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The Determinants of Environmental Disclosure in The Financial Report of Listed Companies in Nigeria

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Abstract- Environmental disclosure by corporations has been increasing steadily in both size and complexity over the last two decades. This study aims at scrutinizing the Determinants of environmental disclosure in Nigeria. Hence the objectives include examining the effect of industry type, leverage and firm size on environmental disclosure. Historical data were obtained from the financial statements and account of firms in the manufacturing and financial sectors listed in the Nigeria Stock Exchange. It was recommended that firms in certain operations that can have effect on the environment should disclose their financial commitments in the annual reports especially those firms that its operations have to do with pollution and other environmental hazard should disclose their environmental information. Adequate number of companies from both manufacturing and non-manufacturing sectors were used for the study with panel data survey of the firms.

Indexed Terms- Determinants, environmental disclosure, firms, industry type, leverage, firm size, annual reports

I. INTRODUCTION

In recent years, the increasing popularity and significant of environmental reporting in an organization as well as the determinants of environmental disclosure seek to receive greater publicity on the clamour for disclosing environmental information in their annual reports which could be linked to demands by corporate stakeholders with pressure from regulators, including the power of environmental groups, the influence of competitors and multinational companies on improving corporate productivity and competitiveness (Muttanachai & Stanton, 2012). There has been wide-ranging of research on the determinants of environmental disclosure in academic research mainly in accounting. Walter Corrier and Michel (2006) exposed that environmental disclosure is highly desirable. Richardson and Welker (2001) stated that environmental disclosure may in fact be disadvantageous to firm's cost of capital.

Antecedents of environmental disclosures have been issues of concern for decades. Antecedents of environmental disclosures became more rampant among nations of the world by the beginning of 1990s, but have also become issues of concern among researchers since 1970s in form of corporate social reporting (Gray, Kouhy & Lavers, 1995). Specifically, antecedents of environmental disclosure gain consciousness after the United National Conference on Environmental and Development (UNCED) held in Rio de Janeiro in June, 1992. Since then, there have been significant rises in the number of developed and developing countries that have passed laws about environmental disclosure and as well number of firms that have made environmental disclosure important aspects in their annual reports and accounts for the interest of stakeholders (Freedman & Jaggy, 2005). According to Crowther (2002) the primary purpose of environmental disclosure is to examine and incorporate in the firm annual reports issues that bother on environmental hazard that are not taken cognisance of in traditional or conventional accounting function that stakeholders can use for decision making.

Disclosure of corporate environmental activities stressed the necessity for a close monitoring of natural resources and the corporation's harmful effect on the society it operate. Environmental effects caused by activities of firms especially those in the manufacturing, oil and gas and banking include pollutions like noise, waste, hazardous emission, spillages, degradation etc (Parmigiani, Klassen & Russo, 2011). Paul and Pal (2001) posit that

environmental disclosure is with reference to making environmental related costs more transparent with company accounting systems and reports. Adeyemi and Ayanlola (2015) further noted that though self-induce vices, regulatory, laxity, inauspicious macroeconomic environment, and endemic corruption in the economy are major constraints to the discharge of social and environmental accounting information. Ezhilarasi and Kailash (2015) show that company size and environmental certification are important factors in explaining environmental disclosure practices of corporate organisation. Aghdam (2015) indicates that highly sensitive firms are more willing to disclose environmental information when compared to low sensitive environmental companies. Small firms are expected to disclose their environmental practices in their annual reports in order to enhance their competitiveness and performance (Emenike, Akamelu & Umeoduagu, 2017).

However, several studies have been carried out on environmental disclosure in development countries like Nigeria in different perspectives (e.g. Ahmad, 2017; Ndukwe. & Onwucheka 2015: Ohidoa, Omokhudu, & Oserogho, 2016). Outcomes of their studies were mixed and inconclusive, hence, the need to validate these studies. This study specifically examines influence of firm size, profitability, industry type, leverage and managerial shareholding on environmental disclosure. Having examined the introduction, the remaining sections are structured as follow: Part 2 focuses on review of related literature; Part 3 looks at the methods and procedures used in this study; Part 4 particularly examines outcome of analysis and discussion of findings; and Part 3 was critically on conclusion and recommendations put forward.

