study intends to concentrate on five sensitive sectors listed on the Nigerian Exchange Group (NGX) which comprises of construction and real estate, natural resources, conglomerate, agriculture and health because they are the least researched areas among sensitive sectors. The entire population of these selected sectors would make up the sample in a six (6) years period covering from 2018 to 2023 (6 years). The choice of this period is based on availability of data coupled with the fact that within this period regulatory issues as well as increased awareness on corporate environmental disclosure in Nigeria were heightened.

1.6 Significance of the Study

This study will add to literature advancement in the following ways:

1. The outcome of this survey will help to identify the different disclosure styles among companies and guide management on the appropriate one to be taken in order to avoid litigations and in turn guarantee overall performance. It will also provide a proactive environmental strategy and relevant signals that will enhance the overall stock market value.
2. The upshot of this study will be relevant to communities where environmental activities are carried out by various companies. These communities comprise of both internal and external stakeholders, thereby keeping them well informed in order to prevent agitation.
3. The results of this investigate will help regulators and decision-makers, including the Security and Exchange Commission (SEC), Manufacturing Association of Nigeria (MAN), and National Agency for Food and Drug Administration and Control (NAFDAC), to determine the best course of action for achieving stakeholders' desired goals.
4. In order to do additional research in comparable or related fields of interest, the study will also offer pertinent data and information to academics, accounting students, researchers, and other related disciplines.

1.7 Limitation of the Study

The study's primary limitations, like with many other research in developing nations, were the reliability and accessibility of the data. The problem of inaccurate variable measurement was another issue. Due to its qualitative nature, the topic of financial reporting quality is one that is believed with multiple measuring indices in literature. There are differing opinions on what the metrics for measuring financial reporting quality should be. Adopting proxies for the idea has

traditionally been the norm. However, the study views this as a weakness because there was no absolute assurance that the proxy chosen would accurately reflect the actual notion.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter dwells on providing useful extant literature relating to the study both in Nigeria and other parts of the globe.

2.2 Concept of Environmental Disclosure

Environmental disclosure (ED) as an integral part of sustainability reporting has established itself as a well-studied topic in accounting (see e.g Chen & Lee, 2023; Das & Patel, 2023). As a concept, it can either be mandatory or voluntary in nature. The mandatory ED is governed by laws and regulations, while the voluntary disclosure is based on company's discretion. Bashir & Sadiq (2024) stated ED is a tool used to provide information to stakeholders as it reflects on the environmental performance of the company as well as concerns about various environmental issues. It involves reporting information that will affect the natural environment, environmental protection and resources utilized. Kim & Lee (2023) described ED as a company's commitment and loyalty to operate in an economically and environmentally sustainable way, taking into account the interest of stakeholders. By stakeholders, we mean shareholders, employees, host communities, government, customers etc. In view of this, we appreciate the need for companies to be comprehensive in reporting owing to the fact that stakeholders make judicious use of the reports for decision and evaluation purposes for example shareholders evaluate companies based on their corporate environmental performance, the communities assess based on how companies environmental activities meet their expectations in mitigating environmental hazard such as oil spillage, pollution, global warming etc. thereby leading to sustainable environment, the

government and regulatory authorities appraise how companies comply with the relevant legislations enacted while employees assess based on the company's working conditions.

From the view point of Hu and Yang (2024) ED is a set of information items associated to the performance and activities of the environmental management of the company and its past, present and future financial obligation. In order words, it means transferring financial and non - financial information regarding resources and social performance of a disclosing company (Tia & Li, 2023). According to Kang and Lee (2024) the reason why companies disclose environmental information in their annual report is to increase compliance to environmental policies, bow down to pressure to contribute clear water and air so as to draw the attention of investors and also fulfil the demand of the stakeholders' group. Through this, companies send signals that may influence public perception toward their operation by either maintaining or defending their existence in the community.

The general public's growing concern for the environment has considerably raised awareness of environmental accountable behaviour; companies are faced with increased pressure to disclose information about their activities. The aim is to provide decision makers with the information that enables the company to reduce cost and business risk while improving the company's value (Cormier & Magnan, 2023).Notable in Europe, the advent of mandatory reporting requirement from the government and the European Union (EU) Commission have encouraged countries within the continent to make available disclosures not only specific to environment and social issues, but also on broad- based non- financial performance, and these have been on the increase since 2013. An example is the historical evolution from EU Accounting Modernization Directive 2003 to the EU Non- Financial Reporting Directive 2014 (Dhaliwal & Li, 2024).

2.2.1 Environmental Disclosure in Nigeria

Environmental disclosure in Nigeria is still budding**.** There has been increased pressure on companies to reduce carbon emission and other harmful activities that adversely affect the environment, many initiatives have been done to ensure environmental safety, protect it from contamination, and preserve natural resources. Disclosure of environmental activity by businesses is necessary in recent years. Anwar and Rashid (2024) investigated the corporate environmental disclosure practices among companies in the Nigerian manufacturing industry in 2011; corporate environmental disclosure was determined by the numbers of sentences in the annual report. The results revealed an extremely short disclosure length, with the average length provided by the chosen companies being just two phrases. In addition, Ahmed and Hasan (2023) examined the quality of environmental reporting in Nigeria, they concentrated on 21 companies that cut across chemical and paint, construction, conglomerates and building materials industrial sectors. The overall standard of disclosure was examined with an index. The outcome demonstrated that the degree of disclosure is just about 32%, which also shows poor reporting. Likewise, Rahman and Hassan (2023) investigated the level of corporate social and environmental disclosure; they made use of a sample of 40 listed companies. The survey confirmed a mean reporting score of 24.29%. The key weakness observed from above studies in Nigerian is using a sample size that is too small and may not accurately reflect the actual population.

Although there are currently no accounting guidelines for reporting environmental data, the Company and Allied Matter Act (CAMA) does not list the specifications for environmental information among the financial statements that public firms are expected to provide in their

annual reports. Companies that disclosed environmental information were all transnational and subject to a global reporting requirement. In Nigeria, documenting and disclosing environmental information in annual reports is still optional, which contributes to the country's low disclosure rates among non-multinational corporations. Indigenous companies mainly disclose qualitative information pertaining to goods, customers, employee health and safety, and community involvement, which are mostly qualitative.

There is need for environmental disclosure to be highly encouraged in Nigeria because it would lead to creation of standards and setting of targets toward limiting threats to her production, maintaining resources and protecting the rights of the citizen in addition to improving sustainability. Most companies from developed nations have adopted Global Reporting Initiative (GRI) since it provides framework to report information to stakeholders.

The GRI, a non-governmental organisation founded in 1997, UN Global Compact initiative initiated in 2000, Asset 4 database by Thomson Reuters Corporation etc. provide guidelines that are suitable for environmental disclosure universally on companies' actions relating to their environmental, social and economic activities and the goal of GRI is to develop and promote a universally suitable set of guidelines for sustainable reporting in which environmental disclosure is part. All over the globe, GRI is still the most widely used voluntary reporting standard.

2.2.2 Nigeria Environmental Framework

Environmental regulation in Nigeria existed as a mere façade, but the situation changed in 1988 when a foreign company deposit poisonous waste in the Niger Delta region. The incident shocked the Federal Government and additionally revealed the porous nature of environmental regulation in the country. This brought about the promulgation of Decree No. 42 of 1988 which

made it a criminal offence for anyone to carry or dump any harmful waste within the entire land mass and waters of the Federal Republic of Nigeria (Uwuigbe, 2018). This led to the inception of Federal Environmental Protection Agency (FEPA).

The establishment of FEPA Act in Nigeria formed the basis of further legislations in specific aspects of the environment. The State Environmental Protection Agencies (SEPAs) at state levels and Environmental Committees at the local government levels were thereafter established. In June 1999, FEPA was renamed Federal Ministry of Environment. The establishment of NESRA Act formed the premise of further legislations in specific aspects of the environment, hence ensuring that environmental rules in the country are adhered to.

In a bid to protect the environment from the recurrent hazards such as pollution, waste, spillage and climate changes caused by companies' activities in Nigeria, a set of principles and policies are aligned to determine the safeguard of mankind and natural resources. Through its environmental policy, the Nigerian government promotes environmentally-based sustainable development. Numerous strategies are being proposed to ensure long-term sustainability, including (i) integrating environmental consideration into important economic processes for making choices, (ii) factoring environmental salvaging expenditure into huge advancement projects, (iii) using economic tools for regulating natural resources, and (iv) implementing environmentally comfortable innovations. In bid to also regulate companies and their operation the code of CG was put in place.

CG in regards to the Nigerian corporate environment dates back to the 1990s, where some companies had issues with the government primarily due to bad leadership of the management of the company. The issues ranged from concealment of indebtedness level, overvaluations, money

laundering and eventual collapse of some of the companies (Oteh, 2023). This brought about the introduction of the revised code of corporate governance for public listed companies (Securities and Exchange Commission, 2011). In 2016, a super code which goal was to harmonize and unite all existing sectoral differences came into existence. It was referred as the “three-in-one” code which covers the public sector, private sector and not- for- profit organisation (NPFOs). The code applied the ‘Comply or Else approach’ which was later observed to be very confusing in terms of its conflicting provision on seemingly the same subject matter, hence the suspension by the Federal Government. This finally led to the creation of the 2018 code of CG, which is relevant and applicable to companies of varying sizes across the various sectors. The aim of the code is to institutionalise corporate best practises, sensitize the general public on essential corporate value as well as the ethical practices as a way promote the integrity of the business environment. Companies are required to adopt the ‘Apply and Explain’ approach in implementing and monitoring compliance with the code (Adelupe & Ojeshina, 2019). The code is still in use at present.

Despite all the regulations, Choi and Kim (2024) maintain that problems from the environmental disclosure still persist. In the same way, Rahman and Hassan (2023) opines that the problem in Nigeria is basically implementation as opposed to setting codes and laws. Implementation is not only limited to Nigeria, it is also a common concern in evolving, and sometimes some developed economies.

2.3 Measurement of Environmental Disclosures

Analysing environmental information comes with numerous difficulties because there is no universally accepted standardize measurement practice. However, prior literature extensively used three methods namely questionnaire, context analysis and disclosure index.

2.3.1 Questionnaire or Survey

It involves the use of questionnaires to examine the view of different financial users' group of accounting information (financial analysts and investors) on disclosure practices (Naser & Nuseibeh, 2023). This measure was derived from the evaluated work of financial research specialist who established work based on three categories namely, annual, published, and other financial information, quarterly and other published but not required information. To show the view of the analyst of disclosure practice, the method employed the use of the questionnaire and interview method in extracting information. The total disclosure score is however calculated as the weighted average as derived from the three (3) categories as aforementioned. This disclosure method can be used for a large range of companies because of the ease involved in constructing it. The quality of result derived from the use of this method is a function of the quality of the research questionnaire (Fang & Wang, 2024).

