EFFECT OF CORPORATE ATTRIBUTES ON VOLUNTARY DISCLOSURE BY LISTED INDUSTRIAL GOODS COMPANIES IN NIGERIA

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ABSTRACT

Information asymmetry aids in investment decision making. In several instances, listed companies are only required to disclose information as stipulated in International Financial Reporting and Capital Market Authority Guidelines. In some cases, listed companies provide quantitative and qualitative information which may be paramount to decision making amongst different stakeholders. Consequently, the study investigated the effect of corporate attributes on voluntary disclosure by listed Industrial goods companies in Nigeria. Using secondary data collected from the annual reports and accounts of 13 randomly selected Industrial goods companies for the period of 2011 to 2020. The study analyzed the data using the logistic regression technique. The study found that Firm size and Firm Age have positive significant effect on the voluntary disclosure of listed Industrial Goods Companies in Nigeria. While profitability has a positive insignificant effect on the voluntary disclosure of listed Industrial Goods Companies in Nigeria. Further findings revealed that, leverage and Liquidity both have negative significant effect on the voluntary disclosure of listed Industrial Goods companies in Nigeria. Thus, the study recommended the need to provide more quarterly voluntary disclosures on the liquidity ratio and its constituents. The more liquid the firm, the more demand for voluntary disclosure that tells the short-term lenders and customers how responsive the firm is in catering for short term obligations. Also, Industrial Goods firms should put into consideration the length of time they engage in a business method to become acquainted with the business environment for enhanced voluntary disclosure of business activities, that will attract more financiers and customers to the firms.

Key Words: Firm Size, Profitability, Leverage, Liquidity and Firm Age.

INTRODUCTION

Globally, voluntary disclosure has been a controversial issue and the level of compliance is still uncertain even when the yearning of financial information disclosure is increasingly needed by every stakeholder. Naturally, private entities are not obligated by law to meet some mandatory disclosure requirements, unlike public entities and corporate organizations which must publicly meet specific information disclosure requirements that are relevant for shareholders and the other entire stakeholders. Perhaps, one of the benefits of privately owned entities include avoidance mandatory disclosure of vital financial and non-financial information (Farre-Mensa, 2017; Rizzato, Busso, Fiandrino & Cantino, 2019).
The 2008 global financial crises (GFC), proved to be a pivotal point that brought corporate disclosure back to the forefront of research and business discussion. The GFC highlighted the importance of corporate voluntary information disclosure and business honesty in avoiding further economic instability and widespread damage (Bose et al., 2018). To date, corporate voluntary information disclosure has become an important focus of research, as it is seen as an important tool to increased corporate transparency (Alhazmi, 2017).

Voluntary disclosure can be used by various stakeholders of a company in their different decision making processes and could also help to determine when fraud has been perpetrated (Ali, Ahmed and Henry, 2004). It can help to further clarify issues under the mandatory disclosures and help paint a clearer picture of the state of the company. At present the information disclosed by some organizations is limited to the minimum legal requirements whilst other enterprises disclose additional information voluntarily such as director's shareholding in the company and statement of corporate social responsibility. There are several reasons to expect that better performing companies will engage in voluntary disclosures. This could be because companies that achieve desirable performance would have nothing to hide and would be eager to disclose their achievements to their stakeholders so as to efficiently attract the investments and purchase of their stock on the stock market. Voluntary disclosure is a device which reduces the information gap in between insiders and the stakeholders. Furthermore, if management voluntarily discloses information, then they will be able to enhance the credibility of their reporting among stakeholders. As a result of the importance attached to voluntary disclosure, researchers, national accounting bodies and all other stakeholders began to turn attention to voluntary disclosures provided by corporate bodies within last few decades (Odili, 2018).

However, the degree of voluntary accounting disclosure varies from firm to firm (Juhmani, 2013) and there are factors which influence the voluntary information in annual reports; they give rise to variation in the level of disclosure among companies (Han, 2004). However, without any statutory requirement, organizations disclose information voluntarily. Therefore, it is very important to comprehend the extent of voluntary disclosure levels and the factors which affect them, such as changes in capital markets, changes in business environments and/or globalization (Healy & Palepu, 2001).

Firms can be distinguished from one another on the basis of different financial and non-financial attributes including firm size, ownership structure, audit committee attributes, CEO duality, board independence, and board size. These attributes are unique to specific companies and raise a perception in the mind of the users of that information regarding the performance and future of the company (Omar & Simon, 2011). Researchers like Uddin, and Hassan, (2011); Sabo, Rabi, Usman, Fatima and Tijani, (2015); Uwuigbe, Olayinka, Olubukola, Ebeguki and Jimoh, (2017), have also explored the possibility of corporate attributes as an important determinant of voluntary disclosure of companies.

Zaheer (2013), made claims that in the current era where all critical decisions of firm management quickly reach the markets as well as information users, an important issue regarding financial research is the impact of these corporate attributes on voluntary disclosure of companies without dwelling too much on past evidence.

In the words of Uyar and Kilic, (2012) and Yusuf (2016), a plurality of studies has been done to investigate the effect of certain corporate attributes on voluntary disclosure but many of the research have focused on just on attribute. Adequate disclosure brings confidence in the minds of investors as firms learn more
precisely their market positioning, cost structures and efficiency levels and these influence financial performance of firms. The measure of a firm voluntary disclosure cannot be certain if the corporate attributes are not functioning effectively (Roos & Roos, 2017). Voluntary financial disclosure of a firm which is a function of its attributes usually have significant positive influence on performance as shown in many past researches (Choi & Meek, 2008). This indicates that the better predetermined corporate attributes in terms of its assets size, ownership structure, CEO duality, and board size combination can influence the voluntary information disclosure outcome of the firms (Rouf, 2016).

Most of the previous studies on corporate attributes on voluntary disclosure focused on developed countries and developed capital markets (Depoers 2000, Meeks, Roberts & Gray 1995, Singhvi & Desai 1971, Firth 1979, Cooke 1991, Raffournier 1995 and Gruning, 2007). But few assessed effect of corporate attributes on voluntary disclosure in developing countries (Chow & Wong-Boren 1987, Alsaeed 2006, and Aljifri, 2008). None was conducted in Nigeria. Therefore, this study aimed to determine the effect of corporate attribute on voluntary disclosure in the Nigeria listed Industrial goods companies for the period of ten (10) years from 2011-2020.

