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FIRM CHARACTERISTICS AND CORPORATE ENVIRONMENTAL DISCLOSURE BY LESS- SENSITIVE LISTED COMPANIES IN NIGERIA

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ABSTRACT

The main purpose of this study was to investigate the relationship between firm characteristics and corporate environmental disclosure by Nigerian less- sensitive listed companies. Data were collected from the annual reports of listed companies (Financial service and other service sectors) on the Nigerian Stock Exchange for the period of 2009 to 2018. Ex post factor research design was used. Panel regression was used in analyzing the data. The findings of the study revealed that environmental disclosure by less-sensitive listed companies in Nigeria is low but show a steady increase over the study period. The finding of the study also revealed that age of the firm and leverage are positively and significantly related to the level of corporate environmental disclosure by the less- sensitive listed companies in Nigeria. In addition, firm size and size of audit firm are positive but insignificantly related to environmental disclosure. The study recommended that, due to the low level of environmental disclosure by less-sensitive listed companies in Nigeria, which is occasioned by lack of standards or legislation to compel companies to disclose environmental information; government should make a law compelling environmental disclosure by listed companies. Secondly, firms that trade on more debts should try to disclose more environmental information in order to meet its creditors' expectations on environmental issues. Lastly, companies that have long period of operation should give interested parties, sufficient environmental information in their annual reports and other communication channels, such as environmental, social responsibility or sustainability reports, web-sites, newspapers and magazines.

Key Words: Environmental disclosure; Environmental accounting; Less-sensitive companies; Firm characteristics; Sensitive companies.

Introduction

The adverse environmental impact of economic development, such as natural disasters, pollution, climate change and global warming, have continued to attract the attention of governmental bodies, non-governmental organizations, investors, professional bodies, environmentalists, academics, researchers, and individuals worldwide(Oti & Mbu-Ogar, 2018). These environmental problems negatively affect the development of countries of the world. Owing to these negative impacts, companies have been pressurized to be sensitive to environmental issues and also display transparency in order to mitigate the adverse impact of their operations on the environment (Pahuja, 2009; Da Silva, Sonia & Aibar-Guzmán, 2010; Suttipun & Stanton, 2012).

In response to these pressures, many companies world over have begun to seek ways of mitigating the

adverse impact of their operations on the environment and also started voluntarily disclosing environmental information to publicize their efforts in tackling these negative environmental impacts and as well as contributing to clean and safe environment in their host communities. This has led to the emergence of environmental accounting and reporting. It has also facilitated environmental information disclosure by companies as an important dimension of accounting information system (Da Silva, Sonia & Aibar-Guzmán, 2010; Suttipun & Stanton, 2012).

Dixon, Mousa, Gehan and Woodheah (2005) have argued that environmental disclosure by companies has been informed by the increase in environmental regulations and pressure for clean air, clean water, and clean land by stakeholders, the increase of environmental risks caused by pollution, and the companies' desires to improve their images or gain financial benefits. These developments have also led to a substantial increase in the academic research in the area of environmental disclosure (Yildiz, 2014).

Barnali and Puja (2015) explained that environmental reporting and disclosure practices are a means of communicating to the stakeholders about the impact of the organization's actions on the environment. Companies communicate information on their environmental performance to stakeholders through different media, such as annual reports, environmental report, corporate website, in-house magazine or advertising (Branco & Rodrigues, 2007). The annual report has become the most common method of measuring a company's environmental performance in developing countries (Uwuigbe, 2011).

Many companies have been voluntarily disclosing information on their environmental performance to stakeholders because of the global focus on sustainable development and increasing public concern for companies to mitigate the adverse environmental impact of their operations. Brandy (2006) has observed that environmental reporting has grown as a voluntary issue mainly among companies, but has remained a predominantly partial phenomenon and is dominated by large companies. However, he further noted that in countries like Australia, France, South Korea, Sweden, Demark, United Kingdom, Germany and Netherlands, environmental disclosure is increasingly becoming a mandatory issue. In Nigeria, the disclosure of environmental information is still voluntary.

Public companies and organizations have a significant power in building the social ecological system. They are the main focus in environmental studies (Patten, 2002; Burgwal & Vieira, 2014). Their operations have a big impact on the environment. Thus, they should shoulder the responsibility of making the society aware of the importance of environmental protection and also improve on their social and environmental information disclosure to stakeholders.

Prior studies on corporate environmental disclosure have developed Corporate Environmental Disclosure Index (CEDI) checklist with environmental themes from the Global Reporting Initiative (GRI) framework, to measure the level of environmental disclosure by companies (Abdul, 2010; Despina, Efthymis & Antonios, 2011). Commonly used to measure the level of environmental disclosure by companies are the Scoring method and the Counting method. The Scoring method involves identifying specific environmental items in companies' reports, designing a standard for scoring, and eventually calculating a score per company. Although the indexes (for example, according to Global Reporting Initiative (GRI) guidelines, local codes and standards, or specific environmental aspects etc.) and scoring criteria (such as monetary or non-monetary, quantitative or qualitative, hard or soft etc.) vary from one research to another, many researchers have chosen the disclosure-scoring measure to analyze companies' reports (Clarkson et al, 2008).

On the other hand, the Counting method involves, for instance, counting words, sentences and number of pages that are related to environmental disclosure (Gray et al, 1995; Deegan& Gordon, 1996; Hackston & Milne, 1996; Suttipun & Stanton, 2012). However, based on the review of previous studies analyzing the extent of environmental disclosures, seven environmental themes, A1–A7, consist of 'Hard' and 'Soft' with a scoring model containing 95 line items that reflect the spirit of the Global Reporting Initiative (GRI) guidelines,viz; Governance structure and management systems, Credibility, Environmental performance indicator, Environmental spending, Vision and strategy claims, Environmental profile and Environmental initiatives have been revealed. This procedure was used by other researchers successfully (Clarkson et al, 2008; Khadash, 2008).