2.3.2 Disclosure Index

Cerf (2018) is pioneer researcher to use disclosure index in accounting. He conducted an empirical study on the basis of interview with a financial analyst. He developed thirty-one (31) disclosure items which were scored on the scale of 1 to 4. This technique includes dividing the total number of information items anticipated to be released by the observed number of information items reported by an organization. Depending on the kind of inquiry that needs to be

done, this form of disclosure may need to be adjusted. The disclosure index approach has been used widely in different countries. In creating disclosure index, two levels of involvement were observed from literature. They include the full involvement and the non-involvement. The full involvement simply means that the researcher is totally in charge of creating the entire process of selections to that of scoring the information items to be disclosed, while the non-involvement entails that the researchers are not fully in control of the selection process through the scoring of the information items to be disclosed; rather they depend on available information indices (Ikhu-Omoreigbe, 2019).

Bearing in mind the inherent disclosure weighted problems being faced by researchers, professionals have used the medium to develop their own disclosure index overtime; consequently, prior studies have shown reliance on the use of the available disclosure index from professional organisation (Patel & Das, 2024). The use of disclosure index in literature exhibit how flexible the method actually is. The flexible nature of disclosure index creates the opportunity for researchers to always choose to construct their own index to fulfil the needs of their own research. Disclosure index is considered more suitable because it mainly focus on either the inclusion or exclusion of specific information. Additionally, it is considered trustworthy because it is unaffected by underlying problems like repetition, syntax, and preset measurement units.

2.3.3 Content Analysis

A survey method known as content analysis is used to extract reproducible and reliable interpretations from texts and apply them to the contexts in which they are used. According to Rashid and Anwar (2024) researchers can study and work over the text to make valid inferences about hidden or underlying meanings and messages of interest. The quantity of information can

be measured by counting the data items i.e. the number of words, the number of sentences and the number of pages (Hassan & Marston, 2023). Content analysis can be computer aided or human coded with the latter having the advantage as it permits the quantitative assessment of achieved reliability (Saha & Bhattacharya, 2024).

Some of the studies that have made use of content analysis overtime include (Islam & Rashid, 2023; Kang & Lee, 2024). Despite the attractiveness of this method because of its basic concern, it is labour intensive most especially during data collection process, which inevitably restricts the sample size employed by most studies (Khan & Rahman, 2023). It places emphasis on quantity rather than quality of disclosure.

2.4 Chief Executive Officer (CEO)

In accordance with the Nigeria Code of Corporate Governance of 2018, the CEO's primary responsibilities include: (i) supervising the day-to-day operations of the business; (ii) facilitating that there is adequate execution and accomplishment of the business' strategic imperatives to guarantee environmental sustainability and advancement; (iii) promoting responsible administration of the business' finances and other resources; and (iv) supplying the board with full, reliable, and readily available information and documentation that permits the board to make informed decisions. (v) Advancing and defending the company's interests; and (vi) serving as the company's principal spokesperson when interacting with its various stakeholders.

CEO, as the highest placed individual in an organisation is accountable for a company's general achievement and for implementing key strategic recommendations. He may also ask for input on major decisions, but they are the ultimate authority in making final decisions (Elsayed & Rashid,

2023). The CEO may also be referred to or addressed as chief executive, president, and managing director.

2.5 Chief Executive Officer Attributes

Managerial attributes can be grouped into two namely physical and psychological (Gao & Liu, 2023). Extant literature has largely focused on the physical/demographic which comprises age, tenure, education, gender, career background (Khan & Rahman, 2023) while the psychological attributes include the level of over confidence, hubris, cultural and social influences. This study will focus on the physical attributes comprising of CEO tenure, foreign exposure, gender and age.

2.5.1 Chief Executive Officer (CEO) Tenure

CEO years in service implies the amount in years spent by a person in a company's executive position as the CEO. Logically, it is expected that as the CEO tenure increases, the motivation for improved performance increases in a bid to avoid termination. Surprisingly, it is not always the case. Miller and Shamsie (2021) opined that newly appointed executives have been shown to be more willing to experiment and pursue innovative strategies while longer-tenured executives have been shown to be more resistant to strategic change (Ahmed & Hasan, 2023).

2.5.2 Chief Executive Officer (CEO) Foreign Exposure

CEO's foreign exposure in this context refers to the academic background and/or work experience of the CEO in a foreign country. It is an obvious fact that knowledge is power; every individual seeks knowledge so as to remain relevant in the society. A standard education provides the required knowledge needed by the CEO to make optimum decision to enhance the company's image in the eyes of the public (Lee & Wang, 2023). Moreover, a well- travelled CEO most often than not views issues and proffer solutions from a global perceptive as a result

of the vast experience and knowledge acquired either through the course of studying or working. Consequently, the citizens where motivated to further their education, placing emphasis on foreign education and work experience with the aim that the citizens would transfer and implement on completion of their program (Ma & Zhang, 2024). The returnees where bestow with a title 'National Distinguished Experts' and placed in vital positions in various companies so as to put the knowledge acquired into practice. CEOs with foreign exposure tend to support their organisational policies with standard practices of developed economies and subsequently leading to both financial and non-financial outcomes (Sharma & Arora, 2023).

2.5.3 Chief Executive Officer (CEO) Gender

Women remain underrepresented in management positions within the corporate environment across the world, in spite of justifiable increase in education (Tan & Li, 2023). Countries such as Sweden and Norway promulgated regulations that encourage gender inclusion and involvement in top managerial cadre. Precisely, to address gender inequality, Norway in 2003 made a mandatory law of a 40% minimum representation of both male and female in public companies. Although, this law was greatly protested by corporate stakeholders and resulted in negative spill-over effects such as more male representation in private companies and the radical changes in the status of companies from public to private. It led to a relatively gender balanced board in public companies and made the country have a gender gap of just 2% (Tran & Dang, 2023).

2.5.4 Chief Executive Officer (CEO) Age

The CEO's age on the choices of organisational policies has been explored greatly with scholars having varied opinions concerning CEO's age with respect to decision making. Executives' age affects their values, cognitive styles and decision (Fang & Wang, 2024; Lee & Wang, 2023).

People who are born at different ages undergo distinct stages of development, which affects how they view the same problem. In addition, as they increase in age, they are more incline to maintain the current state and balance; thus, reject new ideas and practices (Mishra & Rahman, 2023). Unlike senior executives, the junior ones are more energetic and creative, more incline to accept new ideas and new management methods (Tran & Dang, 2023; Ma & Zhang, 2024). They usually pursue innovation proactively (Lewis et al. 2021).

2.6 CEO Tenure and Environmental Disclosure

Regarding the impact of a CEO's term (short or lengthy tenure) on a number of organizational outcomes, there are various schools of thought. According to studies in favor of short-term CEOs, most CEOs have a tendency to go above and above in their early years of leadership to make a good impression on stakeholders like investors and competitors. Such signals include companies' performance and disclosing environmental information. Ahmed & Hasan (2023) had earlier argued along this line that almost all major actions taken by CEOs occur in the first two and a half years in office. Accordingly, newly appointed CEOs are more apt to respond to requests for voluntary disclosure than long-tenure CEOs because they are less imbedded within the existing norms of the company and more open-minded about how the company should be run, short-tenure CEOs will likely perceive less risk in responding to requests to disclose environmental information because they are willing to experiment (Elsayed & Rashid, 2023) and press for innovation that could lead to better companies performance. Lewis et al. (2021) examined CEO characteristics and environmental disclosure. The sample consists of 589 companies in the United State (US), for the period of 2002-2008. The findings showed that newly appointed CEOs tend to respond to carbon disclosure project (CDP) similarly, Dang & Tran (2024) found that CEO could restore corporate social responsibility (CSR) performance of a company at the start

of their tenure than at the later end. Based on prior studies, we discern that the longer the CEOs tenure the more autonomous and powerful they can become which make them able to endure pressure to resist changes. Alam and Rahman (2024) opined a steady trend of negative relationship between CEO's time in office and organisational change.

On the other hand, studies in support of long tenure CEOs are of the view that they have ample time to showcase their expertise and intelligence (Arora & Sharma, 2023), withstand pressure (Wei, Ouyang& Cheng, 2022) and create the enabling environment to mix up and bond with employees (Luo, Kanuri & Andrew, 2023) in order to move companies to greater height through strategic changes. Huang (2023) analysed the impact of CEO characteristics on corporate sustainability development. The sample comprise of 661 companies with 392 observations. Spanning from 2005 to 2010 by means of regression analysis, it was discovered that CEO tenure could enhance CSR performance. The findings of Ali and Khan (2023) and Bhattacharya and Saha (2023) agrees with Huang (2023) where CEOs tenure have a positive influence on companies' performance and environmental disclosure.

In respect to CEO tenure and environmental disclosure in Nigeria, we could not find many empirical articles according to our inquiry. Still, we gained access to a recent study conducted by Chen and Lee (2023) which has a contrary view to the earlier reviewed studies, they examined the impact of corporate governance on sustainability reporting in 35 financial and non-financial companies in Nigeria for the period of 2013-2019. They employed the probit panel random effect regression analysis. The result indicated CEO tenure has no significant relationship with CSRD reporting in Nigeria. We expect a significant relationship between CEO tenure and environmental disclosure in Nigeria.

2.7 CEO Foreign Exposure and Environmental Disclosure

Prior literature placed much emphasis on CEOs educational background excluding the foreign element and work experience. In their argument, Masters in Business Administration (MBA) degree represent common educational qualification for CEOs of large companies (Hassan & Khan, 2024; France & Lavelle, 2024) because they display glaring differences on how environmental disclosure issues are viewed and interpreted. Lewis et al. (2021) examined CEOs characteristics and firm environmental disclosure. The findings revealed the CEOs with MBA qualification have a better perspective to respond to environmental disclosure than the ones led by lawyers. Ma and Zhang (2024) additionally found that an average age top executives with MBA qualification tends to report on environmental information, this is contrary with those with legal training. Saha and Bhattacharya (2023) reaffirmed in the study that executives with MBA qualifications are more willing to make more aggressive decisions than an executive without the MBA degree. Examples of these aggressive decisions include decision on leverage or equity financing, capital expenditure and declaring of dividend (Berthrand & Scholar, 2023). The reason for their action is that executives with MBA could be more versatile in strategic decision making and easily recognise opportunities that promote companies overall performance and take advantage of it. Therefore, the CEO with MBA qualification is expected to recognise non-mandatory disclosure as a rare chance to promote the company's performance.