Objectives of the Study
The main objective of the study is to examine the effect of corporate attributes on voluntary disclosure of listed industrial goods companies in Nigeria. The specific objectives of this study include to;

i. Ascertain the effect of firm size on voluntary disclosure of listed industrial goods companies in Nigeria.
ii. Determine the effect of profitability on voluntary disclosure of listed industrial goods companies in Nigeria.
iii. Examine the effect of leverage on voluntary disclosure of listed industrial goods companies in Nigeria.
iv. Ascertain the effect of liquidity on voluntary disclosure of listed industrial goods companies in Nigeria.
v. Determine the effect of firm age on voluntary disclosure of listed industrial goods companies in Nigeria.

Research Questions
The following research questions are set to be answered during the study;

i. What is the extent and the effect of firm size on voluntary disclosure of listed industrial goods material companies in Nigeria?
ii. To what extent does profitability affect voluntary disclosure of listed industrial goods companies in Nigeria?
iii. What is the extent and the effect of leverage on voluntary disclosure of listed industrial goods companies in Nigeria?
iv. To what extent is the effect of liquidity on voluntary disclosure of listed industrial goods companies in Nigeria?
v. To what extent does firm age affect voluntary disclosure of listed industrial goods companies in Nigeria?

Statement of Hypotheses
The following research hypotheses are set to be tested during the course of the study;

Ho₁: Firm size has no significant effect on voluntary disclosure of listed industrial goods companies in Nigeria.
Ho_1: Profitability has no significant effect on voluntary disclosure of listed industrial goods companies in Nigeria.

Ho_2: Leverage has no significant effect on voluntary disclosure of listed industrial goods companies in Nigeria.

Ho_3: Liquidity has no significant effect on voluntary disclosure of listed industrial goods companies in Nigeria.

Ho_4: Firm age has no significant effect on voluntary disclosure of listed industrial goods companies in Nigeria.

LITERATURE REVIEW

Theoretical Framework
This study is anchored on the dynamic capability theory. The study also discussed the relevance of agency theory, signaling theory, resource-based theory, legitimacy theory and stakeholder theory to the study.

Dynamic Capability Theory
The study is based on the dynamic capability theory which is an extension of the resource-based view (RBV) theory of the firm. The dynamic capability theory is propounded by Teece and Pisano, (1994). The dynamic capability theory asserts that the core dynamic capabilities line of attack is that competitive attainment ascends from the unceasing growth, alignment and reconfiguration of corporate attributes. The theory discusses the flaws of the resource-based view theory. The RBV theory has been critiqued for failing to account for environmental dynamism and how firms should react when faced with obsolescencing resources (Blair, 2015). The dynamic capability enables firms to create, develop and protect those attributes that lead to sustainability of the firm through adequate voluntary disclosure to meet the need of varying stakeholders. The dynamic capability theory argues that resources and capabilities are constantly being developed inside the firm.

Subsequently, Amer et al., (2014) opine that firm resources are all possessions, competences, organizational practices, business features, information knowledge among others controlled by the business that allow the business to comprehend and apply tactics that progress its competence and effectiveness on the market. Relationship generally are deliberated to be the resources of the firm and hence corporate attributes, in particular, can similarly be regarded as a weighty resource which can significantly influence the quality of firm's voluntary disclosure above competitors in the industry. Capability that deliver ways of adjusting to the changes in the business environment include consumer demands, advent of novel markets and competitive variations (Ismail & Rahman, 2013).

Signaling Theory
A signal is a movement, action or sound that is used to communicate instructions or information. For instance, in a recruitment exercise, prospective job applicants strive to 'signal' their capabilities through well written curriculum vitae's that clearly outline their strengths in terms of work experience, educational background and even mental and physical abilities.

In like manner, signaling theory as advanced by Ross, (1977) suggests that if investors are not able to effectively differentiate with certainty between two firms which they perceive to be performing equally well, the firm that performs better will ensure that they provide a 'signal' so as to catch the attention of
these investors and enjoy a positive company reputation. They may do this by disclosing additional information unbeknown to investors and which will positively affect the outlook of the company. Similarly, it should be noted that not disclosing any information at all is also a signal.

Ross, (1977) asserts that managers prefer to signal in the form of disclosure so that they can mitigate against problems associated with lack of disclosures. In line with signaling theory, managers will settle for disclosure over non-disclosure. However, it should be noted that the costs of disclosure should outweigh the benefits. Signaling theory advocates that firms considered 'healthy' in terms of better earnings and performance will probably disclose more information than 'distressed' firms. Distressed firms are those whose performance is spiraling down probably due to economic recession and poor management strategies (Wruck, 1990).

**Resource Based Theory**

As cited in Donavan, (1984), resource based theory was propounded by Wernerfelt in the year (1984). Ali et al., (2014) define the resource-based theory (RBT) as a method of analyzing and identifying a firm's strategic advantages based on examining its distinct combination of assets, skills, capabilities, and intangibles as an organization. This theory is concerned with internal firm characteristics and their effect on firm performance. It views the firm as a bundle of resources which are combined to create organizational capabilities which it can use to earn above average profitability (Donavan, 1984).

Each firm develops competencies from these resources, and when they are well developed, these become the source of the firm's competitive advantages. This theory will aide in explaining profitability variation of intra industry firms as it specifically addresses firm characteristics rather than industry factors. The financial characteristics are normally measured by leverage ratios and sales which enable the firm to increase its project financing by borrowing from debt providers. The size of a firm is one of the resources the firm can use to gain competitive advantage, whereas business experience of the firm gives the firm organizational capabilities that it can use to gain a competitive advantage over its competitors thus being able to earn an above average financial performance.

**Agency Theory**

Jensen and Meckling, (1976) developed agency theory. As the name suggests, the theory tend to explain the relationship between agents and owners of the business. For this reason, agency theory is used mostly in explanatory models. Conditionally, principals normally give orders to their agents while the agents abide by the instructions of their principals. However, the agents have specific interests when taking these orders from the principals who give orders and their specific interests should not be convergent.

Furthermore, because of specialization, the agent has advantage of achieving result, the used process and the important information on he/her tasks. The main challenge is that, the agent is the main actor in utility maximization might use that advantage for he/her personal interests (Adeyemi & Oboh, 2011).