There are firm characteristics considered as company attributes that give a company greater public visibility and may have a relationship with the extent of the company's environmental disclosure, which include firm size, leverage, size of audit firm, and age of the firm. Companies with greater public visibility in the sensitive and less- sensitive firms are usually under pressure to be environmentally responsible and thus disclose information concerning their environmental performance. Apparently, the operations of such companies have tremendous impact on the natural environment. Studies focusing on corporate environmental disclosure (CED) have been conducted in both developed and developing countries. In developed countries, the majority of CED studies that were conducted with different aims and methods of corporate environmental disclosure practice, such as Gray et al (1995), Hackston and Milne (1996), Patten (2002), Kolk (2003), Brammer and Pavelin (2008) and Barbu et al, (2012).

It can be argued that developed countries have different corporate social and environmental disclosure practices in comparison to those in developing countries (Imam, 2000). This could be due to the fact that, developed countries have paid more attention to social and environmental issues than developing countries. The findings of these studies suggested that many companies responded to the expectation of society, stakeholder's pressure, and increased regulation or reporting requirement on environmental information in many developed countries.

In developing countries, corporate environmental disclosure phenomenon is a topic of interest in research, and it is less established in developing countries than in developed countries, which makes empirical research on the subject highly desirable. Recent studies have shown that there is an increasing voluntary environmental disclosure by companies in developing countries to meet stakeholder's pressure and society expectations,(Yunusa, Mohamed & Adam, 2016; Welbeck, Owusu, Bekoe & Kusi, 2017; Roy, Ghosh & Kumar,2017; Mohammed, 2018). Most of the studies were conducted on the determinants of environmental disclosure or firm characteristics and environmental disclosure in the environmental sensitive companies, such as oil and gas, manufacturing, breweries and industrial goods (Ahmad, 2017; Amaechi & Nwankwe, 2017) while there is little empirical research on firm characteristics or determinants of environmental disclosure in the less–environmental sensitive listed companies in Nigeria viz; financial and other service sectors (Welbeck, Owusu, Bekoe & Kusi, 2017).

It is felt that the less-sensitive listed companies in Nigeria (financial service and other service sectors) have negatively impacted the environment and also that there is need for those companies to disclose environmental accounting information just like those companies operating in environmental sensitive (Non-financial) sectors that cause relatively high level of environmental damage. It is against this

backdrop, therefore, that this study investigated firm characteristics and environmental disclosure by less-sensitive listed companies in Nigeria.

Statement of the Problem

Environmental problems and their adverse effects on the society and the economy have led to the demand for environmental disclosure by companies. Industrial production activities have continued to pose danger to the physical environment as they have continuously created environmental hazards, which are harmful to host communities, employees, customers, individuals and society at large. The increasing pressures for companies to disclose environmental information on environmental activities have been necessitated by the need to mitigate the adverse environmental impact of their operations.

In Nigeria, environmental disclosure by companies has been faced with challenges including lack of accounting standard for environmental reporting and lack of legislation for mandatory disclosure of environmental information. Environmental information disclosure in Nigeria has remained a voluntary and discretional activity.

Goyal (2013) noted that there is a lot of variation in environmental disclosure practices all over the world due to inexistence of International Accounting Standard exclusively dealing with environmental issues in annual reports. The agitations for clean and safe environment have given rise to increasing clamors for environmental accounting disclosure legislations in not just developed countries, but also in developing countries, such as Nigeria.

Existence of environmental disclosure legislations would propel the listed companies operating in both sensitive (Non-Financial) and the less-sensitive (Financial and other Service) sectors to disclose more information on their operations. Owing to the importance of environmental safety or protection, the companies operating especially in less-sensitive (financial service and other service) are expected to respect the environment and also, based on the global best practices, disclose sufficient environmental information even in the situation of inexistence of accounting standard and compelling legislations. However, as the challenge of inexistence of compelling environmental disclosure legislations and environmental disclosure standard lingers on, uniformity in environmental disclosure among the less-sensitive companies based on their sub-sectors and the GRI introduced in 2002 by the United Nations Environmental Programme (UNEP) is not possible.

Therefore, the main problem is the extent to which firm attributes or characteristics affect environmental disclosure by companies operating in the less-sensitive (financial and other service) sectors in Nigeria is not known. However, there is empirical evidence on firm characteristics or determinants of corporate environmental disclosure by previous studies more especially on companies operating in sensitive sectors such as Oil and Gas, Manufacturing, Breweries and Industrial Goods (Yunusa et al, 2016; Ahmad, 2017; Amaechi & Nwankwe, 2017;). However, there is little or no empirical evidence more especially on firm characteristics or determinants of corporate environmental disclosure on companies operating in less-sensitive sectors. The implication is that if this problem is not properly attended to, there will be little or no information as to the extent to which company's characteristics may influence the level of environmental disclosure by companies operating in less-sensitive sectors in Nigeria.

The main objective of this study is to investigate the relationship between firm characteristics and corporate environmental disclosure by less-sensitive listed companies in Nigeria. Specifically, the study seeks to;

1. Study the relationship between firm size and corporate environmental disclosure by less-sensitive listed companies in Nigeria.
2. Investigate the relationship between leverage and corporate environmental disclosure by less-sensitive listed companies in Nigeria.
3. Examine the relationship between size of the audit firm and corporate environmental disclosure by less-sensitive listed companies in Nigeria.
4. Examine the relationship between firm age and corporate environmental disclosure by less-sensitive listed companies in Nigeria.