Extant literature suggests that persons with legal degrees demonstrated excellent decision-making pattern in comparison with other professions. Nevertheless, executives with legal education are often condemned for their conservative tactics towards business activities (Arora & Sharma, 2023). Lawyers are basically trained to protect their clients and reduce risk as much as possible. These behaviours tend to prevail when the lawyer occupy the position of CEO of

companies (Ghosh & saha, 2024). In line with (Saha and Bhattacharya) empirically revealed that executives with legal qualifications are prone to act in a conservative manner. For instance, manager with legal trainings as much as possible stick to the existing status quo. They are also known to be prudent and hold on to cash when the market is uncertain leading to lesser money released for R&D purposes (Singh & Kumar, 2024). Furthermore, CEOs with legal qualification have the tendency to guide down earnings forecast in order to reduce litigation risk (Lee & Wang, 2023). Considering the agitation and litigation suit that arises due to information asymmetry, CEOs with legal training may be more receptive to disclose environmental information.

Nevertheless, despite empirical evidence suggesting CEOs with MBA are more likely to report environmental issues. Considering the fact that MBA is merely one type of business education, it might be contested. Business education covers a wide range such as accounting, finance, marketing, management and so on.

Ma & Zhang (2024) investigated the impact of CEO characteristics on corporate social performance with emphasis placed on firm and industry characteristics. The result revealed that CEOs who have acquired bachelor's degree in Humanities positively enhance exemplary social performance. It further found that the strength rating depicted an inverse relationship to the CEOs having bachelor's degree in Economics and the level of short-term compensation.

Literature of CEO education and environmental disclosure in Nigeria is scanty. However, studies by Uyagu and Dabor (2017) analysed CEO characteristics and financial performance in Nigeria. The result revealed CEO educational background has no significant effect on firm performance. Contrary to Uyagu and Dabor (2017), Sharma & Arora (2023) revealed that CEO education plays an enormous role in enhancing profitability and performance in the financial sector. We

observed in the Nigeria scenario, emphases were not placed on particular qualifications, but rather on education holistically. We perceive the reason being that an educated CEO thinks and reasons cognitively and act wisely in order to enhance better company's performance.

For the purpose of this investigation, we will dwell on CEO foreign exposure with emphasis on CEOs foreign education and/or previous work experience in countries with high environmental rating on environmental disclosure. These countries include Scandinavian Countries (Denmark, Finland, Sweden) that have the highest level of environmental disclosure in the world (Ienciu, 2021), and the United Kingdom, Germany, United States of America, Canada and France (Bartel & Fogelberg, 2020) which have revealed a clear growth in environmental reporting instrument since 2013. The idea being that despite the voluntary nature of environmental disclosure in Nigeria, which is a major hindrance to timely and detailed environmental information disclosure by companies, the CEO with foreign exposure is presumed to have a broadened mind-set and are likely to support the company's regulations with standard practices of developed economies, of which environmental friendly practices and disclosure are key.

2.8 CEO Gender and Environmental Disclosure

According to Buss (2022) female and male CEOs differ in their actions and trends on environmental information disclosure due to elements such as educational background, communication and career experience and personality. Women are regarded as better resource managers because they are more independent, and are likely to add diversity to board's human capital which leads to improved decision making (Eagly & Carli, 2023). The outcome of some studies by foreign authors such as Das and Patel (2023) discovered that female CEOs are more effective in the application of environmentally friendly strategies than their male counterpart,

they employed a data of all Fortune 500 CEOs and board of directors in the US, for a 10 years period, ranging from 2001-2010 by means of panel data analysis. That of Liu (2024) found that Thai companies with female CEOs do not significantly influence environmental information disclosure. The findings of Das and Patel (2023) equally align with Rupley, Kim & Lee (2023) which found the positive influence of women directors on board and the quality of environmental information disclosed. In Jordan, Ali and Khan (2023) studied the effect of CEO's characteristics on forward looking information (FLI), in this context FLI means voluntary disclosure. The sample comprise of 201 non- financial companies listed in the Amman stock exchange for the duration of 2008- 2013, the result revealed the presence of CEO gender significantly has an impact on FLI that could be valuable for better decision making for stakeholders. Random effect and panel data regression were used.

Tran and Dang (2023) investigated Gender and Climate Change Disclosure on Turkish companies on BIST100 relying on data from corporate sustainability reporting initiative over a duration of 2010- 2019. The findings revealed no conclusive indications of a link between focusing on climate change and women's total membership on board members. notwithstanding, it was stated that the likelihood of optional climate change publication could be increased by the participation of females on corporate board committees as a form of representation for their active involvement in corporate governance.

Verma and Jain (2024) examined the impact of gender diversity on voluntary disclosure in annual reports in Finland. The sample comprise of 108 companies listed on the Helsinki stock exchange over the period of 2005- 2007. It revealed a significant positive relationship between female chief financial officers and higher voluntary disclosure, but female CEOs have no significant impact on voluntary disclosure.

In the Nigeria context, due to the scanty nature of studies in this area, the researcher reviews the closet variable to CEO gender which is board gender diversity. Sadiq and Bashir (2024) examined board characteristics and social environmental disclosure in Nigeria. A sample of six firms in food products sector listed on stock exchange for the years 2009 to 2018 were studied. The annual reports and the NGX fact book were used for data gathering and descriptive statistics, correlation, and OLS were used to analyse the data. It was observed that women on corporate board play essential roles in the decision-making process in respect to which information to be disclosed by the company directors. The result showed a positive significant association between the variables. The findings of (Eytiomi et al, 2018) equally agree with Sadiq and Bashir (2024). We observe consensus in findings to a large extent from prior literature as regard female CEOs and environmental disclosure as well as performance. The reason may not be far from the assumption that females CEOs are seen to be more detailed in their reports, and more eco-friendly than their male counter pact. Theoretically, it is expected that CEOs gender should be positively related to company's environmental disclosure in Nigeria.

2.9 CEO Age and Environmental Disclosure

According to Ahmad, Nawawi and Salin (2022) age is one aspect of the physical attributes that reveal the experience as well as the expertise of a person. The reason is that people of different ages tend to act and reason differently depending on their background, experience and societal influence. CEO age will be considered from two viewpoints: the young and the old CEO. Studies in favour of younger CEOs suggested that they are more energetic, passionate and creative about their jobs. In addition, they are innovative and ready to accept new ideas that could lead to better performance of companies (Amran, Yusuf & Aripin, 2020; Serfling, 2021). On the contrary, Kollamous and Agyes, 2020 found that older people are more receptive about issues of the

environment and tend to promote positive environmental awareness. This could be because the CEO is more experienced and realises the implication of the company not fulfilling its corporate social responsibility (CSR). The company's image can be dented and result to huge cost of compensation. Similarly, Chen and Lee (2023) examined the influence of CEO qualities on sustainable performance, sustainability outcomes and environmental reporting which are inspired by institutionally determined sustainability guidelines, laws, and management of 2,854 Chinese traded businesses during the period 2010–2017. When compared to their superior counterparts, empirical results from regression analysis showed that youthful CEOs had a tendency to make decisions that have a negative impact on sustainability and the environment as a whole. Forte (2021) opined that older executives with rich experience tend to have increased cognitive level as well as high moral and maturity value when faced with difficult events.

However, Li and Liu (2024) in the study of CEO characteristics and environmental information disclosure by means of regression analysis examined a sample of sixty (60) non- financial listed companies in Thailand stock exchange. The result showed age is insignificant to environmental disclosure. Likewise, McCarthy, Oliver, and Song (2017) showed a negative association between CEO age and CSR. This study expects a significant relationship between CEO age and environmental disclosure.

2.12 Review of Theories

This section is a review of the underpinning theories that form the basis of this study. The theories are briefly discussed below:

2.12.1 Upper Echelons Theory

The Upper Echelons theory was propounded by Hambrick and Mason (1984). This theory is used to explain the influence of the upper echelon cadre within a company on strategic company's outcomes and decision making. Hambrick and Mason (1984) argued that top management matters when it comes to strategic companies' outcomes because these outcomes are the result of complex decision making, which is largely influenced by behavioural attributes of the manager, who has been delegated with the responsibility and authority for decision making. They suggested that decision-makers use their own givens, which represent their intellectual framework and ideals, while making strategic judgments. They used the term "givens" to refer to quantifiable organisational characteristics and attributes of managers, some of which include age, tenure, functional background information, and backgrounds in education. Hambrick (2017) puts it clearly by stating that the central theme of this theory is that executives act based on how they personally perceive the strategic environment and this perception is premised on their values, experience, and personality. In other words, to understand how companies behave, the values, experiences, bias and perceptions of the upper echelon cadre should be considered.

Applying this theory, it is worthy to note that (Hambrick & Mason 1984; Hambrick 2017) stressed that companies' outcomes are affected by the disposition and the givens of decision-makers. Due to the separation of ownership from control, it is equally known that shareholders have delegated decision making to management. Management here could refer to the board of directors (BOD) and/or CEO. Thus, the attributes of management (BOD, CEO) based on this theory, should influence strategic companies' outcomes of which environmental disclosure is one. ((Bartel & Fogelberg 2020). Argued that managerial attributes can either be physical or psychological. Moreover, they argued that physical attributes affect companies' outcomes indirectly while the

psychological attributes have a direct effect. However, because of the relative difficulty in measuring psychological attributes researchers seem to focus on just physical attributes.

2.12.2 Legitimacy Theory

Legitimacy implies a widespread insight showing that the conducts of a company are desirable and suitable within a society. According to Cho and Patten (2007) legitimacy theory implies that the corporate environmental reporting is a function of the intensity of political and social pressure companies have to face pertaining to their environment. In response to the political and social stress, it is very important companies disclose more environmental information to justify their rightful image and existence in the community in order to avoid penalty or fine that could result from legitimacy crisis (De Villiers & VanStaden, 2006).

The philosophy behind this theory is that the community visualizes the company based on how they have performed in relation to societal expectations. Companies employ the use of corporate annual report as a device to retain legitimacy, that is why the broader the chances of unfavourable shifts in community expectations, the better the need to control the process by employing corporate environmental reporting (Deegan, 2002). Consequently, legitimacy theory is a suitable theoretical approach from which we can examine environmental disclosure since it focuses on the thought that for a business to justify its right in the environment of operation, it must react to the need of the society by giving it what it wants.

2.12.3 Stakeholders Theory

Whereas, the Agency theory is concerned with the agent and principal as the main interest groups within a company, the stakeholders' theory expatiates on this view. The Stakeholders' theory is attributed to Freeman (1984) and is centred on the idea that companies are not only in

existence to meet the interest of the principal, but also to meet the expectations of all stakeholders. By stakeholders, this theory means anyone that is influenced by the activities and dealings of a organisation. These stakeholders include, but not limited to the host communities, government, labour unions, society, supplier and employees. It is obvious that stakeholders are not equal in their interest in an organisation or in the magnitude of the impact of a company's operation on their affairs. In addition, some stakeholders have conflicting interests and stakes. Ali and Rizwan (2013) separated a company's stakeholders into primary and secondary stakeholders. The primary stakeholders were seen as those stakeholders whose support are needed for companies to continue as going concerns, have greater influence to alter the actions of the organisations and include shareholders, creditors and employees. The secondary are given to be those stakeholders whose support are not needed for a company's going concern, have lesser power to influence the actions of the company and include consumer advocacy groups and environmental lobby groups. Wittichindanon (2017) also separated corporate stakeholders into two (2) groups which are; internal and external stakeholders. Internal stakeholders being those stakeholders that are within the company such as shareholders and employees while external stakeholders are those outside the company like the community and public interest groups. While the greater the importance and power of the stakeholders the more attention will be given to them by the company, stakeholder relationship with a company can be managed by providing more supplying them with knowledge to win their approval and support. These stakeholders are those who have a goal or cooperation in society and are therefore significant for the company's success (Faouzi & Mohamed, 2014). Therefore, stakeholder theory therefore provides that companies have stakeholders whose corporate actions affect and who can in turn affect them. Thus, a company needs to show these stakeholders that they are being recognized in the decisions and actions of

the company through disclosing information which includes information on their environmental activities (Faouzi & Mohamed, 2014).