As recognized by the agency theory, a wide separation exists between the management and ownership hence results in conflict of interest between the firm owners and the agents. The theory also asserts that the managers normally take advantage of the situation by expropriating the cooperate cash flow for their personal gain or interest resulting to inefficiency, loss of assets and of firm values. Moreover, the theory identifies small and large shareholders as the main variables which can affect the firms' performance. The members of the board or board size can positively influence the voluntary disclosure of firms since they can monitor managers indirectly by using incentives.
Stakeholder Theory
Freeman, (1983) defines stakeholders as 'any identifiable group or individual on which the organization is dependent for its continued survival 'and those groups or individuals can affect and are affected by the achievement of an organization's mission'. It is important to note the difference between stakeholders and shareholders. According to Boesso and Kumar, (2007), the stakeholder theory suggests that an organization's management is expected to take on activities expected by those identifiable groups or individuals who can affect and who are affected by the achievement of an organization's objectives. Companies disclose information voluntarily to meet the stakeholders' expectations and to deliver more information about the company's activities that may affect these stakeholders.
According to stakeholder theory, companies are obligated and accountable to a variety of stakeholders who affect and are affected by business activities (McWilliams, Siegel & Wright, 2006). These stakeholders are not limited to shareholders (owners of the company), because stakeholders include employees, customers, suppliers, creditors, government and other groups in society (Clark 1998; Mallin, 2007). Further, consistent with stakeholder's theory, when managers are making decisions, they should take into consideration the variety of stakeholders and their interests (Deegan & Samkin, 2009). However, relationships among stakeholders are complicated and they have different, sometimes conflicting interests (Chen & Roberts, 2010). Therefore, managers need to make balanced judgments about how to satisfy these different stakeholders interests (El-Diftar, 2016).

Legitimacy Theory
Legitimacy theory has widely been used in relation to socio-economic and environmental disclosure. It stems from the fact that business organizations have a moral obligation to operate within the norms of the society at large. According to Dowling and Pfeffer, (1975) legitimacy theory is a condition whereby the value systems of an organization are in harmony with those of the society. Organizations do not only work in the interest of their investors, but they also ensure that their actions do not negatively affect the environment in which they conduct their business by avoiding pollution and other illegal activities. Hence, if managers make out that the operations of their organizations are contrary to what society expects of them, then there is need to immediately reinforce legitimacy (Dowling & Pfeffer, 1975).
Society normally permits entities to continue with their operations for as long as they meet their expectations. For that reason, there exists a 'social contract' between an organization and the society in which it operates (Deegan, 2002). If a company's activities are not carried out with the societal norms in mind, the community will work to ensure the company ceases its operations. This amounts to threats to organizational legitimacy and adversely affects the company's corporate image and reputation. This is the reason why most companies would prefer to disclose their efforts towards Corporate Social Responsibility (CSR) in their annual reports to communicate their legitimacy to the community.

Conceptual Framework
This section dealt with the operationalization of the variables of the study, that is, corporate attributes and voluntary disclosure.

Corporate Attributes
Corporate attributes examined by this study are firm size, profitability, liquidity, leverage and age of the firm. These variables are discussed in turns as follows:
Firm size
Firm size can be identified as an important variable which affect the level of corporate disclosure. Agency problem can be efficiently controlled by small noncomplex organizations (Fama & Jensen, 1983). Therefore, it suggests that if the firm size is small then the agency cost also will be decreased. Therefore, to avoid this agency conflict, larger firms may disclose more voluntary information and this suggestion is supported by the studies Cornett et al., (2007); Damarchi et al., (2012). These studies explained the reasons behind to have this kind of relationship. Firms should incur more cost to prepare and disclose the information and it became financial burden to small firms, but large firms can incur that expenditure without burden (Naser et al., 2002).

Profitability
Profitability is the result of a company's operation over a period of time. When profitability is high and a firm achieves a high margin of profit, the managerial groups are motivated to disclose more information in order to show off good reputation to the consumers, shareholders, investors and other stakeholders (Ullmann, 1985). Indeed, firms would normally only engage in voluntary disclosures when they have made some economic gains. This is because disclosing voluntary information entails cost, which firms will only bear when there is sufficient profit beyond fulfilling shareholders' obligation (Brammer & Pavelin, 2006). Studies on relationship between profitability and the extent of voluntary disclosure came with mixed findings by using various proxies for measuring profitability such as net profit (NP), return on capital employed (ROCE), dividend per share (DPS), earnings per share (EPS), return on assets (ROA) and return on equity (ROE).

Leverage
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. 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. Cormier and Magnan, (2002). Brammer and Pavelin, (2006) demonstrated a negative association between voluntary disclosure and leverage. Nevertheless, Roberts, (1992) and Naser et al., (2006) reported a positive relationship. Most studies in voluntary 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 social responsibility. As a result, the polluting companies will have a preference to report more voluntary information if they have more debt.

Liquidity
Although liquidity is not a new concept in accounting and finance field, it has no universally accepted definition. This is largely due to the fact that liquidity arises from different economic perspectives for it being the engine of any business (Marozva, 2015). Adler, (2012) assert that liquidity is seen as a cost, whose effect on return on assets has to be assessed. Taking bearing from the banking sector, Marozva, (2015) posits that liquidity is simply the ability of a bank to maintain sufficient funds and or reserves to pay for its maturing obligations. The study seeks to link liquidity to the firm's ability to immediately meet cash, cheques, other withdrawal obligations and legitimate new loan demand while abiding by existing reserve requirements.
**Firm Age**

Company age has been assessed in different studies (Owusu-Ansah, 1998; Akhtaruddin, 2005, Alsaeed, 2006) even though some studies take it as a control variable. Older companies are more likely to disclose information than new ones, because of the ease and low cost of collecting and analyzing data, the presence of track records and stability in the market. Moreover, Camfferman and Cooke, (2002) suggest that age of a company should be investigated by future studies. The extent of a company's disclosure may be influenced by its age, which is a stage of development and growth (Owusu-Ansah, 1998; and Alfaraih & Alanezi, 2011). Older firms that are well-established are likely to disclose more than younger companies (Sejjaaka, 2003). This is based upon arguments that new companies may encounter difficulty in making changes to comply with the requirements of the law (Abbott, Park & Pater, 2000).

**Voluntary Disclosure**

Voluntary disclosure can be seen as a response to several factors, such as changes in capital markets, changes in business environments and/or organization (Healy & Palepu, 2001). Previous studies have also shown that firms that are upfront in their disclosures tend to experience cheaper cost of capital (Bostosan 1997, Karamanou & Vafeas, 2005, Leuz & Verrecchia, 2000, and Sengupta, 1998). Information in the annual reports should be disclosed to reflect timeliness (Ball & Shivakumar, 2005), relevance (Ball, Robin & Sadka, 2008), Comparability (Lin & Wang, 2001) and Understandability (Courtis 1998, and Smith & Taffler, 1992). But, however, differences exist in disclosure practices across countries due to a range of reasons (Nobes 1998), some of which include differences in historical antecedents, legal, economic and political trajectories and institutional differences (La Porta, Lopez-de-Silanes & Shleifer, 2008).