Research Questions

The research questions instituted for this study are as follows;

1. To what extent is the relationship between firm size and corporate environmental disclosure by less-sensitive listed companies in Nigeria?
2. To what extent is the relationship between leverage and corporate environmental disclosure by less-sensitive listed companies in Nigeria?
3. To what extent is the relationship between size of the audit firm and corporate environmental disclosure by less-sensitive listed companies in Nigeria?
4. To what extent is the relationship between firm age and corporate environmental disclosure by less-sensitive listed companies in Nigeria?

Reseach Hypotheses

Ho_1: There is no significant relationship between firm size and corporate environmental disclosure by less-sensitive listed companies in Nigeria.

Ho_2: There is no significant relationship between leverage and corporate environmental disclosure by less-sensitive listed companies in Nigeria.

Ho_3: There is no significant relationship between size of the Audit firm and corporate environmental disclosure by less-sensitive listed companies in Nigeria.

Ho_4: There is no significant relationship between firm age and corporate environmental disclosure by less-sensitive listed companies in Nigeria.

Conceptual Framework

The concepts relating to the topic under investigation are reviewed and they include the following; environmental accounting, corporate environmental accounting disclosure, firm characteristics, and Nigerian less-sensitive listed companies.

Environmental accounting

The Environmental Protection Agency, United Kingdom (EPA) in 2006 defined environmental accounting as the collection, analysis and assessment of environmental and financial performance data obtained from business management systems such as environmental management and financial accounting system. It involves taking corrective management action to reduce environmental impacts and

costs plus where appropriate, the external reporting of the environmental information in published annual report, audited accounts or verified Corporate Environmental Report (Steel & Powel, 2002). The perspectives of these agencies show that environmental accounting involves the identification, estimation, analysis and reporting of environmental information to management and other relevant publics or stakeholders. This can be conducted at country level or at corporate level.

Mahdi, Mahdi and Sima (2011) have stated that environmental accounting deals with all activities that aid the accounting system in recognizing, recording and reporting the effects of damage done to the environment for enhancing corporate environmental performance. They further noted that environmental accounting is a system that attempts to make the best possible quantitative assessment (in terms of either monetary or physical units) of the costs and benefits to an enterprise due to the environmental preservation activities that it undertakes. They also observed that some researchers refer to the subject in a variety of ways namely; environmental management accounting, corporate social accounts, social accounting, social and environmental accounting, social and environmental report, social and environmental accounting. Therefore, environmental accounting is a system of recording and reportingenvironmental costs and environmental related financial information either in the annual report, corporate websites or stand -alone environmental reportsin order to communicate such information to stakeholders.

Corporate Environmental Accounting Disclosure

Gatimbu and Wabwire (2016) stated that corporate environmental disclosure is about reporting the impact of organizations' activities on the natural environment. The researchers give examples of such activities are estate management, pollution, wetland, wild life conservation, carbon management, emission and recycling. Onmonya (2018) is of the view that corporate environmental disclosure entails providing financial and non-financial information relating to the environment in such documents as annual reports, sustainability/environmental report, corporate website, in-house publications, and newspapers.

Goyal (2013) described environmental reporting as the disclosure by an entity of environmentally related data, verified (audited) or not, regarding environmental risks, environmental impacts, policies, strategies, targets, costs, liabilities, or environmental performance, to those who have an interest in such information, as an aid to enriching their relationship with the reporting entity.

It is also viewed by Pramanik, Shil and Das (2008) as an umbrella term used for the various means by which company disclosure information on their environmental expenditures, activities and performance to the public. It relates to the collection, measurement and publication of 'green' information to the financial and non-financial communities (Ramdhorry, Padachi & Girotfle, 2010). It is described by Brandy (2009) as the communication of an accurate, although much simplified, overview of a company's environmental interactions to its stakeholders, most likely in annual report or company's web site or by combination of these methods.

Ofoegbu (2016) noted that corporate environmental accounting information disclosure entails the financial and non-financial disclosure of social and environmental impact, which the activities of manufacturing companies have on the environment. Berthelot, Cormier and Magnan (2003) observed that corporate environmental disclosure comprises set of information about firm's environmental management policies which can take the form of qualitative statements, quantitative facts or assertions, financial statements, figures/footnotes.

Globally, corporate environmental disclosures have increased in both developed and developing countries over the past two decades. For example, in the US, UK, Australia, New Zealand and Japan a number of studies have revealed that environmental disclosures have increased over time (Walden, 1993; Adams, Hill & Roberts, 1998; Frost & Wilmshurst, 2000; Tilling, 2004). Similarly, in developing countries including Nigeria, Bangladesh, Lybia, Malysia and Kenya there is an increase in corporate environmental disclosure even though at slow pace(Gatimbu & Wabwire 2016; Uwalomwa & Jafaru 2012).

In Japan, the Environmental Accounting Guideline issued by the Ministry of Environment requires companies to include separate statement to reflect environmental cost and environmental performance (Ministry of Environment, Japan, 2005). In many developing countries, disclosure types are mainly narratives with little monetary or quantitative information. These appear mainly in the Chairman's Report, Directors' Report or a separate Social Responsibility or Environmental Report in the annual reports/financial statements (Ullah et al., 2014). Since Nigeria is a developing country with no mandatory disclosure requirement, it is likely that less – sensitive listed companies in Nigeria will follow a similar pattern.

Environmental Disclosure Themes (Index)

Onmonya (2018) explained that environmental disclosure themes are groups of environmental items that a company is expected to disclose. Corporate environmental disclosure index is utilized to measure the degree of environmental disclosure compliance by companies and that it is made up of different environmental themes or categories. Corporate Environmental Disclosure Index (CEDI) is used to assess the level of environmental disclosure by companies. It usually comprises of different environmental themes or categories. Environmental themes are used to categories specific environmental items or activities. There is no standard classification for now; various researchers use environmental themes from other prior studies. These themes were adapted from international environmental disclosure guidelines such as Global Reporting Initiative, national environmental protection and regulatory agencies and professional accounting bodies.