Meanwhile, Beefs and Southier (1999) state that viewing from within the scope of a firm's strategy; environmental disclosure naturally occupies a prominent place. Muttanachai and Stanton (2012) pointed out that environmental disclosure reports are means of reinforcing corporate responsibility for environmental situations. According to Leuz, (2003) and Healy and Palepu, (2001) environmental disclosure extending beyond financial performance measures may be in fact value relevant for investors as it assist in bridging the growing gap between traditional financial statement and market valuation needs. Conversely, Cornier and Magnan (2003) emphasize that in French content, proprietary, cost (leverage and profitability) volume and ownership) are important determinants of a firm's environmental disclosure or report strategy. Most of the studies on the reasons and determinants of environmental disclosure were investigated in developed countries such as: USA, UK, Canada, Australia, Japan with few from developing countries (Abdul 2010).

Environmental disclosure with the aid of companies has been increasing regularly in both size and complexity over the last two decades (Srinivasa, 2014). Research interest over the years has tried to apprehend and provide an explanation for this area of corporate reporting which seems to lie outside the traditional domains of accounting disclosures. The evolving task in contemporary business activities is the need to reconfigure their overall performance indices to include societal and environmental issues as part of the standard objective of doing business.

The study adopted a combination of cross sectional data and time series (panel) survey data of firms quoted in the Nigerian stock exchange. However, panel data survey of the firms cover a period of three years (2011- 2013). A sample size consists of fifty (50) companies from both manufacturing and non-manufacturing sectors were used for the study. The model for this study was adapted from the work of Mejda and Hakim, (2013).

II. LITERATURE REVIEW

- CONCEPT OF ENVIRONMENTAL DISCLOSURE

The concept of environmental disclosure reporting gained greater publicity right from the United National conference on environmental and development (UNCED) held in Rio de Janeiro in June 1992. Ishak (2010) defined environmental disclosure as an environmental management strategy to communicate with stakeholders. Environmental disclosure is as well commonly regarded as corporation social responsibility reporting (Degan, 2007). Meanwhile, parker (1986) as cited in Setyorim and Ishak (2010) defined corporate environment disclosure as the reporting by corporation on the social impact of

corporate activities, the effectiveness of corporate social programs, as a way corporation is discharging its social responsibility and the stewardship of its social resources at large.

Environment disclosure is viewed in different perspectives, but channelled towards the same direction. Zakimi and Hamid, (2004) posit that environmental disclosure is used by firms to express to the public cost implications of their activities which has impacts on the society. According to Lodhia (2006), corporate environmental disclosure is defined as a reporting process by which firms discloses environmental information in their annual financial statements and accounts in order to communicate their financial positions to the respective stakeholders for the purpose of providing evidence of stewardship report. Berthelot, Cormier and Magnan (2003) is of the view that environmental disclosure is the disclosures that is associated with firm's past, present and future environmental management decisions, activities and performance. Pahuja (2009) describes environmental disclosure as firms' consciousness to report more environmental information on the annual reports when compared to firms which do not. Thus, these firms may have more propensities for the disclosure of environmental information on the financial statements more than their environmental performance. These corporate entities also face greater pressure from stakeholders within and outside the corporation. It is along this line, Dixon, Mousa & Woodhead (2005) explain that the reasons for disclosing environmental information on the annual financial statements of quoted firms is to increase the rate of meeting the terms of environmental rules, regulations as well as pressure for clean water and clean air. Environmental disclosure by companies shapes external perceptions of the company, assist stakeholders assess whether the company is a good corporate citizen, and ultimately give reasons for the company continued existence to its stakeholder's satisfaction.