**Review of Related Empirical Studies**

Several studies were carried out in relation to firm attributes and voluntary accounting disclosure. The following are the review of such studies in a chronological order.

Asmare and Viswanadham, (2022) examined the extent of voluntary disclosure level and its determinants. In order to achieve their study objectives, they developed a voluntary disclosure index including 65 items grouped into nine categories by employing content analysis in the annual reports of commercial banks in Ethiopia for the time period of 2017 to 2021. Using ordinary least square regression, their study found that, disclosures about corporate strategy were the highest and the level of corporate governance information is the lowest level of voluntary disclosure in the annual reports of the study time periods. Furthermore, their study revealed that, there is a positive relationship between commercial bank age, size and return on asset and voluntary disclosure, which is statistically significant. The study done by Asmare and Viswanadham, (2022) although distinct from the industrial goods firms, provides new insight into determinants of voluntary disclosure in the annual reports.

Rahman and Rahman, (2021) analyzed and explain the influence of corporate characteristics on voluntary disclosure. Corporate characteristics that are tested in this study are five variables, including: profitability, liquidity, leverage, firm size, and the firm size. They used corporate governance as a moderating variable for being able to explain the effect of firm characteristics on voluntary disclosure. Data for the study were
Seran, (2021) analyzed the influence of firm characteristics and voluntary disclosure levels in the annual reports of listed companies in Indonesia Stock Exchange. To Seren, (2021), the degree of voluntary disclosure is calculated by an index which is based on background information, non-financial statistic, projected information, and management discussion and analysis. Using 434 companies in 2021 as a sample and with application of multiple regression analysis; his study found that, firm characteristics; profitability, firm size, liquidity and industry type have significant relationship with voluntary disclosure, while leverage, age and ownership have no significant with voluntary disclosure. Seren's study can be very helpful for shareholders, creditors and financial management decisions about giving voluntary disclosure, as it provides adequate information for decision making given the wide variety of firm corporate disclosures tested in the study.

Adebayo and Ezejiofor, (2021) examined the effect of voluntary environmental disclosure on the corporate performance of quoted consumer goods manufacturing firms in Nigeria. Their study specifically examined the effect of voluntary disclosure on the current ratio and quick ratio. They used the ex post facto research design and their study population was drawn from selected consumer good manufacturing firms quoted on the floor of the Nigerian Stock Exchange. Using a correlation test statistic, they found that, voluntary disclosure is positively related to the current ratio and a quick ratio of quoted manufacturing companies in Nigeria. Their study findings is faulted on the basis that, it failed to test the causality of current and quick ratios to voluntary disclosure rather it hinged on just the relationship which does not inform scholars and practitioners of the causal effects.

Tran, (2021) studied the impact of firm characteristics on the voluntary disclosure of the top 50 listed firms in Forbes Vietnam from 2015 to 2019. His study uses the ordinary least squares of time-series data to test the regression model while he used the signaling and agency theory to explain the relationship between firm characteristics on voluntary disclosure. Tran's results show three variables of firm characteristics that positively impact the voluntary disclosure of 50 listed firms, including firm size, growth rate of market share value to book value, and audit type, in which audit type has the strongest influence.

A recent study by Bicer and Milad, (2020) examined the impact of bank attributes on voluntary disclosure of banks in Borsa Istanbul for the year (2013- 2017). The study used the checklist of 64 items. The result of multivariate statistical analyses shows that leverage and age are positive and statically significant with voluntary disclosure.

Enache and Hussainey, (2020) investigated the joint effect of voluntary disclosure and corporate governance on firm performance, arguing that the two mechanisms may be independent, substitutive, or complementary. Their findings on data from a sample of US biotech firms indicate a substitutive effect on firm performance, for firms with products in advanced stages of development.

Nwadialor and Nwese, (2020) investigated the effect of Non-Financial Disclosures on performance of non-financial firms' in Nigeria. Their study is vital as it portrays the extent to which non-financial disclosures influences firms' performance. Three hypotheses were formulated to guide the investigation and the statistical test of parameter estimates was conducted using panel regression model operated.
study findings generally indicate that Corporate Governance and voluntary disclosure have exerted significant influence on firms' performance (ROE) at 5% significant level. Based on this, the study concludes that voluntary disclosures have positively improved firm's performance over the years.

Zhou, (2019) by using a sample of Chinese publicly traded manufacturing firms found that corporate aspects like board of directors and ownership structure are associated with the decision of voluntary disclosure on corporate social responsibility reports. Two meta-analysis studies investigated the effect of corporate governance on disclosure.

Aluwoung and Fodio, (2019) investigates the influence of Firms attributes and corporate voluntary information disclosure by industrial goods in Nigeria. They used secondary data collected from the annual reports and accounts of 9 randomly selected industrial goods companies for the period 2011 to 2017. Their study analyzed the data using the logistic regression technique. The study finds that corporate attributes significantly affect the voluntary information disclosure of industrial goods in Nigeria. Secondly, profitability has a significant positive effect on voluntary disclosure by industrial goods companies in Nigeria. The study also finds that firm size has a significant positive effect on voluntary disclosure. Lastly, the study finds a positive but insignificant effect of auditor types on the voluntary disclosure of industrial goods companies in Nigeria.

Matemeh, (2019) investigated and examined the relationship between specific company characteristics and voluntary disclosure level in annual reports of 56 Jordanian Public Shareholding Industrial companies listed on the Amman Stock Exchange over the period 2014-2016. His study focused on audit type, firm age, firm size, profitability, and leverage as company characteristics. Using multiple regression analysis, he found a positive association between voluntary disclosure level and audit type, firm age, firm size (in terms of total asset) and profitability. In Contrast, negative association is observed between companies listing leverage and voluntary disclosure. Matemeh's study contributes to the understanding of voluntary disclosure in the context of developing countries in general and Jordan in particular.

Sanni, (2018) assessed the effect of corporate characteristics on voluntary disclosure of listed financial service firms in Nigeria for the period of 2014-2018. His study used correlational research design. Using panel regression technique, he found that, profitability and leverage have a negative and significant effect on the voluntary disclosure of financial service firms in Nigeria. On the other hand, a positive and significant relationship exists between firm size and voluntary disclosure.

Latif, Shahid, Haq, Waqas and Arshad, (2018) investigated the impact of corporate governance on firm performance of manufacturing companies in Pakistan. Panel research design was adopted and secondary data collected from 12 manufacturing companies from 2005 to 2012. Data was analyzed using regression, correlation and descriptive statistics. Results of the study revealed positive and significant impact of corporate governance on firm performance of manufacturing companies in Pakistan. It would have been appropriate to report panel data diagnostics tests in addition to regression modelling.