Buniamin (2010) used nine environmental themes to develop CEDI. These are general environmental consideration, environmental policy, environmental audit, environmental product, environmental financial related data, sustainability, environmental aesthetics, environmental initiative and other environmental issues. Buniamin adopted environmental themes from Gray, Kouhy and Lavers (1995b) and Hackson and Milne (1996). Other studies used broad environmental themes like environmental expenditures, pollution abatement, environmental preservation, energy utilization and other environmental related information (Hossain & Reaz, 2007).

Clarkson et al. (2008) developed seven corporate environmental disclosure themes based on GRI requirement that are divided into 'hard' and 'soft' disclosure items. The seven environmental themes are group into A1 to A4 as 'hard' namely; governance structure and management systems, credibility, environmental performance indicators (EPI), environmental spending, while A5 to A7 concerning, vision and strategy claims, environmental profile, and environmental initiatives are refer to as soft disclosure themes. The Clarkson et al. (2008) content analysis index is suitable for environmental reports, but also for corporate websites. The scorecard was developed in cooperation with an expert in the field of

environmental reporting and it is based on sustainability reporting guidelines, issued in 2002, by the Global Reporting Initiative (GRI).

However, this study adopted environmental themes used by Clarkson et al., (2008) since these were taken from the GRI guideline and developed by environmental disclosure experts. It has seven environmental themes number A1 to A7 divided into 'hard' and 'soft' with various environmental disclosure items each. However, A1 to A4 as discussed below are considered 'hard' disclosure items because environmental claims can easily be verified and cannot easily be mimicked by poor environmental performers. Similarly, A5 to A7 are 'soft' disclosure items because they are unverifiable claims to be committed to the environment and they can be easily mimicked.

Firm Characteristics

Firm characteristics refer to the various features that enable a firm to be classified as an independent entity or a unit that administers production of goods and services for public consumption. They are also known as corporate attributes that can influence the level of corporate environmental and social disclosure of accounting information. Many studies in social and environmental accounting have investigated the relationship between firm characteristics and corporate environmental disclosure (Asrori, Mohammed & atta, 2019; Onyali & Okafor, 2018; Ahmad, 2017; Amaechi & Nwankwe, 2017; Yildiz, 2014; Clarkson, et al., 2007; Cormier & Gordon, 2001;; Pattern, 1991; Suttipun & Stanton, 2012).

Some characteristics are found to have a positive effect on the level of disclosure while some have a negative effect. Firm size, firm age, profitability, industrial type and leverage are the most considered characteristics when investigating determinates of the level of corporate social environmental disclosure (Asrori, Mohammed & Atta, 2019; Onyali & Okafor, 2018; Nawaiseh, 2015; Burgwal & Vieira 2014). These firm characteristics are used as independent variable and corporate environmental disclosure as dependent variable. Some of the firm characteristics considered by this study are firm size, leverage, size of audit firm and age of the firm.

Legitimacy theory

Dowling and Pfeffer (1975) proposed legitimacy theory from the concept of organizational legitimacy, and they viewed organizational legitimacy as a condition or status which exists when an entity's value system is congruent with the value system of the larger social system of which the entity is a part. Suchman (1995) defined legitimacy as 'a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions'. The legitimacy theory is based on the social contract concept which exists between organizations and individual society members. The society offers organizations legal rights and authority to access natural and human resources that they need for their operations (Yaya, Wibowo & Jalaludin, 2018). In other words, the organizations, in exchange for the access of resources, must continuously seek to comply with the community expectations to ensure their operations 'remain legitimate' (Mathews, 1993). Legitimacy theory posits that organizations continually seek to ensure that they operate within the bounds and norms of their respective societies.

The corporate environmental disclosure practice is a response to economic, social and political pressures surrounding companies in their effort to legitimize corporate existence and behaviors (Guthrie & Parker 1989). Therefore this theory focuses predominantly on the concept of company and society contract;

companies are operating in society through a social contract to organize the activities of the companies and relate them to the society's values, norms and beliefs (Reverte, 2009). The social contract organizes the relation between the company and society, what the society expect from the company as well as what companies are expecting from the society (Guthrie & Parker 1989; Patten, 2002 and Cho& Roberts, 2010). In this case, companies have to show society that they are operating in accordance with the terms of the social contracts by disclosing information about their activities and actions, such as social and environmental information, as often as possible in order to prove their legitimacy (Abbott& Monsen, 1979; Guthrie & Parker, 1990; Gray et al., 1995; Brown & Deegan, 1998; Deegan et al., 2000; Gray et al., 2001; Deegan & Unerman, 2006 andMenassa, 2010).

However, if the company's activities and actions do not match the expectations of the society, a legitimacy gap or illegitimacy occurs (Ali & Hafez, 2014). Since society expectations about company change and also company's activities related to social issues or events change, legitimacy gap (or illegitimacy) changes as well because both are related.

Companies operating in both environmental sensitive and less sensitive sectors respond to society demand or pressure by using several legitimacy strategies which include environmental accounting disclosure and also to report on environmental performance in order to manage public impression or corporate image and minimize their exposure to social and political risks. These risks could be inform of protests by the host communities, civil society groups, agitation by various union organization which could affect company operations, sanction or penalty imposed by regulatory agencies and boycott of company's products by customer groups. These risks, if not properly handled, will cost the company heavily and also affect the stake of investors.