Dhaliwal, Li, Tsang & Yang, (2009) allege that environmental disclosure by company reduces or even remove information gap that exists between company and the stakeholders, thereby; lowering the company's cost of capital. According to Dutta and Bose, (2007) environmental disclosure is a way of passing information (both financial and non-financial) regarding the resources and social performance of the disclosing corporation. Shil and Igbal (2005) defined environmental disclosure as a holistic method of ensuring good corporate governance by a way of transparency or precision in its society's actions. According to Carrol, (2010) environmental disclosure is firm's commitment and loyalty to operate in an economically and environmentally sustainable way while taking into cognizance the interests of all the stakeholders of the firm. Zakimi and Hamid, (2004) define environmental disclosure as environmental management approach to convey environmental information to stakeholders. In order words, environmental disclosure involves the reporting of environmental information that will reflect the natural environment, environmental protection and resources used. Dixon, Mousa & Woodhead (2005) define environmental disclosures as reporting environmental issues that comprises of: the growing number of environmental regulations as well as pressures groups which bother on social and environmental implications of a company. Ndukwe and Onwucheka (2015) note that voluntary stance of environmental reporting has often been used as a cliché for firms to under report their effect on the environment. This is responsible for the negligence of several corporate entities with regards to corporate social and environmental reporting. Corporate environmental disclosure is an instrument for communicating firm's environmental performance. In effect, environmental disclosure is a continuous commitment in reporting cost incurred by corporate entity towards contributing positively in improving quality of life of the workforce and their families, host community and the society in general.

Accordingly, there has been a major enlargement in the figure of companies in both developed and developing countries making environmental disclosures a matter of necessity in their annual reports and other communication media (Deigom & Gordorn, 1996). Henderson and Parson (2004) explained that environmental reporting covers sustainability so that it reflects concerns about environmental protection, intergenerational equality, the earth and its resources. Following that initiative, many studies have noted that increasing popularity and significant of environmental reporting organization seek to operate within the bounds and norms of their respective societies.

Deegan (2002) states that they endeavor to make ensure that their activities are perceived as legitimate by outside parties because a corporation is part of a broader social system. Furthermore, when there is a change in social expectation or stakeholders' concerns, corporation aim at ensuring that their activities in terms of human, environmental and other social consequences respond to those changes to meet social expectations (Deegan, 2001).

Conversely, Campbell, Gaven and shrives, (2003) posit that if companies do not operate in a manner consistent with community expectations, they will be penalized so as to be successful. Thus, corporation must adapt their activities to meet community expectations. According to Wheel and Sillanpea, (1998) environmental reporting is one way to communicate effectively with stakeholder. Moreso and Robert (1994) found that building trust and loyalty contribute to business performance in organization where they are to be responsible to these stakeholders and depend upon their continued approval, to maintain a successful operating environment. Meanwhile, Deegan, Ramkin, and Voguo (2000) argued that firm must seek accord between outsider perceptions of their social concern and their activities or actions serving corporate needs. While Campbell et al, (2003) postulate and explain how social and environmental disclosure can be used to narrow or close the existing gap between company actions and social concerns.

- *Empirical Evidence on Determinants of Environmental Disclosure*

Several authorities in developed countries have empirical evidences in relation to environmental disclosure than in the developing countries. Previous studies are however discussed below.

- *Firms' Industry Type and Environmental Disclosure*

Several previous studies revealed that, companies were classified according to various criteria. Predominantly, companies are separated into two types; high or low profile companies (Choi, 1999; Hackston & Milne, 1996; Patten, 1992). High profile companies are those operating in highly environmentally sensitive industries (Perry & Sheng 1999; Stray & Ballantain 2000; Ho & Taylor 2007), and are however, more exposed to the political and social environment than low profile companies (Newson & Deegan, 2002). Using the association between the levels of corporate environmental disclosure in annual reports and type of industry, many studies Ahmad and Sulaiman,(2004); Ho and Taylor, (2007) and Newson and Deegan, (2002) have established that companies in high environmentally sensitive industries disclose more environmental information in annual reports than companies in low profile industries. Conversely, an early study by Cowen et al. (1987) and a later one in India (Sahay, 2004) found no relationship between type of industry and the levels of corporate environmental disclosure. Upon this backdrop of conflict assertions, we therefore hypothesized that; *there is no significant relationship between industry type and environmental disclosure.*