Nurudeen, Ahnda & Shalli, (2018) examined the effect of corporate characteristics on voluntary disclosure of listed financial service firms in Nigeria for the period. Their study used mixed method approach. Data for their study was extracted from yearly-published financial report of listed financial service firms in Nigeria. All the listed financial service firms were considered for the population of this study, while the sample was adjusted population of thirteen (13) listed financial service firms in Nigeria. Paneled regression technique was used to test the study hypotheses. The study result revealed, that
profitability and leverage have negative and significant effect on the voluntary disclosure of financial service firms in Nigeria.

Ezhilarasi and Kabra1, (2017) investigates the impact of corporate attributes on companies' decision to disclose environmental information since corporate governance ensures fair, responsible, credible and transparent corporate behaviors to its stakeholders. The corporate governance attributes used in their study are Board size, chief executive officer duality, domestic institutional ownership and foreign institutional ownership. The study measured environmental disclosures by a checklist of items based on Global Reporting Initiative guidelines as well as environmental regulations prevailing in India. Employing panel data regression model, the result indicates that foreign institutional ownership is the most important corporate governance attribute that engages corporates in environmental disclosure behavior.

Uyar and Kilic, (2017) investigated the influence of firm characteristics on voluntary disclosure of financial ratios in the annual reports of Turkish listed companies using a sample of industrial firms listed in the Istanbul Stock Exchange (ISE). As methodology, content analysis was utilized to determine the financial ratio disclosure level of the firms. The findings revealed that Turkish listed firms disclose, on average, 5.37 financial ratios in their annual reports. Count data regression models (Poisson and Negative binomial) were used to test the hypotheses. The results of multivariate analyses indicate that firm size, auditor size, profitability and ownership diffusion have significant positive association with voluntary disclosure level of financial ratios, while leverage does not.

Hassan, Umar, Rahman and Hossain, (2016), examine the linear relationship between corporate attributes and corporate accruals (discretionary accruals) in Bangladesh. The behavior of corporate accruals is explained by corporate attributes such as asset size, turnover, earnings per share, and number of shareholders, year of listing, international link of audit firm, ownership structure, internationality, market category, and leverage. Using regression (OLS), a statistically significant relationship is observed between corporate accruals and asset size. They also observed inconsistent growth of inventory, faster growth of accounts receivable with an overvaluation of fixed assets reported by probe committee. Indeed, corporate accruals are not dependent on corporate attributes but rather on the mindset of the corporate manager.

Okoth and Coskun, (2016) investigated the effect of corporate attributes on firm performance. The study adopted descriptive research design and simple random sampling to select non-financial listed companies in Istanbul securities exchange. Secondary data was collected for period 2009 to 2013. Data was analyzed through regression, correlation and descriptive statistics. Results of the study revealed positive and significant effect of board governance index and economic value added. Moreover, there was positive and non-significant effect of governance index and return on assets. It would have been appropriate to adopt data for a long period of time to minimize possibilities of small sample size problem.

Nassreddine, (2016) examined determinants of voluntary information disclosure by Tunisian companies. The methodology is based on qualitative approach, using the cognitive mapping technique. To take into account the specificities of the Tunisian economic, conducted a qualitative analysis in the light of which we can identify the factors motivating the disclosure of voluntary information. The qualitative analysis is based on the census via a set of cases carried out in several Tunisian companies to understand their
perceptions regarding the determinants of voluntary disclosure which it was found that corporate attribute influence voluntary disclosure of Tunisian firms.

Sweiti and Attayah, (2016) investigated the effect of critical factors on voluntary disclosure in Palestine securities exchange. The study hypotheses that voluntary disclosure is influenced by non-executive directors, audit committee, board size, number of shareholders and board activities. The study adopted descriptive research design. Purposive sampling was applied to selected 35 listed companies for period 2007 to 2012. Data was analyzed using descriptive statistics, correlation and regression analysis. Regression analysis revealed positive and significant relationship between non-executive directors, audit committee, board size, and members of shareholders, board activities and voluntary disclosure in Palestine. It was appropriate to have executed regression analysis assumptions prior to fitting regression models.

Ohidoa, Omokhudu and Oserogho, (2016) examine the determinants of environmental disclosure, indicated a positive association between audit firm size and environmental disclosure while leverage has no significance effect on the company's decision to disclose environmental information. A similar work had been carried out by Dibia and Onwuchekwa, (2015) which examined the determinants of environmental disclosures in Nigeria, the results of the study uncovered a negative impact on firm size, leverage and audit firm to disclose environmental information by the Nigerian quoted companies. The influence of firm size on EAD is significant while that of leverage and audit firm is insignificant. Profit after tax appear to have positive impact on the firm's decision to disclose significant environmental information.

Gunawan and Lina, (2015) examined the influence of mandatory disclosure, voluntary disclosure on investor reaction to either partially or simultaneously market ratios of firms. The study was conduct on 38 manufactured companies listed on Indonesian Stock Exchange. There are five variables that mandatory disclosure, voluntary disclosure as the independent variable, cash flow operating activities (AKOp), cash flows investing activities (AKIn), cash flows financing activities (AKDa) as the control variable and the investor reaction was measured by using trading volume activity as the dependent variable. The result indicates that mandatory disclosure partially affect the investor reaction, mandatory disclosure, voluntary disclosure simultaneously affects the investor reaction. Limitations are mandatory disclosure, voluntary disclosure, cash flow operating activities (AKOp), cash flow investing activities (AKIn), cash flow financing activities (AKDa) are less able to measure the volume of stock trading prediction of the future.

Jouirou and Chenguel, (2014) particularly examined the effect of firm performance on voluntary disclosure in annual reports of technology industry in the stock exchange of Thailand. He used OLS for model inspection. His study results reveal that firm size and audit firms positively affect voluntary disclosure, while leverage and concentration ownership have no effect on voluntary disclosure.

Aljifri, Alzarouni, Ng and Tahir, (2014), provided empirical evidence of the impact of firm specific characteristics on corporate voluntary disclosure amongst UAE companies. A total of 153 public, joint-stock companies, listed and unlisted, were incorporated at the time of study. Both descriptive statistics and multiple regression analyses are used to test the relationship between the characteristics of UAE firms and the extent of their voluntary disclosure. Eight hypotheses were established to examine the relationship between a number of explanatory variables (namely, type of industry, listing status, return on equity, liquidity, market capitalization, foreign ownership, non-executive directors, and audit committee) and the extent of disclosure in corporate annual reports. The results of this study show that listing status, industry
type, and size of firm are found to be significantly associated with the level of disclosure. This finding not only provides support for previous studies, but also is of relevance to those in the UAE who want to understand corporate disclosure and should also be of interest to UAE user-groups. Conclusions drawn from this study may be of interest to policy makers and regulators who want to improve corporate voluntary disclosure in their countries.