However, this study is anchored on legitimacy theory, since this study is investigating firm characteristics and corporate environmental disclosure by less-sensitive listed companies in Nigeria. Legitimacy theory is the main theory that it is concerned with society in general and the relationships between companies and their relevant stakeholders.

Literature Review

Kustono and Nanggala (2019) investigated factors that influence Corporate Social Responsibility (CSR) reporting information at Indonesian sharia banks. Corporate characteristics used by the study were size of sharia banks, board of commissioner's size, company age, and profitability of sharia banks. Secondary data and time series were used by the study through the annual report of all sharia banks in Indonesia obtained from the website. Sample size was 13 sharia banks that published annual reports and CSR reports from 2015 to 2017 through purposive sampling. Multiple regressions were used to analyze the Panel data. The result showed that only firm size has influence on CSR. The other independent variables such as board size, age of Islamic banks and Islamic banks profitability do not influence the CSR reporting. Firm size was the predictor of how much content of CSR will be disclosed by management. The study was limited in that the researcher sampled only 13 sharia banks and also ignored other service companies, such as insurance companies and hotels. A study of all the categories of service companies could result in acceptable validiy of findings. Also, the study considered the published annual reports of the sampled companies for only a few years (2015-2017).

Welbeck, Owusu, Bekoe and Kusi (2017) investigated determinants of environmental disclosures of

listed firms in Ghana. The purpose of the study was to examine the type of environmental-related information firms disclose mostly in Ghana, the trend of such disclosures and investigate the determinants of environmental disclosures by firms in Ghana. Using the Global Reporting Initiative (GRI) index as a benchmark, a content analysis of the corporate annual report of 17 firms listed on the Ghana Stock Exchange (GSE) was conducted over a 10-year period (2003 to 2012) to determine the total environmental disclosure scores of the sampled firms. The determinants of environmental disclosure practices of the firms were ascertained by means of a regression analysis. The results of the study indicated that listed firms in Ghana disclose some amount of environmentally-related information espoused by GRI though the level of disclosure is low. Also, the level of disclosure by environmentally-sensitive firms is higher than the less sensitive firms similar to existing studies. Moreover, the study finds firm size, auditor type, age of the firm and industry type to be significant predictors of firms' environmental disclosure practices. The study was only restricted to Ghana.

Yousra (2017) examined the impact of several corporate characteristics on environmental information disclosure of the listed firms in a developing country. It selected the 50 most active firms in the Egyptian stock exchange and the analysis is done using the financial statements from the disclosure book for the period 2007-2011, prior the revolution, along with the firms' annual reports. The final count for the firms is 45, after excluding banks and insurance companies, for having different disclosure requirements and different corporate governance code. The tests for this research are done using the multiple regression model applied using the SPSS. The result found out that there is an insignificant relationship between two factors of firms' characteristics (Firm Size and Firm Financial Leverage) and EID, while Firm's age showed a negative significant relationship with EID and finally Firm's Profitability showed a positive significant relationship with EID. However, the study used small sample size of 45 firms and for a five year study period to generalized environmental disclosure information in Egypt. The study was also limited only in Egypt.

Ibrahim, Nicholas and Alhassan (2019) investigated the factors influencing environmental disclosure (ED) of companies in Ghana and the nature of environmental disclosure generally. The study also examined the relationship between ED and other variables; firm-specific and corporate governance variables. These variables include firm size, profitability, leverage, liquidity stock exchange, ownership, board independence, gender diversity, Director's educational background, location and regulation. Data from the study was derived from the annual reports of companies in Ghana from 2010 to 2014. A sample size of 35 companies was used—comprising 23 listed and 12 non-listed companies. The Ordinary Least Square (OLS) regression model developed was used to ascertain the relationship between the variables. The study found mixed results for firm specific variables. The results show a negative insignificant relationship between firm size and environmental disclosures. Profitability was found to be significant. The study also revealed that listing on the stock exchange and environmental disclosures was not only found to be insignificant, but also negative. Furthermore, the study provided evidence of a significant relationship between leverage and liquidity. The independence of a board was found to negatively affect environmental disclosures while gender diversity and environmental disclosure indicated an insignificant relationship. Regulation and location were found to be significant and insignificant respectively, in relation to the environmental disclosure. This study was limited in that it focused on the annual reports of

the sampled companies from 2010-2014, however a longer period should have been covered to allow for sufficient validity of findings.

Masud, Bae and Kim (2017) examined the analysis of environmental accounting and reporting practices of listed banking companies in Bangladesh. The study aimed to investigate the extent and nature of environmental accounting and reporting of listed banks in Bangladesh in 12 major categories. Information was collected from the annual reports of 20 banks listed on the Dhaka Stock Exchange for the period 2010 to 2014. The study method of analysis was descriptive in nature with content analysis for social and environmental reporting disclosure. The results indicated that the banks significantly disclosed environmental information for the 12 categories. The study found that banks disclosed the most environmental information for green banking and renewable energy categories, whereas they disclosed the least for environmental recognition and waste management categories. Furthermore, the study yearly comparison revealed that disclosure of environmental information increased sharply from 16% in 2010 to 83% in 2014. The study only considered banks and ignored companies in other sectors; the researcher should have sampled companies in other sectors as well.

Ganewatta and Priyadarshani (2016) investigated the effect of firm characteristics on corporate social responsibility disclosure In Sri Lankan banking sector. The study aim was to understand the potential influence of firm characteristics on the level of corporate social responsibility (CSR) disclosures in annual reports of listed banking companies in Colombo Stock Exchange. Firm size, profitability, age and revenue were taken as the firm characteristics which are the independent variables in the study. Data was gathered for four years from 2011 to 2014 from 11 commercial banks listed in Colombo Stock Exchange (CSE). Multiple regression analysis was used for data analysis using E views package. The study found out that firms characteristics such as profitability, firm size, sales revenue and age has no any significant impact on level of corporate social responsibility disclosures in Sri Lankan banking companies. The study gathered the required data for only a short duration of 2011-2014, which is not sufficient enough to generalize the validity of findings. It was also limited to banking companies listed on Colombo Stock Exhange. The study should have considered companies in other sectors or within the same sector of financial services.