- *Firms' Leverage and Environmental Disclosure*

Investors in companies and lenders depend solely on financial statements for the evaluation of a firm's financial standing and credit rating. Thus, managers are disposed to increase disclosure to reduce agency costs between insiders and creditor (Mejda & Hakaim, 2013). Cormier and Magnan (2002) and Brammer and Pavelin (2006) demonstrated a negative association between environmental disclosure and leverage. Nevertheless, Roberts (1992) and Naser *et al.* (2006) reported a positive relationship. Most studies in environmental disclosure determinant investigate companies which operate in polluting sectors. These firms concerned are more likely to be punished. Based on this established facts, the bankers and lenders will pay more attention to these companies' communication about corporate environmental responsibility. As a result, the polluting companies will have a preference to report more environmental information if they have more debt. Mejda and Hakaim (2013) found that firm with higher debt are more probable to disclose environmental information. Hence, we state that; *Firms' leverage has no significant relationship with environmental disclosure.*

- *Firms' Size and Environmental Disclosure*

Abdul ((2010) stakeholder theory; state that larger companies come under more scrutiny than smaller companies. Therefore, these companies feel the heaviness to disclose more social information to obtain approval from the stakeholders for continued survival

(O'Donovan, 1997). Larger firms are as well perceived to be important economic entities and thus have greater demands placed on them to provide more information for customers, suppliers, analysts and government bodies (Cooke, 1991). Making information available is equally made easier because these larger firms possess the necessary resources to furnish stakeholders with the pertinent information and hence producing extra data at a competitive cost than smaller firms (Cooke, 1991, 1992). A positive relationship between size of a corporation and the amount of environmental disclosure has been consistently found by prior studies (Stanny & Ely, 2008; Raar, 2002; Stanwick & Stanwick, 2006 and Ho & Taylor, 2007). Roberts (1992) found a negative association between the size of the company and the level of Corporate Social Responsibility disclosure.
Legitimacy theory suggests that larger companies have to act more in response to disclosures to have a greater influence on social expectations because they have more stakeholders than small companies (Cowen, Ferreri, & Parker, 1987). To verify the truism of the above findings, we hypothesized that; *Firms' sizes have no significant relationship with environmental disclosure.*

- THEORETICAL REVIEW

Freeman and Reed (1983) have recognized stakeholders as the groups who have an interest in the actions of the corporation. In a follow up study, Freeman (1984) revisited stakeholder theory and redefined stakeholders as any person or group who has an interest in the company due to the fact he (or she) can affect or is affected by the firms activities. Mpofu and Karedza (2013), has described stakeholders as any person or group who can have an effect on or is affected by means of the actions, decisions, policies, practices, or goal of the organization. Kassinis and Vafeas (2006) argued that stakeholders can be recognized through the legitimacy of their claims which is substantiated with the aid of a relationship of alternate between themselves and the organization. These stakeholders encompass stockholders, creditors, managers, employees, customers, suppliers, local communities and the conventional public.

According to Freeman and Reed (1983), the stakeholders' theory offers prosperous insights into the elements that inspire managerial behavior in relation to the social and environmental disclosure practices of companies as the activity of the companies affect the a number of stakeholders of the firm vis a vis environmental impacts and cost disclosures of the firm. Previous social and environmental accounting research like Fokeye, Odianonsen and Aanu (2015); Ebiringa (2013) which utilized these theories indicate that companies respond to the expectations of stakeholders groups particularly and generally to these of the broader community in which they operate, through the provision of social and environmental information inside the annual reports.

Firms legitimize their activities and the number of stakeholders also legitimizes their demands on a number environmental issues and disclosures vis-a-vis their interest and demands. The legitimacy theory, according to Dowling and Pfeiffer (1975), is typically described as the congruence between an organization's value system and that of the large social system, of which the company is a part. They similarly stated that companies are seeking to establish congruence between the social values associated with or implied by means of their activities and the norms of suitable conduct in the larger social system of which they are part of. Hence, companies voluntarily disclose environmental information to show that they are conforming to the expectations and values of the society within which they operate.