CHAPTER THREE

METHODOLOGY

3.1 Introduction

The primary focus of this chapter is on the methods and procedures that will be employed in the study to achieve its stated objectives.

3.2 Research Design

This study makes use of *ex-post facto* research design. The design is appropriate because the observations and information were obtained at several points in time without manipulations. The design is typically used to investigate the effects of one or more recognized independent variables that were existing before the investigation on a certain dependent variable. Additionally, by paying attention to the temporal sequence of events, it can be used to follow changes over time and exclude time-invariant unobserved individual variations.

3.3 Population and Sample Size

The population of the study comprises of companies in five (5) environmentally sensitive sectors listed on the Nigerian Exchange Group as at December 2019. The five environmentally sensitive sectors selected include (i) construction and real estate, (ii) conglomerate, (iii) agriculture, (iv) natural resources; and (v) health. A total of thirty-two (32) companies were identified under the aforementioned sectors. The study projected to adopt the entire population as the sample size of the study in a census method. However, during the data collection process, two out of the thirty-two companies were excluded due to incomplete data for the entire 6-year period (2016-2021) studied. The two (2) companies that were excluded were (i) Nigeria-German Chemicals Plc and

(ii) Evans Medical Plc. Owing to the two excluded companies, the final sample size comprised of 30 companies which amounted to 180 firm-year observations in a six-year period.

3.4 Sources of Data

The nature of the study necessitates secondary data which were collected from the audited report of selected companies for the period (2018-2023). Due to their accessibility, availability, and high opportunity for outcome comparability, we solely used corporate annual reports.

Based on the theories reviewed, this study will anchor on the upper echelon theory by Hambrick and Mason (1984) to investigate the relationship between CEO attributes and environmental disclosure. Upper echelon theory is selected because it predicts that the attributes of the echelon cadre in any company would impact on the strategic results. Additionally, Hambrick (2017) indicated that executives act based on how they perceive the strategic environment and this perception is premised on their values, experience, and personality. Therefore, to appreciate the dimension to which an organization reports environmental phenomenon, it is vital to first put into consideration among various parameters, the value, experience, objectivity and perception of the upper echelon cadre. In other words, drawing from the theory, it is expected that the attributes of the executives either collectively (BoD) or individually (CEO, CFO, Chairman of BoD) should affect the level of environmental disclosure. Hence, the researcher proposes a relationship between CEO attributes and environmental disclosure.

Following the work of Li, Lin, and Zhang (2019) on the influence of CEO characteristics on environmental information disclosure where the equation was specified:

$$EID_{it} = \beta_0 + \beta_1 Gender_{it} + \beta_2 Edu_{it} + \beta_3 AgE_{itt} + \beta_4 Tenure_{it} + \beta_4 Expertise_{it} + \beta_6 Size_{it} + \beta_7 Firmage_{it} + \beta_8 REG_{it} + \beta_9 TOPI_{it} + \beta_{10} BI_{it} + \beta_{11} Slack_{it} + \varepsilon_{it} \quad \text{……………………………….. (1)}$$

Where; EID = Environmental information; Gender= CEO Gender; Edu= CEO Educational degree; AGE = CEO Age; Tenure= CEO Tenure; Expertise = CEO experience; Size= Company size; Firm age= Age of Firm; REG= Region; TOPI=Highest Shareholder; BI= independent directors; Slack= Organisational slack

This study adapted Li et al. (2019) model by incorporating variables considered to be relevant in the Nigerian context - given the environmental disclosure regulations in the country. Most extant literature employs the use of control variables in make the outcome of the research more robust; Roberts (1992) keenly acknowledged the significance of corporate characteristics in investigating the level of corporate environmental disclosure. To this end, this study incorporated two of such factors (institutional ownership and company size) as control variables. Eriabie and Odia (2016) posit that dominant institutional ownership influences higher environmental disclosures since they could make use of their voting power as a monitoring tool on the management. On the other hand, numerous researchers (Omoye & Wilson-Oshilim, 2018; Rabi, 2019; Rabiu & Ibrahim, 2017) have controlled for the effect of company size in closely-related studies and found it significant in determining the level of environmental disclosure.

Thus, introducing the two control variables, the functional form of the study model is given as follows:

$$ED = f(CEOT, CEOX, CEOG, CEOA, IOW, CZ) \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (2)$$

The econometric form of the above model is given thus:

$$ED = \alpha_0 + \alpha_1 CEOT_{it} + \alpha_2 CEOX_{it} + \alpha_3 CEOG_{it} + \alpha_5 CEOA_{it} + IOW_{it} + CZ_{it} + \varepsilon_{it} \ldots\ldots (3)$$

Where:

ED = Environmental Disclosures

CEOT = CEO Tenure

CEOX= CEO Foreign Exposure

CEO = CEO Gender

CEOA = CEO Age

IOW = Institutional Ownership

CZ = Company Size

ε_{it}= Stochastic error term

The a-priori expectations are $\alpha_1, \alpha_2, \alpha_3, \alpha_4, \alpha_5, \alpha_6, \alpha_7 > 0$

3.6 Research Instrument

In this study, the dependent variable, environmental disclosure is proxy as ED. It will be measured using Environmental Sustainability Reporting Index (ESRI), which is extracted from GRI. It comprises of 30 check list of items which encompass general as well as specific environmental information shown in the Appendix. It will be measured by assigning dummy score depending on the existence of information; a company is scored '1' if an item in the ESRI is disclosed, and '0' if otherwise. Hence, overall maximum possible score comes to 30. The value ESRI will be calculated for each company as the ratio of computed total disclosure score to the maximum possible score and then it will be expressed in percentage.

The independent variables, which are consistent with the prediction of the upper echelons theory (Hambrick, 2021; Hambrick & Mason, 1984), are CEO Tenure, Foreign Exposure, Gender and Age. CEO Tenure indicates CEO term in position, CEO Gender is indicated with a dummy variable, which is equal to one for female CEOs and zero otherwise. CEO Age will be measured based on the age of CEO.

With respect to CEO Foreign Exposure, a dummy variable will be used, one if CEO previously studied or worked in foreign countries selected and zero otherwise. The countries selected are Denmark, Finland, Sweden (Scandinavian countries), United Kingdom, Germany, United States, Canada and France. The choice of these countries is based on their high level of environmental practices and disclosure. The Scandinavian countries have the highest level of environmental disclosure in the world (Iencius, 2021).

Finally, the control variable, Institutional ownership is defined as the ratio of equity shares held by institutional investors to the total of equity shares issued. Company size is measured by the logarithms of total asset.

3.7 Operationalization of Variables

Table 3.1: Measurement of Variables

s/n	Variables	Definition	Variable Type	Measurement	Source	Apriori sign.
1.	ED	Environmental Disclosures	Dependent	GRI Environmental Sustainability disclosure index (see appendix)	GRI-G4 (2016)	-nil-
2.	CEOG	CEO Gender	Independent	Dummy variable of 1 if female, otherwise 0.	Serfling (2021)	+
3.	CEOX	CEO Foreign Exposure	Independent	Dummy variable of 1 if CEO has a foreign degree or work experience in selected countries, otherwise 0.	Shahab et al. (2020)	+
4.	CEOT	CEO Tenure	Independent	The total number of years spent as CEO in the company.	Innua and Emeni (2019)	+
5.	CEOA	CEO Age	Independent	The age of the CEO	Serfling (2021)	+
6.	IOW	Institutional Ownership	Control	Ratio of equity shares company held by institutional investors to the total of equity shares issued	Yusuf et al. (2018)	+
7.	CZ	Company Size	Control	Natural logarithm of total assets.	Dang et al. (2018)	+

Source: Researcher's compilations, 2024

3.8 Method of Data Analysis

The methods of data analysis that will be used in this study are descriptive and inferential analysis. The descriptive analysis will help to describe and summarize the dataset. This comprises of numerous techniques such as mean, median, minimum and maximum, standard deviation, skewness and kurtosis. For inferential analysis, the panel data regression technique will be used to estimate the model. The use of panel data analysis in this study is based on three fundamental justifications: (1) the variables used possess time and cross-sectional characteristics

(2) the results obtained from panel data analysis is better because of increases in sample size as well as reduction in the degree of freedom and; (3) It also help to avoid the challenges of multicolinearity, aggregation bias and endogeneity issue (Greene, 2002).

In conducting panel data analysis, two major effects (random effects and the fixed effects) are possible. Therefore, in order to choose between fixed effect and random effect, the Hausman test specification is performed, using the E views 9.0 econometric software package. If the parameter from the test in less than 0.05, the fixed effect will be considered appropriate, and if otherwise, the random effect will be considered more desirable.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSES

4.1Descriptive Statistics

The descriptive statistics was run to display the sample characteristics in respect to all the variables used in the study. Table 4.1 below shows the output:

Table 4.1. ***Result of the Descriptive Statistics***

	ED	CEOT	CEOX	CEOG	CEOA	IOW	CS (N'000)
Mean	0.175882	6.600000	0.593333	0.080000	51.76667	53.91572	31506172
Median	0.117647	5.000000	1.000000	0.000000	52.00000	59.26688	5552391.
Maximum	0.705882	23.00000	1.000000	1.000000	65.00000	87.95000	297139795
Minimum	0.000000	1.000000	0.000000	0.000000	38.00000	7.330000	119915.0
Std. Dev.	0.185750	5.370813	0.492857	0.272202	6.617464	21.78578	65148549
Skewness	1.248515	1.093821	-0.38001	3.096281	-0.01607	-0.45162	2.885579
Kurtosis	4.161496	3.693812	1.144410	10.58696	2.044315	2.402215	10.42048
Jarque-Bera	47.40145	32.91972	25.13034	599.4358	5.714800	7.332339	552.3113
Probability	0.000000	0.000000	0.000003	0.000000	0.057418	0.025574	0.000000
Sum	26.38235	990.0000	89.00000	12.00000	7765.000	8087.358	4.73E+09
Sum Sq. Dev.	5.140952	4298.000	36.19333	11.04000	6524.833	70718.42	6.32E+17
Observations	180	180	180	180	180	180	180

Source: EViews 10, 2024

According to Table 4.1's descriptive statistics, the variable ED (environmental disclosures) had a man value of 0.175882. According to the GRI-G4 guidelines, this means that, on average, only 17.6% of the required environmental sustainability disclosure requirements were disclosed by all sampled companies. The minimum and maximum values of 0.00 and 0.706 show that while some of the sampled companies—such as Transnational Corporation Plc.—disclosed up to 70% of the required environmental disclosure in some of the years under study, others—such as Chellarams, Union Diagnostic, and Union Homes—did not divulge any information on environmental practices during those periods. When examining the characteristics of the CEOs

of the tested businesses, the variable CEOT displayed a mean value of 6.6, indicating that the average tenure of CEOs in the sample is approximately 61/2 years. The minimum and maximum figures showed that some CEOs are still in their first year of appointment, while the CEO with the longest tenure during the study's time frame served for 23 years (Fidson Healthcare Plc as of 2018). The sample's CEOs' tenures appear to have little variation, as seen by the standard deviation value of 5.37, which is not excessively high compared to the mean value of 6.6.