Achoki, Kule and Shukla (2016) examined effect of voluntary disclosure on the financial performance of commercial banks in Rwanda. The main objective of the study was to investigate the effect of voluntary disclosure on the financial performance of commercial banks in Rwanda. The study took a sample of 14 commercial banks in Rwanda. Census approach was used to determine the sample size. Data was collected through developing a disclosure index consisting of 47 disclosure items. Secondary data was collected using documentary information from Banks annual accounts for the period 2011 to 2015. Data was analyzed using a multiple linear regression model. Result of the study revealed that a strong relationship exist between the voluntary disclosure, firm size and financial performance. The study found a positive relationship between financial, forward looking and board and social disclosure and return on equity. The study also found a negative relationship between general & strategic disclosure and return on equity. However, the study was conducted on the banking sector alone and this may not provide adequate comparison on disclosure. The study took only a sample of 14 commercial banks in Rwanda and elicited secondary data using documentary information from banks annual accounts for a few years (2011 to 2015); a much greater number of companies should have been sampled.

Agyei-Mensah (2011) conducted a study on the influence of firm-specific characteristics which include firm size, profitability, debt equity ratio, liquidity and audit firm size on voluntary disclosure level of rural banks in the Ashanti region of Ghana. The sample size of the population was 21 rural banks in the Ashanti region of Ghana. Data were collected from annual reports of the companies through content analysis. Data collected were analyzed using multiple regression analysis. The result found out that profitability represented by Return on Capital Employed (ROCE) was positively related to the disclosure level. However, debt equity ratio, liquidity, firm size and audit firm size were insignificantly related to the disclosure level. The study utilized data sourced from the annual reports of only rural banks in the Ashanti region of Ghana and it did not focus on urban banks in the region.

Methodology

This study adopted Ex post facto design to examine the causal relationship between the independent variable (firm characteristics) and the dependent variable (environmental disclosure). The sample of this study consists of 49 firms were selected from the entire population of the 71 listed companies (Financial and Other service sectors) on the Nigerian Stock Exchange for the period of 2009 to 2018 using filtered criteria.The firms were selected based on:(1) Being currently listed on the NSE, (2) Have ten years published annual reports (2009 to 2018) submitted to the NSE.Secondary data were sourced from the annual report and accounts of the sampled listed companies for a period of ten years, that is from 2009-2018 using (machameratio, www.africancompaniesonline.com).

Corporate Environmental Disclosure Index (CEDI) checklist, used in Clarkson et al. (2008), was adapted to measure corporate environmental accounting disclosure. The index contains 45 items that are divided into 'hard' and 'soft' disclosure items. The 29 'hard' disclosure measures (divided in 4 themes) are objective measures. Environmental claims can easily be verified and cannot easily be mimicked by poor environmental performers. The 16 'soft' disclosure measures (divided in 3 themes) are subjective, because they are unverifiable claims to be committed to the environment and they can be easily mimicked. The checklist has seven environmental themes, A1–A7, containing 45 line items with a scoring model of 95 that reflect the spirit of the GRI guidelines (Clarkson, Li, Richardson, &Vasvari, 2008). In addition, the corporate environmental disclosure score (CEDS) was calculated by assigning dummy scores based on data available. Firms who disclosed information on a particular item from A1, A2, A4, A5, A6 and A7 were assigned a value of (1) or otherwise (0) except A3 concerning Environmental Performance Indicators (EPI) that is very key to environmental disclosure performance which has a value of (6) if disclosed or otherwise (0) with a total score of 95. EPI data can be disclosed by firms to convince stakeholders about their environmental commitments. Extra scores are awarded when firms disclose EPI with respect to historical trends, emission targets and the industry average.

Similarly, the value of each company's Corporate environmental disclosure score (CEDS) was computed as the proportion of total number of items disclosed by each company to the total possible number of items to be disclosed by the company. The final score determined of each company can be converted into percentage. The CED is expressed in formula below:

$$CED = \frac{Total\ No.of\ Items\ Disclosed}{Total\ Possible\ Number\ of\ Items\ to\ be\ Disclosed}\ X\ 100$$

where CED = Corporate Environmental Disclosure

For the purpose of finding the relationship between corporate environmental disclosure as the dependent variable on firm characteristics of firm size, leverage, age of the firm and size of audit firm are independent variables. FSIZE=firm Size is measured as the total asset of the company ((Henry,2010;& Ahmad, 2017). LEV=leverage is measured as the ratio of the total debt to equity (Rafique, 2010; & Yildiz, 2014). FAG= age of the firm is measured by number of years listed on Nigeria Stock Exchange, 2009 - 2018, Nigerian Stock Exchange Factbook, (2019). SAF=size of the audit firm is measured by dummy variable with a score of 1 if audited by the big 4 audit firms or otherwise 0 (De Sousa, 2009). Panel regression analysis is adopted.

The regression model is expressed as follows:

ED = *f*(FSIZE, LEV, FAG, SAF,)

The model is written in explicit form and it reflects the dependent variable and the independent variables for the study with the error term.