Dowling and Pfeffer (1975) counselled that legitimacy theory is beneficial in examining corporate behavior. This is due to the fact legitimacy is essential to organizations, constraints imposed through social norms and values and reactions to such constraints provide a focus for analyzing organizational behaviors taken with respect to the environment. Uwalomwa (2011) made claims that the legitimacy theory is applicable due to the fact it emphasizes that through definition, firm environmental disclosure should conform to at least one of the techniques as the implementation of any legitimization approach have to contain both communication (disclosure) through the organization, as well as addressing norms, values or beliefs of relevant publics.

- ENVIRONMENTAL ACCOUNTING DISCLOSURES ENVIRONMENTAL COSTS

These are costs that the organizations incur to prevent, monitor and report environmental impacts (KASNEB, 2014). US EPA (1995) defines five tiers of environmental costs namely; conventional, hidden, contingent, image and relationship and societal. These costs are broadly divided into two: private costs and societal costs. Private costs are borne by the firm whereas societal costs are borne by society.

- Private Costs: Conventional costs are the costs of capital equipment, raw materials and supplies. The costs of using raw materials, utilities, capital goods, and supplies are usually addressed in cost accounting and capital budgeting but are not usually considered environmental costs. However, decreased use and less waste of raw materials, utilities, capital goods, and supplies are environmentally preferable, reducing both environmental degradation and consumption of natural resources.

- Hidden Costs: this refers to the results of assigning environmental costs to overlook future and contingency costs. There are several types of environmental costs that may be potentially hidden from managers: First are the upfront environmental costs, which are incurred prior to the operation of a process, system, or facility. These can include costs related to sitting, the design of environmentally preferable products or processes, qualifications of suppliers, evaluation of alternative pollution control equipment, and so on.

Whether classified as overhead or R&D, these costs can easily be forgotten when managers and analysts focus on operating costs of processes, systems, and facilities. Secondly, we have the regulatory costs from activities such as monitoring and reporting of environmental activities and emissions, the cost for searching for environmentally responsible suppliers and ongoing cost of cleaning contaminated land (KASNEB, 2014).

- Contingent Costs are environmental costs that are not certain to occur in the future but depend on uncertain future events. They are a cost that may or may not be incurred at some point in the future. For example, the cost that is involved in remediating future spills (KASNEB, 2014).

- Image and Relationship Costs: these are less tangible costs because they are incurred to affect subjective perceptions of management, customers, employees, communities, and regulators. This category can include the costs of annual environmental reports community involvement activities and costs expended voluntarily for environmental activities (KASNEB, 2014).

- Societal Cost: is described as costs that organization imposes on others for which they may not be held legally responsible and which cannot be compensated for in the legal system (KASNEB, 2014). For instance, damage caused to a river because of polluted waste-water discharge, or to ecosystems from solid waste disposal or to asthmatics because of air pollutant emissions are all examples of external costs for which an industry often does not compensate (Uwaloma, 2011).

- NON-FINANCIAL INDICATORS

According to Karambu and Joseph (2016), Non-financial information is information that concerns the environmental objectives, the management, the policy and other appearances that can broadcast environment performance in non-financial information. The disclosure requirements according to Global Reporting Initiatives under Non-financial information concerning the environmental objectives are:

- Compliance (Monetary value of significant fines and the total number of non-monetary sanctions for noncompliance with environmental laws and regulations)

- Performance indicators on the environment i.e. water, air, soil).

These indicators are defined by the Global Reporting Initiative, and other organizations. The disclosure requirement according to Global Reporting Initiatives comprised under Performance indicators on the environment are:

- Water (Total water withdrawal by source; Water sources significantly affected by the withdrawal of

water; Percentage and the total volume of water recycled and reused).

- Biodiversity (Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas, Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas; Habitats protected or restored; Strategies, current actions, and future plans for managing impacts on biodiversity; Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk).