Tufail, (2014) carried out studies on the determinants of voluntary disclosures of listed firms in Pakistan. Population of the study comprises of 372 manufacturing firms as at 2012. Data collected was analyzed with the aid of paneled regression. The findings of his study revealed that age, firm size, profitability and auditor size have positive and significant relationship with voluntary disclosure. However, leverage has significant and negative relationship with voluntary disclosure.

Basuony and Mohamed, (2014) examine the determinants and characteristics of voluntary internet disclosure by listed companies in Oman. The study uses archival data from listed companies on Muscat Securities Market (MSM). Binary Logistic Regression analysis is used to examine the determinants of internet disclosure reporting. The results of this study reveal that ROA is one of the factors that impacts internet disclosure reporting. Also, the results reveal that ownership concentration has a negative effect on the internet disclosure. The study provides insights into corporate internet disclosure in the GCC countries that will benefit all stakeholders with an interest in corporate reporting in this important region of the world.

Najm-Ul-Sehar, Bilal and Tufail, (2013) investigate the factors affecting voluntary disclosure in the annual reports of listed companies in Karachi stock exchange (KSE) of Pakistan. The degree of voluntary disclosure is calculated by an index which is based on financial, non-financial and strategic information. For exploring determinants of voluntary information, latest data of 372 manufacturing companies of Pakistan in 2012 were collected. Most recommended cross sectional data analysis techniques and multiple regression analysis was used in this study. In order to obtained robust results of regression analysis, diagnostic tests were applied. The finding of this study shows that firm characteristics; profitability, firm size, age and auditor size have positive and significant relationship with voluntary disclosure whereas, leverage has negative and significant relationship with voluntary disclosure.

Chalaki, Didah and Rhiahenizhad, (2012) investigated the effect of corporate attributes on voluntary reporting quality in firms listed in Tehran Stock Exchange (TSE) during the period of 2003 to 2011. Using multiple regression, the study results show that there is no relationship between corporate governance attributes including board size, board independence, ownership concentration, institutional ownership and voluntary reporting quality. In addition, no evidence is found to support significant relationship between control variables (audit size, firm size and firm age) and voluntary reporting quality.

Bhyani, (2012) asserted the extent of corporate disclosure practices of listed non-financial firm in India for the year 2008-2011, using 100 firms as sampled. The study used 74 voluntary disclosure checklists, the multiple regression result shows a positive and significant association among leverage, firm age and voluntary disclosure.

Similarly, Kolsi, (2012) examined the determinants of corporate voluntary disclosure of 52 Tunisian firms for the year 2009. The study developed 45 voluntary disclosure checklist items. The result of multivariate results showed that firm leverage is positively and significantly influence voluntary disclosure. In contrast to above findings, Uyar and Kilic, (2012) examined the impact of firms attributes on voluntary disclosure of listed manufacturing firm in Turkish for the period of 2010, using 129 manufacturing firms as sampled. The study used 96 voluntary disclosure checklists items, the univariate and multivariate (OLS) result shows a negative and significant association among leverage and voluntary disclosure.
METHODOLOGY

Research Design
This study adopts the ex-post facto research design. Ex-post facto research design pertains use of already existing data to predict current events. This precisely concerns secondary data.

Population of the Study
The population of this study comprises of the 13 listed industrial goods firms on the Nigeria Exchange Group (NGX) as at December 2020.

Sample and Sampling Technique
The study employed the judgmental sampling technique to choose 11 listed industrial goods firms as sample for the study. The basis for choosing 11 listed industrial goods firms is premised on the fact that 2 (BUA cement & NOTORE chemicals PLC) firms have no complete data to cover the study period (2011-2020). Thus, only the listed companies (11) with complete data set for the study period are used as sample size. The companies are; Austin Laz, Berger Paints, Beta Glass, CAP PLC, CUTIX, Dangote cement PLC, GREIF, LAFARGE, Meyers PLC, Premier Paints, and TrippleG PLC.

Sources and Methods of Data Collection
Historical data of firm size, profitability, leverage, liquidity, firm age and voluntary disclosure is collected from published annual report and accounts of the firms available on their website and Nigeria Exchange Group website. These are secondary data and the most suitable for good empirical finding of corporate attributes on voluntary disclosure.

Table 2: Voluntary Disclosure checklist

<table>
<thead>
<tr>
<th>S/N</th>
<th>Item</th>
<th>Checklist</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Financial data disclosure</td>
<td>Disclosure that includes data about the financial risk associated with investment made by the company</td>
<td>‘1’ if disclosed and ‘0’ if not disclosed</td>
</tr>
<tr>
<td>2</td>
<td>General/strategic information disclosure</td>
<td>This refers to information about the how the company allocates its’ financial and non-financial resource to economic activities, the implementation process, and how the plans of the company are achieved.</td>
<td>‘1’ if disclosed and ‘0’ if not disclosed</td>
</tr>
<tr>
<td>3</td>
<td>Forward looking disclosure</td>
<td>Disclosure about the current and future business plans of the company in terms of investment, tax related matters, contracts, and obligations. This enables investors to forecast the performance of company</td>
<td>‘1’ if disclosed and ‘0’ if not disclosed</td>
</tr>
<tr>
<td>4</td>
<td>Social and environmental disclosure</td>
<td>This are information reported in the annual reports of the companies about their contribution social welfare of workers, customers, suppliers, and the host communities. It also includes information about how the companies’ economic activities affect the environment</td>
<td>‘1’ if disclosed and ‘0’ if not disclosed</td>
</tr>
<tr>
<td>5</td>
<td>Corporate governance disclosure</td>
<td>This is the companies’ disclosure of information about the board members in terms of their nationality, qualification, gender diversity, remuneration, and other characteristics that enables external stakeholders assess the level of the companies’ adherence to global corporate governance standards.</td>
<td>‘1’ if disclosed and ‘0’ if not disclosed</td>
</tr>
</tbody>
</table>

Source: Authors compilation 2022.
A score of 1 will be allocated for each of the items in the five categories that voluntarily disclosed. On the other hand, a score of 0 will be allocated for each of the items in the five categories that is not disclosed. At the end, the total disclosed item will be summed up and divided against the 5 disclosure criteria to ascertain the actual percentage of disclosure index. The disclosure percentage index is used as the measure for voluntary disclosure for the study.