$ED_{it} = \beta_0 + \beta_1 FSIZE_{it} + \beta_2 LEV_{it} + \beta_3 FAGit + \beta_4 SAF_{it} + \mu_{it}$-

Where:

ED = Environmental Disclosure

β_0 = the intercept term

$\beta_1 - \beta_4$ = Regression coefficients

FSIZE = Size of firm i in period t

LEV = Leverage of firm i in period t

FAG = Age of firm i in period t

SAF = Size of Audit Firm i in period t

μ_{it} = Stochastic error terms

t = the time unit (t = 1, 2 . . . 10 years)

i = Company

A Priori Expectation

A priori expectation of the study is that all the independent variables (Firm Characteristics) will have positive relationship with the dependent variable (environmental disclosure). Summary of Independent Variables with expected sign is as follows, Firm Size = +, Leverage = +, Firm Age = + and Size of Audit Firm = +.

The following diagnostic tests are conducted to enrich the analysis of data i. Multicolinearity test, Variance Inflation Factor (VIF) and Tolerance values are conducted to ensure that some or all of the explanatory variables in a multiple regression analysis are not highly inter-correlated to cause multicolinearity problems in the data ii. Heteroscedasticity test is conducted to check whether the variability of error terms is constant or not. iii. Normality test is conducted to check that Skewness and Kutosis for all the variables showed result of normality distribution of the data. iv.Hausman specification test is conducted to enable the study choose between fixed and random effect.

Result and Discussion

Table 1: Descriptive Statistics

Variables	Obs	Mean	Std Deviation	Minimum	Maximum
CED	490	4.91	4.67	0	26.31
FAG	490	17.11	11.86	1	50
LEV	490	33.99	29.29	-26.92	254.75
FSIZE	490	52,700,000,000	281,000,000,000	331,131,100	5,890,000,000,000
SAF	490	0.57	0.50	0	1

Source: STATA 13 Outputs, 2021

Table 1 above presents the results of the descriptive statistics of the variables (Dependent and Independent), namely: mean, standard deviation, minimum value and the maximum value.
Table 1
show that corporate environmental disclosure has a mean value of 4.91 with a standard deviation of 4.67, a minimum of 0 and a maximum of 26.31. The standard deviation of 4.67 implies that there is no wide dispersion of the data from mean value of the environmental disclosure of the less-sensitive listed companies in Nigeria.
The average age of the Nigerian less-sensitive listed companies is 17 years and the youngest is 10years while the oldest is 50 years.
Leverage has ratio values of 33.99 and 29.29 for mean and standard deviation respectively; implying that on the average the firm capital structure had 33.99 ratio debt financing.
Firm size has mean value of N5.27 billion with a standard deviation of N2.81billion minimum and maximum values of N331.131m and N5.89 trillion respectively. This suggests a wide dispersion in firm sizes of Nigerian less-sensitive listed (Financial and Other service) companies.
Table 1 also revealed that audit firm size has an average value of 0.57 with a standard deviation of 0.50 while the minimum and maximum values which are dichotomous are 0 and 1 respectively. The standard deviation of 50% signifies that the data is widely dispersed from the mean value of the sample service firms. The average implies that majority of the service firms in Nigeria are audited by big four audit firms during the period under study.

Table2: Correlation Matrix

VARIABLES	CED	FAG	LEV	FSIZE	SAF	VIF
CED	1.0000					
FAG	0.2722	1.0000				1.11
LEV	0.0021	0.0944	1.0000			1.03
FSIZE	0.5241	0.3048	0.1459	1.0000		1.40
SAF	0.3631	0.2015	0.0407	0.4782	1.0000	1.30
MEAN VIF						**1.21**

Source: STATA 13 Outputs, 2021

Table 2 presents the Pearson correlation matrix between the dependent and independent variables and it shows that there is a positive correlation between the dependent variable (CED) and all the independent variables of the study. The results of the correlation analysis indicated that the highest correlation coefficient between independent variables is 0.4782 for FSIZE and SAf. Farrar and Gluabar (1967) as cited in Yildiz (2014) suggest that correlation between independent variables should not be considered harmful until the correlation coefficients reach 0.8 or 0.9 and Emory (1982) considers more than 0.8 to be problematic. To determine the presence of collinearity problem, a Variance Inflation Factor (VIF) test is carried out and the results provide evidence of the absence of collinearity because the results of the VIF test range from a minimum of 1.03 to a maximum of 1.40 and a mean of 1.21. VIF of 5.00 can still be a proof of absence of collinearity (Neter, Kutner, Nachtsheim & Wasserman 1996).

The Breusch-Pagan test for heteroskedasticity was conducted to check whether the variability of error terms is constant or not. The presence of heteroscedasticity signifies that the variation of the residuals or term error is not constant which would affect inferences in respect of beta coefficient, coefficient of determination (R2) and F statistic of the study. The result reveals that there is presence of heteroskedasticity because the p-value 0.000 is at 1% significance level. Therefore, as a result of the presence of heteroscedasticity, the study conducted a robust regression test to correct the heteroscedasticity.

In order for this study to select or decide with strong and statistical inferences the best, between the fixed effect model output and random effect model output, the Hausman specification test was conducted. However, the results of the Hausman specification test shows that the fixed effect is more appropriate for this study because the result is significant at 1% with a P value of 0.000.The regression results of the Fixed Effects (FE) are presented in table 3.

Table 3 : Summary of Regression Result (Fixed Effect Regression)

Variables	Coefficient	T- statistics	P-value
Constant	-4.9293	-0.84	0.404
FAG	0.2385	4.22	0.000***
LEV	0.0136	2.41	0.016**
FSIZE	0.6443	0.75	0.455
SAF	0.8193	1.70	0.090*
R-square:			
Within	0.1441		
Between	0.1601		
Overall	0.1455		
F- value	18.39		
P- value	0.0000		

Note: *= 1% level of significant, **= 5% level of significant.**

The results from Table 3 indicated that the independent variables of the model can explain 14.5% of the variations in the dependent variables (corporate environmental disclosure by less- sensitive listed companies in Nigeria) from the R-square coefficient of determination of 0.1455. This suggests that there are other firm characteristics that influence environmental disclosure. Furthermore, the Table 10 also shows that the model is fit as evidenced by the F-statistics of 18.39 which is significant at a P- value of 0.0000.