The variable of CEOX showed a mean value of 0.593 which means that over 59% of the CEOs in the sample have got foreign degrees in different disciplines. On the gender of the CEOs, the result showed that only 8% of the CEOs of the entire sample and periods covered were females.

Looking at the diversity in the age of the CEOs, as shown by the variable of CEOA, the result showed an average age of 52 years. The oldest CEO among the sample was 65yrs (for A.G. Leventis as at 2018) while the youngest was 38yrs (for Chellarams as at 2014). The control variable of IOW showed a mean value of 53.92 which implies that, cumulatively, about 54% of the shares of the sampled companies are owned by institutional investors. The average size of the sampled companies is ₦31,506,172,000 (representing the mean total assets of the entire sampled companies). The minimum and maximum values of ₦119,915,000 (for Smart Products Plc as at 2014) and ₦297,139,795,000 (i.e. Transnational Corporation Plc as at 2019) are confirmation of massive variability in the sizes of the companies in respect to their total assets. The probability values of the Jargue-Bera statistics showed signs that, individually, some variables are not normally distributed. This could be attributed to the usage of some of the variables (e.g. firm size) in their raw forms for ease of interpretation of the descriptive statistics. The overall normality result is presented in the histogram normality test in *Figure* 4.1 below.

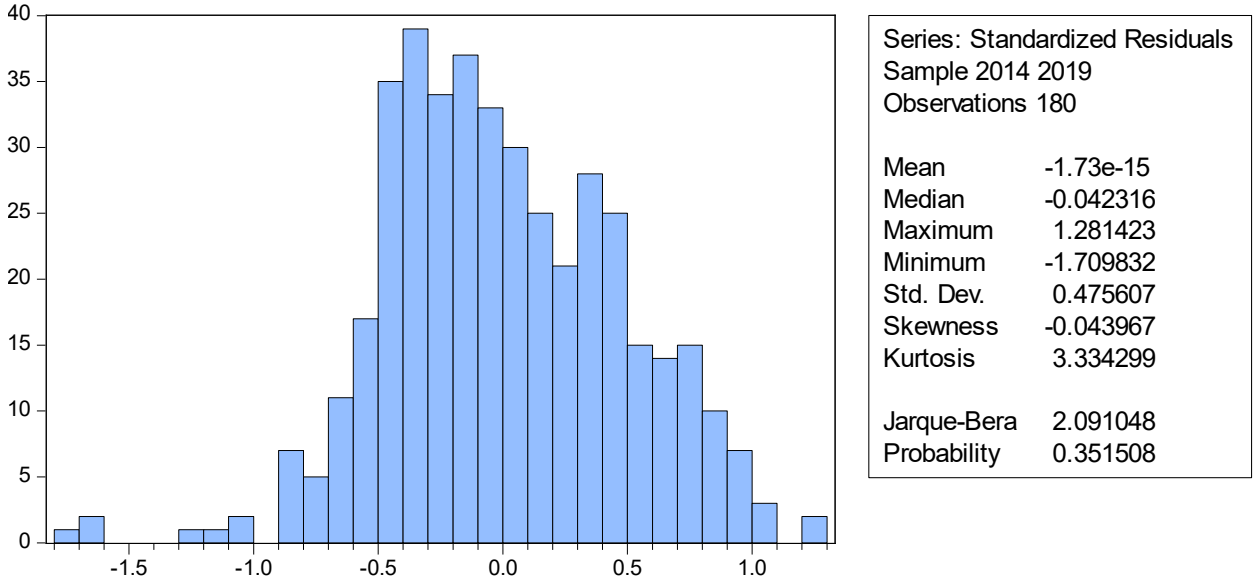

*Figure 4.1.*Histogram Normality Test (Source: EViews 10, 2024)

In testing for the normality of the residuals of a regression line, the mean value of the Jarque-Bera test showed a mean of 2.09 and a high probability value of 0.351 (about 35%). Based on the decision rule, since the p-value is far beyond the benchmark of 5%, we cannot reject the null hypothesis of normally distributed residuals (*u*). This implies that the population residual (u) is normally distributed and fulfills the assumption of a good regression line.

4.3 Correlation Matrix

Table 4.2 ***Results of the Correlation Analysis***

	ED	**CEOT**	**CEOX**	**CEOG**	**CEOA**	**IOW**	**CS**
ED	1.0000						

CEOT	-0.24994	1.0000					
	(0.002)**	-----					
CEOX	-0.05007	0.029411	1.0000				
	(0.543)	(0.721)	-----				
CEOG	0.020457	-0.04683	-0.35619	1.0000			
	(0.804)	(0.569)	(0.000)**	-----			
CEOA	0.355591	0.073268	-0.20832	0.073773	1.0000		
	(0.000)**	(0.373)	(0.011)*	(0.370)	-----		
IOW	0.017938	-0.26577	0.192668	0.021584	0.063499	1.0000	
	(0.8275)	(0.001)**	(0.018)*	(0.793)	(0.440)	-----	
CS	0.2096	-0.10706	0.171	-0.1664	0.120456	0.398747	1.0000
	(0.010)*	(0.192)	(0.036)*	(0.0418)*	(0.142)	(0.000)**	-----
	**. ,*. Correlation is significant at the 1% and 5% levels (2-tailed) respectively.						

Source: EViews 10, 2024 (NB: *p*-values are in parentheses)

The result of the correlation matrix revealed mixed coefficients of both positive and negative values. Specifically, the variables of CEOT and CEOX have negative correlation coefficients meaning that they both move in opposite directions with our variable of interest, ED (environmental disclosure). However, their *p*-values of 0.002 (< 0.05) and 0.543 (for CEOT and CEOX respectively) implies that only the association between CEOT and ED is statistically

significant while that of CEOX and ED is statistically non-significant. Thus, longer CEO tenure is associated with lesser environmental disclosure.

On the other hand, the variables of CEOG and CEOA both have positive correlation coefficients meaning that they both move in the same direction with the variable of ED. However, only that of CEOA is statistically significant due to the low p-value of 0.000 (< 0.05) as the p-value of CEOG is loo large at 0.804 (> 0.05). This implies that higher CEO age is strongly associated with higher environmental disclosure. The remaining two control variables of IOW and CS equally have positive correlation coefficients, but on CS is statistically significant owing to the low probability value of 0.01. This suggests that larger firms are strongly associated with higher environmental disclosures.

A further look at Table 4.2 shows that the highest value of correlation coefficient (i.e. 0.3987) is between company size (CS) and institutional ownership (IOW). That is a sign that the correlation coefficients did not pose any problem of multicollinearity due to the relatively small correlation coefficients. The variance inflation factor (VIF) test presented in Table 4.3 further confirms the absence of the problem of multicollinearity in the regression variables.

Table 4.3 ***Variance Inflation Factors***

Variance Inflation Factors
Date: 07/14/21 Time: 21:32
Sample: 1 180
Included observations: 180

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	0.025728	142.1747	NA
CEOT	6.95E-06	2.771602	1.099736
CEOX	0.000957	3.138635	1.276378
CEOG	0.002924	1.292617	1.189208
CEOA	4.54E-06	68.35844	1.091885
IOW	5.11E-07	9.543457	1.331806
CS	7.76E-05	108.9132	1.258552

Source: EViews 10 (2024)

Despite an indication of the unlikeliness of multicollinearity problem owing to the low correlation (r) values evident in Table 4.2, the Variance Inflation Factors (VIF) test for multicollinearity was further performed to confirm the assumption. As observed from Table 4.3, all the Centered VIF values are very close to the value of 1 and far below the benchmark of 10. This is a confirmation of the absence of multicollinearity between the independent variables. The results of the other regression diagnostics tests are presented in Table 4.4 below.

Table 4.4 ***Results of the Regression Diagnostics Test(s)***

Heteroskedasticity Test: Breusch-Pagan-Godfrey:	
F-statistics	0.50396
Prob.	0.8046
Breusch-Godfrey Serial Correlation LM Test:	
F-statistics	86.11318
Prob.	0.00000

Ramsey RESET Test	
F-statistics	2.507667
Prob.	0.1334

Source: EViews 10 Output, 2024

From Table 4.4, the test for heteroscedasticity, which checks for the presence/absence of non-constant variance, was conducted using the Breusch-Pagan-Godfrey test. The decision rule is to conclude that there is no heteroscedasticity if the corresponding probability value of the F-statistic is greater than 5% level. If that be the case (that is, if the p-value is greater than 5%), we conclude that there is homoscedasticity, which is desirable. As observed from the Table, the p-value of 0.8046 (80.46%) is an indication that heteroscedasticity is absence among the series. This means that the residuals are homoskedastic and that is the desirable outcome.

The second row of the Table shows the Breusch-Godfrey Lagrange Multiplier (LM) test which checks for serial correlation. The outcome revealed that the null hypothesis of zero autocorrelation in the residuals is rejected. This is due to the probability value (Prob. F, Prob. Chi-Square) of 0.0000 which is less than 5%. However, although the presence of serial correlation does not affect the unbiasedness or consistency of panel data estimation, the white cross-section standard errors & covariance was used in addressing the error.

In the third row of the table, the outcome of the Ramsey reset test for model specification was reported to test the accuracy of the regression model. The result reported an F-statistic and probability value of 2.5077 and 0.1334 (13.4%). The high probability value is suggestive that there is no significant evidence of mis-specification. Thus, the result means we can accept the null hypothesis of properly specified model.

4.4 Multivariate Analysis

This sub-section presents the analyses of the panel regression model specified in the previous chapter. The Pooled, Fixed and Random effect techniques were all estimated in order to provide a comprehensive overview of the results. However, since one of the cons of the pooled OLS technique is that it does not recognize the heterogeneity among samples and our sample cuts across different sub-sectors, the study relied on the fixed and random effect techniques. Therefrom, the Hausman test was thus employed to help determine the most appropriate model between the fixed and random effects. The outcome of the Hausman tests is presented in Table 4.5 below.