3.5 Model Specification
The study adapted the multiple regression model of Sweiti and Attayah, (2016) as well as the content disclosure index used by Abeywardana and Panditharathna, (2016), and Uyar and Kilic, (2017) stated as:

\[ \text{VD} = f (FS, PROF, LEV, LIQ & FA) \] \hspace{1cm} \text{Model 1} \]

In econometric function;

\[ \text{VD} = \alpha + \beta_1 \text{FS} + \beta_2 \text{PROF} + \beta_3 \text{LEV} + \beta_4 \text{LIQ} + \beta_5 \text{FA} + \text{U} \] \hspace{1cm} \text{Model 2} \]

Where;

\[ \alpha = \text{Constant} \]

\[ \text{FS} = \text{Firm size (Log of total assets of the firm at that time)} \]

\[ \text{PROF} = \text{Profitability (Net profit divide by total assets of the firm at that time).} \]

\[ \text{LEV} = \text{Leverage (Total liability to total equity of the firms at a time).} \]

\[ \text{LIQ} = \text{Liquidity (Current assets to current liability of the firm at a time).} \]

\[ \text{FA} = \text{Firm age (Log of number of years the firm has been incorporated & is in operation of the firm at a time).} \]

\[ \text{VD} = \text{Voluntary Disclosure (The total number of content “1” found divided by the total disclosure criteria “5”).} \]

\[ it = \text{Cross-section( ) at time ( )} \]

\[ U = \text{Error term used in the model.} \]

\[ \beta_1, \beta_2 = \text{Beta coefficient of the independent variables} \]

RESULTS AND DISCUSSION
This section presents the data extracted from the annual financial statement of the selected listed industrial goods firms that are sampled for the study. An analysis of the data is done using a panel regression method. Finally, the stated hypotheses are tested, and the discussion of the result from the tested hypotheses is done in this chapter of the study.

4.1 Data Presentation and Analysis
In this section, analyses of the data presented in Appendix I of the study are done with the aid of E View version 9. Furthermore, this section presents the descriptive statistics of the data extracted from the annual financial statement of the listed industrial goods firms that are sampled for the study. The correlation analysis is done in the subsequent section, as well as the regression analysis.

4.1.1 Descriptive statistics
The descriptive statistics for both the dependent and independent variables are presented in Table 1 below:
Table 3: Descriptive statistics table

<table>
<thead>
<tr>
<th></th>
<th>VD</th>
<th>FS’000</th>
<th>PROF</th>
<th>LEV</th>
<th>LIQ</th>
<th>FA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>0.785455</td>
<td>5,223,205</td>
<td>0.167245</td>
<td>0.699753</td>
<td>1.434092</td>
<td>37.77273</td>
</tr>
<tr>
<td>Maximum</td>
<td>1.000000</td>
<td>91,444,954</td>
<td>0.958652</td>
<td>3.258212</td>
<td>5.896033</td>
<td>63.00000</td>
</tr>
<tr>
<td>Minimum</td>
<td>0.400000</td>
<td>116,376.0</td>
<td>0.001854</td>
<td>0.015552</td>
<td>0.024486</td>
<td>21.00000</td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>0.181146</td>
<td>12558124</td>
<td>0.191358</td>
<td>0.482125</td>
<td>0.852771</td>
<td>14.49749</td>
</tr>
<tr>
<td>Skewness</td>
<td>-0.228830</td>
<td>2.388573</td>
<td>1.955904</td>
<td>1.566846</td>
<td>1.745115</td>
<td>-0.677386</td>
</tr>
<tr>
<td>Observations</td>
<td>110</td>
<td>110</td>
<td>110</td>
<td>110</td>
<td>110</td>
<td>110</td>
</tr>
</tbody>
</table>

Source: E_View Output in appendix II

Table 3 presents the descriptive statistics of all the variables. N represents the number of observations and therefore the number of observation for the study is 110.

Voluntary disclosure (VD) has a mean of 0.7854455 with a deviation of 0.181146. Furthermore, VD records a minimum and maximum value of 0.40000 and 1.00000. This shows that some of the companies disclosed an item in each of 5 checklists criterial to score 100% in a particular year. The result also reveals that firm size (FS) reflects a mean of approximately 5.2 billion Naira with a deviation of 12.6 billion Naira. FS also revealed a minimum value of approximately 116.4 million Naira and a maximum value of 91.4 billion Naira. Profitability (PROF) reveals a mean of 0.167245 with a deviation of 0.191358. PROF further revealed a minimum and maximum value of 0.001854 and 0.958652 respectively. More so, the result further reflects a mean of 0.699753 and a deviation of 0.482125 in respect to leverage (LEV) of the firms. LEV also records a minimum and maximum value of 0.015552 and 3.258212. The result also reveals that Liquidity (LIQ) reflects a mean of 1.434092 with a deviation of 0.852771. LIQ also revealed a minimum value of 0.024486 and a maximum value of 5.896033. Firm age (FA) recorded a minimum and maximum value of 21.00000 and 63.00000. FA also recorded a mean of 37.77273 and a standard deviation of 14.49749.

To test for normality/stationarity of data, the Skewness statistics are used. The ratio of skewness to its standard error can be used as a test of normality. According to Berenson and Levine, (1999) you can reject normality if the ratio is less than -2 or greater than +2. A large positive value for skewness indicates a long right tail; an extremely negative value indicates a long left tail; which is an indication of non-normality of data.

The data set for all the variables reveal skewness statistic values that are between the range of -2 and +2 which means that all the data values are within the accepted skewness range for normality thus all the data are normalized. The result of the descriptive statistics skewness in respect to the study variables reveals that the set of data has no outliers to distort the outcome of the regression result. Also, this is further proof that the data gotten represents industrial goods sector corporate attributes and voluntary disclosure data without extreme bias.

4.2 Diagnostic test

In this section, the various diagnostic test of data for the regression is done. The section starts with the correlation test, then the multicollinearity test, and the heteroscedasticity test.
4.2.1 Correlation Analysis
This section presents in the table below the result of the correlation analysis between the independent variables.