- Emissions, Effluents, and Waste (Total direct and indirect greenhouse gas emissions by weight; Other relevant indirect greenhouse gas emissions by weight; Initiatives to reduce greenhouse gas emissions and reductions achieved; Emissions of ozone-depleting substances by Weight; NO, SO, and other significant air emissions by type and weight; Total water discharge by quality and destination; Total weight of waste by type and disposal method; Total number and volume of significant spills; Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel Convention Annex I, II, III, and VIII, and percentage of transported waste shipped internationally; Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the reporting organization's discharges of water and runoff) (Karambu & Joseph (2016).

- Products and Services (Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation; Percentage of products sold and their packaging materials that are reclaimed by category).

- Materials (Percentage of materials used that are recycled input materials)

- Energy (Direct energy consumption by primary energy Source, Indirect energy consumption by primary Source; Energy saved due to conservation and efficiency improvements, Initiatives to provide energy-efficient or renewable energy based products and services, and reductions in energy requirements as a result of these initiatives; Initiatives to reduce indirect energy consumption and reductions achieved).

- FINANCIAL INDICATORS

Financial indicators include; investments and acquisitions of environmental assets, costs, provisions). These indicators expose in monetary terms the behaviour of firms regarding environmental reporting. The disclosure requirements according to Global Reporting Initiatives under financial indicators are:

- Transport (Significant environmental impacts of transporting products and other goods and materials used for the organization's operations, and transporting members of the workforce).

- Overall (Total environmental protection expenditures and investments by type) (Karambu & Joseph (2016).

- THE CONCEPT OF FIRM VALUE

Firm value describes the assets a firm owned. It is necessary because it portrays the prosperity of the business owners. It is the responsibility of the management who serves as the agent of the owner of the corporation to optimally maximize the values of the firm which form the core objective of any corporation. When there is a high firm value it shows that the firm is wealthy and therefore the shareholders" wealth is utilized. The firm value indicates the successfulness level of the shareholders and investors. The performance of companies is shown through the firm value. Firm value is the angle where the Investors also observe the company, and it is relevant to stock price. Ftouhi, Ayed and Zemzem (2010), opined that the increase in stock price will gain high firm value. The performance of a firm can be defined or measured in various different ways including profitability, market share growth, return on investment, return on equity and liquidity. A firm can, by being environmentally sustainable, differentiate its products and thus increase its revenue. Similarly, a firm can save costs on resources, regulatory costs, capital and

labour and therewith increase its profit. Profitability, as well as corporate financial performance, was used by a number of researchers as an explanatory variable for differences in disclosure. However, the association between corporate performance and corporate social and environmental accounting disclosure is arguably one of the most controversial issues yet to be solved (Choi, 1998). According to Bhagat and Black (2002), high Tobin's q shows how effective management of a company has produced a higher market value from the same asset.

- EMPIRICAL REVIEW

Khlif, Guidara and Souissi (2015) carried out a study on corporate social and environmental disclosure and corporate performance: evidence from South Africa and Morocco. The purpose of the study was to inspect the relationship between corporate overall performance and social and environmental disclosure for two African leading countries namely, South Africa (common law country) and Morocco (civil regulation country). The sample consisted of 168 annual reports spanning from 2004 to 2009. A content evaluation of companies' annual reports was used to measure the extent of voluntary social and environmental disclosure. Results showed that social and environmental disclosure has a huge tremendous impact on corporate performance only in the South African setting. The findings emphasized the need to explicitly reflect on consideration on the legal and institutional setting prevailing in each context.

Dibia and Onwuchekwa (2015) carried out a research on the Determinants of Environmental Disclosures in Nigeria: A Case of Oil and Gas Companies, they made use of the cross-sectional research design. A sample of 15 companies drawn from the oil and gas sectors of the Nigerian Stock Exchange for 2008-2013 financial years was used for the study. Secondary data was sourced from the annual reports of the sampled companies whilst the binary regression approach was used for data analyses. The findings of the study were that there is a significant relationship between firm size and corporate environmental disclosures; there is no significant relationship between profit and corporate environmental disclosures; there is no significant relationship between leverage and corporate environmental disclosures and there is no significant relationship between audit firm type and corporate environmental disclosures.