Table 4.5 ***Result of the Hausman Test***

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	4.879166	6	0.5594

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
CEOT	-0.003444	-0.003629	0.000000	0.1989
CEOX	-0.007319	-0.007929	0.000001	0.5488
CEOG	-0.007308	-0.006312	0.000001	0.4059
CEOA	0.001343	0.001512	0.000000	0.0872
CS	0.023759	0.023633	0.000028	0.9809
IOW	0.000020	-0.000057	0.000000	0.4898

EViews 10 Output (2024)

The following hypothesis applies to the Hausman test:
H_O: Random Effect Model is consistent
H_1: Fixed Effect Model is consistent

Decision Rule:If p-value is less than 5 per cent we can reject the null hypothesis that random effect

is consistent; otherwise the random effect shall be accepted.

The result of the Hausman test in Table 4.5 showed a probability value of 0.559 and a Chi-sq value of 4.879. Since the probability value of 55.9 per cent exceeded the critical p-value of 5 per cent, it then means that the random effect model is more appropriate for the study than the fixed effect in capturing the relationships in the panel estimation. Thus, the null hypothesis of equality of coefficients between the random and fixed effect model is accepted. The summary of the random effect results is presented in Table 4.6 below as extracted from the EViews 10 output.

Table 4.6 ***Panel Regression Result***

Random Effects Specification	Dependent Variable: ED (Environmental Disclosure) Method: Panel EGLS (Cross-section random effects) Sample: 2014 – 2019 Cross-sections included: 30 Total panel (balanced) observations: 180			
Independent Variables	***Predicted Sign***	**Coefficients**	**t-Statistic**	**p-value (sig.)**
Intercept (C)	-nil-	-0.173573	-1.133988	0.2588
CEOT	+	-0.004056	-4.992858	0.0000**
CEOX	+	0.006542	0.867440	0.3872
CEOG	+	0.002823	0.299070	0.7653
CEOA	+	0.001491	2.465787	0.0149*
Control Variables				
IOW	+	-0.001497	-2.094297	0.0380*
CS	+	0.020402	2.204593	0.0291*
R-squared				0.242138
Adjusted R-squared				0.187616

F-statistic	4.441079
Probability Value (p-value)	0.000020**

Source: EViews 10 outputs (2024) **. ,*. Significant at the 1% and 5% levels respectively

As can be seen from Table 4.6, there is a significant linear association between the dependent variable of ED and all of the explanatory variables, as indicated by the F-statistic value of 4.44 and the significant probability value of 0.000. The random impact model has an adjusted R-square of 0.188 and a multiple correlation coefficient of 0.24. The modified R-square value indicates that the explanatory variables CEOT, CEOX, CEOG, CEOA, IOW, and CS explain for around 19% of the systematic cross-sectional variance of the dependent variable of environmental reporting. The outcome also demonstrates that while the CEOT variable has a negative coefficient sign, the CEOX, CEOG, and CEOA independent variables all have favourable coefficient signs. However, only two of the CEO-related variables (that is, CEOT and CEOA) were statistically significant. This implies that, holding other variables constant, environmental disclosure (ED) is predicted to reduce by about 0.41% when CEO tenure (CEOT) goes up by one while a unit increase in CEO age will trigger environmental disclosure by up to 0.15%.

On the behaviours of the two control variables, it can be observed from the result that both are statistically significant at 5% levels. Specifically, the variable of CS has a coefficient value of 0.0204 and a low p-value of 0.029 (< 0.05) while the variable of IOW has a negative coefficient value (-0.001497) and a significant probability value (p-value=0.038 < 0.05). This implies that, all things being equal, larger firms are associated with higher environmental disclosures, while firms dominated by institutional ownership are associated with lower environmental disclosures.

4.5 Discussion of Findings

Taking a look at the results of the descriptive statistics shown in Table 4.1 as a starting point, the outcome indicated that the sampled companies have an average environmental disclosure of 17.6%. Although the level of environmental reporting at 17.6% can be considered low on average, it is not entirely different from the outcome of some recent Nigerian studies. For example, Ofoegbu, Odoemelam and Okafor (2018) found an average environmental disclosure of just 10.7% in a sample comprising of 90 Nigerian companies, but they studied just one financial year (2015). Similarly, Omoye and Wilson-Oshilim (2018) also found an average ED of 23.7% in a sample consisting of 118 randomly selected Nigerian listed firms between 2012 and 2016. Similar level of environmental disclosures was also observed in studies like Purwantini, Faisal, Januarti, and Dwiatmoko (2019) which found the dimension of environmental disclosure among Indonesian environmentally hazardous firms to be 22.5% on the average. However, the level of environmental disclosure is higher in some other emerging economies. For example, Rabi (2019) studied 63 industrial companies in Jordan and found 41.5%, while Ofoegbu et al (2018) sampled 213 South African firms and found 40.15% on average.

The outcome of the first hypothesis testing disclosed that a negative significant connection exists between CEO tenure and environmental reporting. This implies that the longer the CEO stays in office; the lower attention is given to environmental disclosure. This finding is in line with the school of thoughts (e.g. Gabarro, 1987; Miller & Shamise, 2001) which puts forward that the first two and a half years of a CEO's tenure are when they take practically all of their significant decisions. In essence, our result aligns with short tenured CEO for higher environmental disclosure, and vice versa. This is similar to the result of Chen et al. (2019) which found that CEOs are more likely to restore CSRD of a company at the beginning of their tenure rather than

at the later end. On the other hand, the outcome of the analysis is in contrary view to those of Azizan et al. (2015) and Li et al. (2019) whose results are in tandem the view that long CEO tenureship leads to higher environmental disclosure

The analysis of the second hypothesis test revealed a favorable but unimportant association between CEOs' experience to foreign countries and disclosure regarding the environment. This resulted in the null hypothesis two being accepted. Although the positive sign meets our apriori expectation, the non-significance of the variable of CEOs' foreign education and exposure is unexpected. The study projected that CEOs with foreign educational exposure, especially in highly advanced countries where environmental policies are given topmost priority, are largely intensified to engage in more environmental sustainable operations and disclosures. Howbeit, the non-significant relationship is similar to the findings of Uyagu and Dabor (2017) which showed evidence that CEO educational background has no significant effect on organisational efficiency. The result, on the other hand, is equally at variance with Saidu (2019) who found that CEO education background plays a strong role in determining organisational performance.

In the third hypothesis testing, the Ho_3 was equally accepted implying that CEO gender has a favourable but non-significant association with environmental reporting. Going the measure of CEOG applied, the significance of the positive coefficient indicator is that women CEOs are more probable to be connected with higher level of environmental disclosure; nevertheless, the non-significant *p*-value indicate that such association is not statistically relevant within the parameter of this survey. Thus, there no strong effect of female CEOs on environmental disclosure of the entire sampled companies, all things being equal. The positive sign aligns with our apriori expectation as the study projected that since females are more threat aversive than men, that female CEOs are likely to comply with voluntary requirements in non-financial

disclosures. The non-significance of the CEO gender variable could be attributed to the observed limited (only 8%, see Table 4.1) women participation at CEO position of the sampled companies, which is considered very low compared to the 35% for female inclusion in governance recommended by the Nigerian National Gender Policy of 2007. The result is in tandem with Ararat and Sayedy (2019) and Nalikka (2009) which both found non-significant relationship between gender and voluntary disclosures in Turkey and Finland respectively. In the Nigerian context, however, the result negates those of Eytiomi et al. (2018), Fodio and Oba (2012); and Muhammed and Sabo (2015).

The findings of the fourth hypothesis testing disclosed a favourable significant association between CEO age and environmental disclosure. This led to the rejection of Ho_4. This result agrees with our expectation and with the school of thoughts (e.g. Forte, 2004; Kollamous & Agyes, 2002) that older CEOs are more receptive and ethically minded towards environmental awareness. The positive significant relationship between CEO age and environmental disclosure is in agreement with the recent studies of Shahab et al. (2020) and Inua and Emeni (2019) which found same significant relationships in among Chinese and Nigerian companies respectively. It however negates the outcomes of Li et al. (2019) and McCarthy et al. (2017) which showed non-significant and negative relationships (respectively) between CEO age and environmental disclosures in Thailand and Australia apiece.

Lastly, the outcome of the two control variables indicated that both the firm size and ownership structure (institutional ownership) are strong determinants of environmental disclosures. On one hand, the positive relationship between company size and environmental disclosure is consistent with the result of Egbunike and Nwankwe (2017) and Omoye and Wilson-Oshilim (2018) which both found empirical evidences that firm size is a strong stimulating factor of environmental

disclosure among Nigerian quoted firms. It however negates the recent findings of Rabi (2019) which showed inverse relationship between firm size and environmental disclosure in Jordan. This discrepancy can be attributed to country specifics.

Also, our result on institutional ownership, although statistically significant, is unexpected due to the negative coefficient sign. The study projected a positive relationship owing to the conjecturing that institutional shareholders drive good governance and environmental performance. The studies of Dyck, Lins, Roth, and Wagner (2018) and Nurleni, Bandang, Darmawati, and Amiruddin (2018) both found significant positive impacts of institutional ownership and environmental disclosures in U.S. and Indonesia respectively. Both findings are at variance with ours which can as well be attributed to country heterogeneities since Nigeria is still classified among the low environmental and social norm countries, unlike the U.S. (Dyck et al. 2018). In the Nigerian context, the negative relationship tallies with the result of Yusuf, Fodio, and Nwala (2018) which also showed inverse effect of institutional ownership and voluntary disclosure. Some Nigerian studies equally found that institutional shareholders increase the probability of providing enhanced environmental disclosures (e.g. Uwuigbe, Erin, Uwuigbe, Igbinoba, & Jafaru, 2017). The lack of convergence can be attributed to the patter of institutional ownership in most Nigeria companies where the management owns large chunks of the shares through proxy companies.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of the major findings of the study from where it draws its conclusions. It also proffers recommendations for policy makers and future researchers. The major contributions of the study to existing knowledge were also highlighted.

5.2 Summary of Findings

Based on the outcome of the empirical analyses and discussion of findings in the previous chapter, the major findings of the study can be summarised as follows:

1. There is significant negative relationship between CEO tenure and environmental disclosure. This implies that long CEO tenureship is strongly associated with lesser environmental disclosure in Nigeria.
2. There is non-significant positive relationship between CEO foreign educational exposure and environmental disclosure. This suggests that having CEOs with foreign educational exposure does not assert any meaningful impact on the level of environmental disclosure in Nigeria.
3. There is non-significant positive relationship between CEO gender and environmental disclosure. This implies that changes in the level of environmental disclosures are not associated the presence of female CEOs in Nigerian listed companies.
4. The relationship between CEO age and environmental disclosure is positive and statistically significant. This implies that older CEOs strongly influence greater environmental disclosures in Nigeria.