The fixed effect estimation shows that Firm size has a positive coefficient of 0.644 but have an insignificant relationship between corporate environmental disclosures. The t statistic is 0.75 with a p-value of 0.455. This implies that there is positive relationship between firm size and corporate environmental disclosure by less- sensitive listed companies in Nigeria. The hypothesis 1 also agreed with the apprior expectation of the study which expected a positive relationship between firm size and corporate environmental disclosure. The finding of this study indicated that firm size has positive but insignificant relationship with corporate environmental disclosure by the less-sensitive listed companies in Nigeria. This finding supports the studies conducted by Agyei-Mensah (2011); Yousra (2017); Ganewatta and Priyadarshani (2016), who documented that there is insignificant effect between firm size and environmental disclosure. However, the result is not consistent with the findings of Kustono and Nanggala (2019); Abubakar (2016); Achoki, Kule and Shukla (2016), and Hawashe (2015), who documented that there is a significant relationship between firm size and environmental disclosure.

Considering leverage, fixed effect estimates shows a positive and significant relationship between leverage and environmental disclosure at 5% confidence level. The implication of this is that as the leverage increases, the level of environmental disclosure also increases. The hypothesis 2 also agreed with the apprior expectation of the study which expected a positive relationship between leverage and corporate environmental disclosure. The finding of this study revealed that there is a positive and significant relationship between leverage and corporate environmental disclosure by the less-sensitive listed companies in Nigeria. This finding is consistent with those of Uyagu, Okpanachi, Nyor and Muhammad (2017), and Amaechi and Nwankwe (2017) who noted that leverage has a positive and significant relationship on corporate environmental disclosure. However, the result of this study is not consistent with those of Agyei-Mensah (2011) and Yildiz (2014), who found that there is an insignificant relationship between leverage and corporate environmental disclosure. This finding is also in line with legitimacy theory, which views that a firm with a high degree of dependence on debt would encourage a company to increase social and environmental activities by disclosing more environmental information in order to meet its creditors' expectations on environmental issues.

The fixed effect estimates show that, Size of Audit Firm (SAF) has a positive coefficient but have an insignificant relationship with environmental disclosure. The hypothesis 3 also agreed with the apprior expectation of the study which expected a positive relationship between Size of Audit Firm and corporate environmental disclosure. The finding of this study indicated that the coefficient on size of audit firm is positive but has an insignificant relationship with corporate environmental disclosure by less-sensitive listed companies in Nigeria. This implies that companies that engage the services of the big 4 Auditors may not necessarily engage in environmental disclosure. This finding is consistent with the views of Agyei-Mensah (2011); Dibia and Onwuchekwa (2015), who found out that size of audit firm, have an

insignificant impact on corporate environmental disclosure. However, this finding is not consistent with the views of Welbeck, Owusu, Bekoe and Kusi (2017) which revealed that companies audited by the big audit firms tends to disclose high level of environmental information.

Fixed regression result in Table 3 also shows that firm age is positive and has a significant relationship between corporate environmental disclosures at 1% level of significance. This implies that as the age of a firm increases, its level of environmental disclosure practices also increases. The hypothesis 4 also agreed withaprior expectation of the study which expected a positive relationship between Age of the firm and corporate environmental disclosure. The finding of this study also revealed that firm age is positive and significantly related to corporate environmental disclosure by less-sensitive listed companies in Nigeria. This implies that as the age of a firm increases, its level of environmental disclosure also increases. This finding is in line with legitimacy theory which posits that older companies have built legitimacy throughout their operating years, so that developing their reporting of environmental information maintains their legitimacy. This findings is in line with those of Welbeck, Owusu, Bekoe and Kusi (2017); Nguyen, Tran, Nguyen and Le (2017); Indah and Mochamad (2018); Onyali and Okafor (2018), and Hamid (2004) who noted that firm age is a major determinant of environmental disclosure because it has a positive and significant relationship with corporate environmental disclosure. This finding is not consistent with those of Kustono and Nanggala (2019); Ganewatta and Priyadarshani (2016), who documented that there is insignificant relationship between firm age and the level of environmental disclosure practices.

Conclusion

This study examined firm characteristic and corporate environmental disclosure by less-sensitive listed companies in Nigeria. The study covers forty nine companies out of seventy one less-sensitive listed companies.The result of this study revealed that corporate environmental disclosure has been found to be generally low, much lower than the global average of environmental disclosure. This means that the less-sensitive listed companies in Nigeria are not yet disclosing information on their environmental activities as they should. The result of this study also shows that all variables examined in the study have a positive relationship with corporate environmental disclosure. However, leverage and age of the firm have a positive and significant relationship with corporate environmental disclosure, while firm size and size of audit firm have a positive and insignificant relationship with corporate environmental disclosure.

Recommendations

The study recommends based on the research findings that:

As age of the firm has positive and significant relationship with environmental disclosure by the less-sensitive listed Nigerian, companies should give interested parties, sufficient environmental information in their annual reports and other communication channels, such as environmental, social responsibility or sustainability reports, web-sites, newspapers and magazines.

Also, leverage is a major determinant of environmental disclosure, firms that trade on more debts should try to disclose more environmental information in order to meet its creditors' expectations on environmental issues.

Due to the low level of environmental disclosure by less-sensitive listed Nigerian companies, which is occasioned by lack of a legislation to compel environmental disclosure, government should make a law compelling environmental disclosure by listed companies.

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