As Ebiringa, et al (2013) observed, there is considerable consensus in the literature with regards to the effect of company size on corporate environmental disclosure practices. The effect has been identified as positive as a firm size is expected to increase its information reporting level. There are at least three reasons for this link. First of all, large firms are more willing to disclose information to reduce their political costs, since their higher visibility can easily lead to more litigation and governmental intervention. Secondly, owing to more developed internal reporting system, the costs associated with a higher disclosure level are lower for large firms. Thirdly, smaller firms are more likely to hide crucial information because of their competitive disadvantage within their industry. The authors further posited that corporate size would be related to social responsibility activities because larger companies are more likely to be scrutinized by both general public and socially sensitive special interest groups.

Galani *et al* (2011) conducted a study on the Relationship between Firm Size and Environmental Disclosures. The study investigated the level of environmental reporting in corporate annual reports. Specifically, it investigated the extent to which Greek companies have implemented a set of environmental accounting practices and analyzed the relationship between various firm characteristics and environmental disclosures. The results obtained showed that the degree of development of environmental accounting practices is low and there is a positive relationship between corporate size and the disclosure of environmental information in annual reports. However, neither profitability nor listing status seemed to explain differences in environmental disclosure practices between Greek companies.

III. METHODOLOGY

This study adopted ex-post facto research design for empirical study. This design will be appropriate for the study because it assists in determining the determinants of environmental disclosure of manufacturing firms in Nigeria. The population of this study will cover selected manufacturing companies

(consumer and industrial goods producers) that are quoted on the Nigeria Stock Exchange (NSE).

- Model specification

The models that will be used to test the entire hypothesis are:

ED = $\beta 0 + \beta 1FSit + \beta 2PRt + \beta 3BCit + \beta 4\ ATit + \boldsymbol{\varepsilon}$…..model 1

Where;

ED= Environmental Disclosure (1= for disclosure of an environmental information on the checklist.0 = Non-Disclosure)

$\beta 0$ = the intercept/constant;

$\beta 1, \beta 2, \beta 3, \beta 4$ = are the parameters;

FS= Firm Size (Natural log of total assets)

PR = Profitability (Net income divide by total assets)

BC= Board Composition (Total Number of board members)

$\boldsymbol{\varepsilon}$ = the residual/error term (1 – Big four Audit firms 0 – Non-big four Audit firms)

it= The different independent variables of firm i' at time t'.

- Environmental Disclosure Checklist

The following information is the minimum required environmental information;

S/N	ELEMENTS
A. Environmental policy:	
1	Actual statement of policy
2	Establishment of environmental management systems
B. Environmental pollution:	
Waste(s) management	
2	Research on new methods of production to reduce environmental pollution
3	Pollution-prevention technologies
C. Environmental Energy:	
1	Energy saving and conservation
2	Use/development/exploration of new sources, efficiency, insulation etc.
3	Utilization of waste materials for energy conservation
D. Environmental audit:	
1	Reference to environmental review, scoping, audit, assessment, including independent attestation
2	Obtaining certification for Environmental Management Systems/ISO 14001
3	Execution of environmental policies
E. Environmental financial:	
1	Reference to financial/economic impact
2	Past and current expenditure for pollution control
3	A record of the allocation of specific fund

IV. CONCLUSION AND RECOMMENDATION

- Conclusion

It is therefore concluded that profitability, auditor type, board composition and firm size jointly influences the environmental disclosure of manufacturing firms in Nigeria. This predicated on the findings of the study and it is shown that firm size exerts the most significant impact on the environmental disclosure of manufacturing firms in Nigeria.

- Recommendation

The following recommendations were made;

1. The regulatory bodies should initiate policies that will make the disclosure of environmental information compulsory in Nigeria and the board of directors should step up their oversight functions to include environmental disclosures by setting up an environmental monitoring and disclosure committee.
2. The companies should invest their resources into developing and protecting the environment as this has a positive impact on their profitability.
3. The external auditors should also persuade their clients to disclose information relating to the environment as this has an impact on their reputation.
4. Finally, the small manufacturing firms should take steps to improve on their disclosure of environmental information in Nigeria.

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