5.3 Conclusion

The study drew its motivation from the recent upsurge in the level of environmental disclosures which have grown considerably over the last decade and have also triggered a lot of research interests in recent times. Many schools of thoughts attribute the increasing trend in the level of environmental disclosure to the enforcement of mandatory disclosure-regimes by some governments. Available literature, however, suggests that such increasing trends may not be witnessed in climes where environmental disclosures are among the voluntary requirements for listed companies (e.g. Nigeria). While a large chunk of existing studies on drivers of environmental disclosure have beamed their lights on the impact of corporate governance, firm characteristics, among others; commensurate research efforts appeared to be lacking on the role of the CEOs as well as their attributes. Considering the pivotal roles played by the CEOs in the day-to-day management of organisational affairs, the study saw the need to examine the influence of some of their observable characteristics on the level of environmental disclosures.

It was against these backdrops that this study examined whether CEO attributes like CEO tenure, gender, age, and foreign educational exposure have impacts on the level of environmental disclosure of Nigerian listed firms. Relying on the theoretical lenses of the upper echelon, legitimacy and stakeholder theories, the study adopted the four aforementioned CEO attributes as independent variables against environmental disclosure as dependent variable – measured using the GRI-G4 environmental disclosure guideline. Two firm-specific attributes (institutional ownership and company size) were also incorporated as control variables. The study focused on a census of thirty-two companies that made up the conglomerates, agriculture, natural resources, health, construction and real estate sectors in the Nigerian Exchange Group (NGX) for a period of six financial years (2014-2019). Findings from the descriptive statistics showed an average

environmental disclosure level of 17.6% which is slightly below what was recently found in most related studies which also sampled Nigerian listed companies.

Further, the panel regression analysis showed that CEO age have a significant positive impact on environmental disclosure which implies that the older the CEO, the greater the level of environmental disclosure. The study also revealed that CEO tenure has a significant negative impact on environmental disclosure. This suggests that the longer the CEO remains in office, the greater the chances of lower environmental disclosures, all things being equal. It was also found that CEO gender is positively associated with environmental disclosure but non-significantly. The independent variable of CEO foreign educational exposure was found to be statistically non-significantly in terms of level of environmental disclosure among the sample.

In summary, it can be concluded that in terms of the influence of CEO observable attributes on environmental disclosures among in Nigeria, the major variables of interest are CEO tenure and CEO age. The outcomes of the other two CEO attributes, gender and foreign educational exposure, can be termed inconclusive as no significant relationships were established. Ii can also be concluded that the two firm-related characteristics used as control variables are significant determinants of environmental disclosure in the context of this study.

5.4 Recommendations

In line with the findings of this study, the study makes following policy recommendations:

1. The study showed empirical evidence that longer CEO tenure negatively affects environmental disclosure, also Table 4.1 showed that some CEOs served for up to 23 years. The study recommends that regulatory bodies of the non-financial companies should replicate the 10-years maximum CEO tenureship set for the commercial banks by

the CBN. This would help curtail the culture of excessive CEO tenureship in most non-financial companies.

2. There is evidence that the presence of CEOs with foreign educational exposure does not affect the level of environmental disclosure. There is need for management to look beyond the country name where a prospective CEO acquired his or her certificates, but rather on their pedigree in prior assignments or positions.
3. CEO gender was found to be a non-significant determinant of environmental disclosure. The study recommends that firms in the sensitive industries should focus on competence of potential CEO candidates when making appointment decisions and less on gender preferences.
4. Since the age of CEOs is among major demographic traits that positively influence environmental disclosure, management should inculcate age and experience among the prerequisites and conditions of CEO appointments.

5.5 Contributions to Knowledge

1. To the best of the researcher's knowledge, this study is among the first of its kind that aggregates various observable attributes of CEOs in capturing the variations in the level of environmental disclosure in Nigeria. Majority of the prior studies had focused on the board of directors whose roles differ from those of the CEOs.
2. By focusing on five different sectors categorised as environmental sensitive sectors, this study has espoused a new dimension of enquiry into the determinants of environmental disclosure from the angle of CEO attributes. Prior studies in the Nigerian context usually focus on the oil and gas sector.

3. Despite not being statistically significant, the introduction of the variable of CEO foreign educational exposure is among the major contributions of this study. It therefore distinguished itself thereof since from most prior studies usually focus on accounting expertise.

5.6 Suggestions for Further Studies

1. Future researchers should employ other constructs of environmental disclosure index. There are indications that most Nigerian firms do not align with the GRI guideline for environmental sustainability reporting.
2. The study employed the unweighted scoring pattern of environmental disclosure measurement, further studies should try out the weighted scoring approach pattern as some of the GRI requirements on environmental disclosures may not applicable or relevant in different climes.
3. Research in the future should examine the CEO traits' invisible dimensions. According to previous research, a CEO's unobservable traits (such as loyalty, knowledge, commitment, interpersonal relationships, communication skills, etc.) may also affect how well they perform their job and how they make decisions. These intangible qualities can be evaluated qualitatively by using a structured questionnaire, which would help widen the scope of environmental reporting factors currently used in Nigeria.

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APPENDIX ONE (RESULTS)

Results

Fixed Effects

Dependent Variable: ED
Method: Panel Least Squares
Date: 07/14/21 Time: 21:22
Sample: 2014 2019
Periods included: 6
Cross-sections included: 30
Total panel (balanced) observations: 180

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.243527	0.178126	-1.367163	0.1743
CEOT	-0.003444	0.000838	-4.111491	0.0001
CEOX	-0.007319	0.007853	-0.932046	0.3533
CEOG	-0.007308	0.009759	-0.748862	0.4555
CEOA	0.001343	0.000618	2.172161	0.0319
IOW	2.05E-05	0.000438	0.046805	0.9628
CS	0.023759	0.010829	2.194102	0.0303

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.992904	Mean dependent var	0.175882
Adjusted R-squared	0.990725	S.D. dependent var	0.185750
S.E. of regression	0.017889	Akaike info criterion	-5.003719
Sum squared resid	0.036481	Schwarz criterion	-4.281167
Log likelihood	411.2789	Hannan-Quinn criter.	-4.710169
F-statistic	455.7425	Durbin-Watson stat	1.454976
Prob(F-statistic)	0.000000		

Random Effects

Dependent Variable: ED
Method: Panel EGLS (Cross-section random effects)
Date: 07/14/21 Time: 21:21

Sample: 2014 2019
Periods included: 6
Cross-sections included: 30
Total panel (balanced) observations: 180
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.173573	0.153064	-1.133988	0.2588
CEOT	-0.004056	0.000812	-4.992858	0.0000
CEOX	0.006542	0.007542	0.867440	0.3872
CEOG	0.002823	0.009438	0.299070	0.7653
CEOA	0.001491	0.000605	2.465787	0.0149
IOW	-0.001497	0.000715	-2.094297	0.0380
CS	0.020402	0.009254	2.204593	0.0291

Effects Specification	S.D.	Rho
Cross-section random	0.179929	0.9909
Period fixed (dummy variables)		
Idiosyncratic random	0.017241	0.0091

Weighted Statistics

R-squared	0.242138	Mean dependent var	0.175882
Adjusted R-squared	0.187616	S.D. dependent var	0.019033
S.E. of regression	0.017155	Sum squared resid	0.040908
F-statistic	4.441079	Durbin-Watson stat	1.203220
Prob(F-statistic)	0.000020		

Unweighted Statistics

R-squared	0.125491	Mean dependent var	0.175882
Sum squared resid	4.495809	Durbin-Watson stat	0.010948

Pooled OLS

Dependent Variable: ED

Method: Panel Least Squares

Date: 07/14/21 Time: 21:18

Sample: 2014 2019

Periods included: 6

Cross-sections included: 30

Total panel (balanced) observations: 180

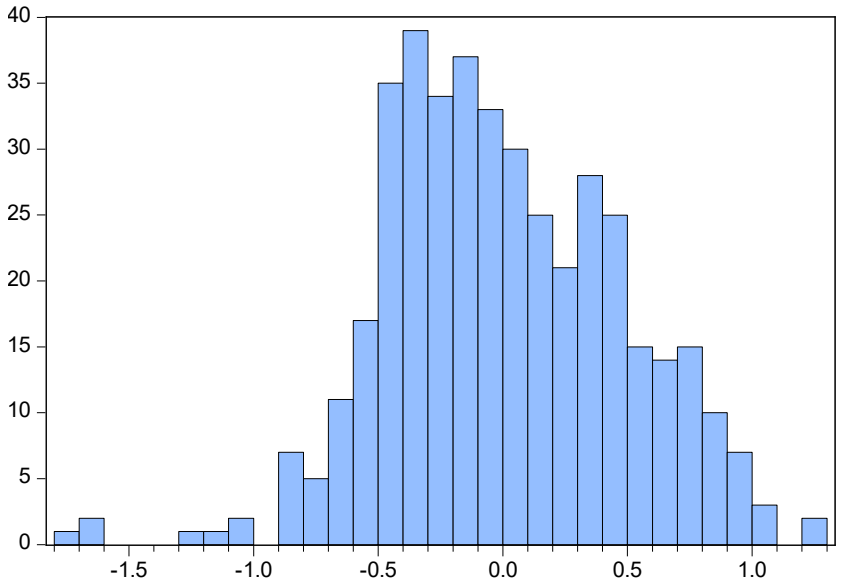
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.569855	0.160398	-3.552753	0.0005
CEOT	-0.010458	0.002635	-3.968309	0.0001
CEOX	0.018013	0.030939	0.582214	0.5613
CEOG	0.022431	0.054073	0.414825	0.6789
CEOA	0.010452	0.002131	4.904336	0.0000
IOW	-0.001497	0.000715	-2.094297	0.0380
CS	0.021579	0.008809	2.449749	0.0155

R-squared	0.244978	Mean dependent var	0.175882
Adjusted R-squared	0.213298	S.D. dependent var	0.185750
S.E. of regression	0.164753	Akaike info criterion	-0.723195
Sum squared resid	3.881534	Schwarz criterion	-0.582698
Log likelihood	61.23959	Hannan-Quinn criter.	-0.666115
F-statistic	7.733058	Durbin-Watson stat	0.047804
Prob(F-statistic)	0.000000		

	ED	CEOT	CEOX	CEOG	CEOA	IOW	SIZE
Mean	0.175882	6.600000	0.593333	0.080000	51.76667	53.91572	31506172
Median	0.117647	5.000000	1.000000	0.000000	52.00000	59.26688	5552391.
Maximum	0.705882	23.00000	1.000000	1.000000	65.00000	87.95000	297139795 .
Minimum	0.000000	1.000000	0.000000	0.000000	38.00000	7.330000	119915.0
Std. Dev.	0.185750	5.370813	0.492857	0.272202	6.617464	21.78578	65148549
Skewness	1.248515	1.093821	-0.380013	3.096281	-0.016074	-0.451616	2.885579
Kurtosis	4.161496	3.693812	1.144410	10.58696	2.044315	2.402215	10.42048
Jarque-Bera	47.40145	32.91972	25.13034	599.4358	5.714800	7.332339	552.3113
Probability	0.000000	0.000000	0.000003	0.000000	0.057418	0.025574	0.000000
Sum	26.38235	990.0000	89.00000	12.00000	7765.000	8087.358	4.73E+09
Sum Sq. Dev.	5.140952	4298.000	36.19333	11.04000	6524.833	70718.42	6.32E+17
Observations	150	150	150	150	150	150	150

	ED	CEOT	CEOX	CEOG	CEOA	IOW	CS
Mean	0.175882	6.600000	0.593333	0.080000	51.76667	53.91572	15.84480
Median	0.117647	5.000000	1.000000	0.000000	52.00000	59.26688	15.52909
Maximum	0.705882	23.00000	1.000000	1.000000	65.00000	87.95000	19.50971
Minimum	0.000000	1.000000	0.000000	0.000000	38.00000	7.330000	11.69454
Std. Dev.	0.185750	5.370813	0.492857	0.272202	6.617464	21.78578	1.718932
Skewness	1.248515	1.093821	-0.380013	3.096281	-0.016074	-0.451616	0.092780
Kurtosis	4.161496	3.693812	1.144410	10.58696	2.044315	2.402215	3.025785
Jarque-Bera	47.40145	32.91972	25.13034	599.4358	5.714800	7.332339	0.219359
Probability	0.000000	0.000000	0.000003	0.000000	0.057418	0.025574	0.896121

Sum	26.38235	990.0000	89.00000	12.00000	7765.000	8087.358	2376.720
Sum Sq. Dev.	5.140952	4298.000	36.19333	11.04000	6524.833	70718.42	440.2543
Observations	150	150	150	150	150	150	150



Series: Standardized Residuals
Sample 2014 2019
Observations 180

Mean	-1.73e-15
Median	-0.042316
Maximum	1.281423
Minimum	-1.709832
Std. Dev.	0.475607
Skewness	-0.043967
Kurtosis	3.334299
Jarque-Bera	2.091048
Probability	0.351508

Covariance Analysis: Ordinary
Date: 07/14/21 Time: 21:30
Sample: 2014 2019
Included observations: 180

Correlation
t-Statistic
Probability

	ED	CEOT	CEOX	CEOG	CEOA	IOW CS
ED	1.000000					

CEOT	-0.249941	1.000000				
	-3.140340	-----				
	0.0020	-----				
CEOX	-0.050067	0.029411	1.000000			
	-0.609850	0.357956	-----			
	0.5429	0.7209	-----			

CEOG	0.020457	-0.046826	-0.356190	1.000000			
	0.248925	-0.570282	-4.637381	-----			
	0.8038	0.5694	0.0000	-----			
CEOA	0.355591	0.073268	-0.208317	0.073773	1.000000		
	4.628463	0.893745	-2.591130	0.899936	-----		
	0.0000	0.3729	0.0105	0.3696	-----		
IOW	0.017938	-0.265771	0.192668	0.021584	0.063499	1.000000	
	0.218266	-3.353862	2.388665	0.262642	0.774062	-----	
	0.8275	0.0010	0.0182	0.7932	0.4401	-----	
CS	0.209600	-0.107060	0.171000	-0.166398	0.120456	0.398747	1.000000
	2.607824	-1.309969	2.111407	-2.052945	1.476163	5.289687	---
	0.0100	0.1922	0.0364	0.0418	0.1420	0.0000	---

Covariance Analysis: Ordinary
Date: 07/14/21 Time: 21:31
Sample: 2014 2019
Included observations: 180

Correlation Probability	ED	CEOT	CEOX	CEOG	CEOA	IOW	CS
ED	1.000000						

CEOT	-0.249941	1.000000					
	0.0020	-----					
CEOX	-0.050067	0.029411	1.000000				
	0.5429	0.7209	-----				
CEOG	0.020457	-0.046826	-0.356190	1.000000			
	0.8038	0.5694	0.0000	-----			
CEOA	0.355591	0.073268	-0.208317	0.073773	1.000000		
	0.0000	0.3729	0.0105	0.3696	-----		
IOW	0.017938	-0.265771	0.192668	0.021584	0.063499	1.000000	
	0.8275	0.0010	0.0182	0.7932	0.4401	-----	
CS	0.209600	-0.107060	0.171000	-0.166398	0.120456	0.398747	1.000000
	0.0100	0.1922	0.0364	0.0418	0.1420	0.0000	-----

Variance Inflation Factors
Date: 07/14/21 Time: 21:32
Sample: 1 180
Included observations: 180

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	0.025728	142.1747	NA
CEOT	6.95E-06	2.771602	1.099736
CEOX	0.000957	3.138635	1.276378
CEOG	0.002924	1.292617	1.189208
CEOA	4.54E-06	68.35844	1.091885
IOW	5.11E-07	9.543457	1.331806
CS	7.76E-05	108.9132	1.258552

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	86.11318	Prob. F(2,141)	0.0000
Obs*R-squared	82.47695	Prob. Chi-Square(2)	0.0000

Test Equation:
Dependent Variable: RESID
Method: Least Squares
Date: 07/14/21 Time: 21:33
Sample: 1 180
Included observations: 180
Presample missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.101377	0.109567	0.925243	0.3564
CEOT	-0.000293	0.001790	-0.163643	0.8702
CEOX	-0.026675	0.021278	-1.253660	0.2120
CEOG	-0.037875	0.036678	-1.032631	0.3035
CEOA	-0.001074	0.001451	-0.740419	0.4603
IOW	0.000346	0.000486	0.713248	0.4769
CS	-0.002800	0.005964	-0.469561	0.6394
RESID(-1)	0.781758	0.083927	9.314711	0.0000

RESID(-2)	-0.044522	0.085761	-0.519136	0.6045

R-squared	0.549846	Mean dependent var	4.44E-16
Adjusted R-squared	0.524306	S.D. dependent var	0.161402
S.E. of regression	0.111320	Akaike info criterion	-1.494694
Sum squared resid	1.747287	Schwarz criterion	-1.314056
Log likelihood	121.1021	Hannan-Quinn criter.	-1.421307
F-statistic	21.52829	Durbin-Watson stat	1.958187
Prob(F-statistic)	0.000000		

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	0.503960	Prob. F(6,143)	0.8046
Obs*R-squared	3.106096	Prob. Chi-Square(6)	0.7954
Scaled explained SS	12.92619	Prob. Chi-Square(6)	0.0442

Test Equation:
Dependent Variable: RESID^2
Method: Least Squares
Date: 07/15/21 Time: 02:50
Sample: 1 180
Included observations: 180

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.010388	0.031466	-0.330137	0.7418
CEOT	-0.000412	0.000517	-0.797642	0.4264
CEOX	0.004322	0.006069	0.712092	0.4776
CEOG	0.005663	0.010608	0.533898	0.5942
CEOA	0.000300	0.000418	0.718632	0.4735
IOW	-0.000215	0.000140	-1.531936	0.1277
CS	0.001042	0.001728	0.603104	0.5474

R-squared	0.020707	Mean dependent var	0.010390
Adjusted R-squared	-0.020382	S.D. dependent var	0.031996
S.E. of regression	0.032320	Akaike info criterion	-3.980697
Sum squared resid	0.149378	Schwarz criterion	-3.840201

		Hannan-Quinn	
Log likelihood	305.5523	criter.	-3.923618
F-statistic	0.503960	Durbin-Watson stat	2.094968
Prob(F-statistic)	0.804591		

Ramsey RESET Test
Equation: UNTITLED
Specification: ED C CEOT CEOX CEOG CEOA IOW CS
Omitted Variables: Squares of fitted values

	Value	df	Probability
t-statistic	2.507667	142	0.1334
F-statistic	6.288394	(1, 142)	0.1334
Likelihood ratio	6.499789	1	0.1081

F-test summary:

	Sum of Sq.	df	Mean Squares
Test SSR	0.164602	1	0.164602
Restricted SSR	3.881534	143	0.027144
Unrestricted SSR	3.716931	142	0.026176

LR test summary:

	Value
Restricted LogL	61.23959
Unrestricted LogL	64.48949

Unrestricted Test Equation:
Dependent Variable: ED
Method: Least Squares
Date: 07/15/21 Time: 03:00
Sample: 1 180
Included observations: 180

Variable	Coefficie	Std. Error	t-Statistic	Prob.

	nt			
C	0.261982	0.367215	0.713431	0.4767
CEOT	0.002215	0.005678	0.390066	0.6971
CEOX	-0.022839	0.034475	-0.662499	0.5087
CEOG	0.002625	0.053684	0.048894	0.9611
CEOA	-0.002538	0.005587	-0.454202	0.6504
IOW	0.000173	0.000968	0.178421	0.8586
CS	-0.007173	0.014363	-0.499401	0.6183
FITTED^2	3.771364	1.503933	2.507667	0.0133

R-squared	0.276995	Mean dependent var	0.175882
Adjusted R-squared	0.241354	S.D. dependent var	0.185750
S.E. of regression	0.161789	Akaike info criterion	-0.753193
Sum squared resid	3.716931	Schwarz criterion	-0.592626
Log likelihood	64.48949	Hannan-Quinn criter.	-0.687960
F-statistic	7.771805	Durbin-Watson stat	0.574605
Prob(F-statistic)	0.000000		

Redundant Variables Test
Null hypothesis: CEOT CEOX CEOG CEOA CS IOW are jointly insignificant
Equation: UNTITLED
Specification: ED C CEOT CEOX CEOG CEOA CS IOW
Redundant Variables: CEOT CEOX CEOG CEOA CS IOW

	Value	df	Probability
F-statistic	7.733058	(6, 143)	0.0000
Likelihood ratio	42.15118	6	0.0000

F-test summary:

	Sum of Sq.	df	Mean Squares
Test SSR	1.25941	6	0.209903

	8		
	5.14095		
Restricted SSR	2	149	0.034503
	3.88153		
Unrestricted SSR	4	143	0.027144

LR test summary:

	Value
	40.1640
Restricted LogL	0
	61.2395
Unrestricted LogL	9

Restricted Test Equation:
Dependent Variable: ED
Method: Panel Least Squares
Date: 07/15/21 Time: 22:21
Sample: 2014 2019
Periods included: 6
Cross-sections included: 30
Total panel (balanced) observations: 180

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.175882	0.015166	11.59683	0.0000

R-squared	0.000000	Mean dependent var	0.175882
Adjusted R-squared	0.000000	S.D. dependent var	0.185750
S.E. of regression	0.185750	Akaike info criterion	-0.522187
Sum squared resid	5.140952	Schwarz criterion	-0.502116
Log likelihood	40.16400	Hannan-Quinn criter.	-0.514033
Durbin-Watson stat	0.010430		