Table 4: Correlations table

<table>
<thead>
<tr>
<th></th>
<th>FS</th>
<th>PROF</th>
<th>LEV</th>
<th>LIQ</th>
<th>FA</th>
</tr>
</thead>
<tbody>
<tr>
<td>FS</td>
<td>1</td>
<td>-0.2900</td>
<td>0.1854</td>
<td>0.4642</td>
<td>-0.0483</td>
</tr>
<tr>
<td>PROF</td>
<td>-0.2900</td>
<td>1</td>
<td>-0.1599</td>
<td>-0.1403</td>
<td>0.2964</td>
</tr>
<tr>
<td>LEV</td>
<td>0.1854</td>
<td>0.0153</td>
<td>1</td>
<td>-0.1403</td>
<td>-0.3528</td>
</tr>
<tr>
<td>LIQ</td>
<td>0.4642</td>
<td>-0.1599</td>
<td>-0.1403</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>FA</td>
<td>-0.0483</td>
<td>0.2964</td>
<td>0.2918</td>
<td>-0.3528</td>
<td>1</td>
</tr>
</tbody>
</table>

Source: E_View Output in appendix II

Table 4 shows the correlation for all the independent variables to ensure the test for multicollinearity of the independent variable since they consist of unranked data. Correlation considers two variables at a time to determine how they relate to each other. These types of checks are necessary because high correlation cause problems about the relative contribution of each predictor to the success of the model (Gujarati & Sangeeta, 2007). The correlation matrix above shows the absence of multicollinearity among the explanatory. All the variables show a low correlation with the highest correlation estimated at 0.46 (Between FS and LIQ). Correlation statistics that are above 0.75 are considered harmful for analysis (see Gujarati and Sangeeta, 2007) but this is not the case with the current study.

Multicollinearity and Heteroscedasticity test
To avoid running a spurious regression, both the multicollinearity test and the heteroscedasticity test carried out to ensure that the variables employed in this study are stationary. For this purpose, the Variance Inflation Factor, and the Breusch-Pagan-Godfrey test are employed to test for multicollinearity and the heteroscedasticity of data. The result of the test is presented in the table below.

Table 5: Result for Multicollinearity and Heteroscedasticity

<table>
<thead>
<tr>
<th>TEST</th>
<th>TEST STAT</th>
<th>FRQ Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multicollinearity</td>
<td>Variance Inflation Factor (VIF)</td>
<td>&lt;10 (1.17 Centered) – 1.53</td>
</tr>
<tr>
<td>Heteroscedasticity</td>
<td>Breusch-Pagan</td>
<td>0.1446 (Obs. Chi. Sq. Prob)</td>
</tr>
</tbody>
</table>

Source: E_View Output in appendix II
Results for the VD model in table 5 above reveal centered VIF statistics values of less than 10 for the model, which proves that the set of independent variables data are free from multicollinearity issues. The test for Heteroscedasticity reveals a Breusch-Pagan statistics of 0.1446>0.05 (P.Value), which means that the set of data for the variables also does not contain issues of Heteroscedasticity.

**Regression of the estimated model summary**

This section presents the results produced by the model summaries for further analysis;

<table>
<thead>
<tr>
<th>Statistic</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>i. Hausman Test</td>
<td>0.1553</td>
</tr>
<tr>
<td>Decision</td>
<td>Random effect model</td>
</tr>
</tbody>
</table>

**Source: E_View Output in appendix II**

To enable the study to choose between the pooled model, fixed-effect model, and the random effect model, the Hausman test is conducted with the comparable results/tables placed in Appendix II at the end of the study for perusal. The result of the Hausman correlation test from table 6 above shows a probability value of 0.1553>0.05 which is not significant thus, informs the preference of the random-effect model from the Hausman test. Thus the random effect model is analyzed below:

**Table 7: VD model summary Table**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>0.110330</td>
<td>0.283464</td>
<td>0.389220</td>
<td>0.6979</td>
</tr>
<tr>
<td>FS</td>
<td>0.093944</td>
<td>0.044481</td>
<td>2.112006</td>
<td>0.0371</td>
</tr>
<tr>
<td>PROF</td>
<td>0.067444</td>
<td>0.104577</td>
<td>0.644924</td>
<td>0.5204</td>
</tr>
<tr>
<td>LEV</td>
<td>-0.142829</td>
<td>0.039254</td>
<td>-3.638606</td>
<td>0.0004</td>
</tr>
<tr>
<td>LIQ</td>
<td>-0.047326</td>
<td>0.023552</td>
<td>-2.009412</td>
<td>0.0471</td>
</tr>
<tr>
<td>FA</td>
<td>0.164153</td>
<td>0.081703</td>
<td>2.009152</td>
<td>0.0471</td>
</tr>
</tbody>
</table>

**Source: E_View Output in appendix II**

Table 7, presents the regression result between FS, PROF, LEV, LIQ, FA, and VD. From the model summary table above, the following information can be distilled.

The $R^2$ which measures the level of variation of the dependent variable caused by the independent variables stood at approximately 0.169. The $R^2$ otherwise known as the coefficient of determination shows the percentage of the total variation of the dependent variable (VD) that can be explained by the independent or explanatory variables (FS, PROF, LEV, LIQ & FA). Thus the $R^2$ value of approximately 0.169 indicates that 16.9% of the variation in the voluntary disclosure (VD) of listed industrial goods firms can be explained by a variation in FS, PROF, LEV, LIQ, and FA while the remaining 83.1% (i.e. 100-
R^2) could be accounted by other variables not included in this model like the asset structure of the firms. The adjusted R^2 of approximately 0.129 indicates that if other factors are considered in the model, this result will deviate from the actual result by only 0.040 (i.e. 0.169 – 0.129). This result shows that there will be a further deviation of the variation caused by the independent factors by 4% if the other factors are to be included. Also, the result shows that there is a significant variation of Fisher's statistics (4.220824) at a probability value of 0.001560 which means the model as a whole is statistically fit.

The regression result as presented in table 5 above to determine the relationship between FS, PROF, LEV, LIQ, FA, and VD of the firms shows that when all the independent variables are held stationary or without the variable intercept model; the VD variable is estimated at 0.110330. This simply implies that when all independent variables are held constant, there will be increase (positive relationship) in the voluntary disclosure of listed industrial goods firms up to the tune of 0.110330 units occasioned by factors not incorporated in this study. Thus, a unit increase in FS will lead to an increase (positive relationship) in VD by 9.4%. Also, a unit increase in PROF will lead to increase (positive relationship) in VD by 6.7%. A unit increase in LEV will lead to decrease (negative relationship) in VD by 14.3%. A unit increase in LIQ will lead to decrease (negative relationship) in VD by 4.7% and a unit increase in FA will lead to increase in VD by 16.4%.

**Summary of Findings**

The following is the summary of the major findings of this study arrived at through the test of the coefficients of the variables in the model summary table and the test of the research hypotheses earlier formulated in this study. The major findings in respect to each objective, question, and hypothesis is as follows;

i. There is a positive relationship between firm size and voluntary disclosure of the listed industrial goods companies in Nigeria. Also, the result revealed a significant effect of firm size on voluntary disclosure of listed industrial goods companies in Nigeria.

ii. There is a positive relationship between profitability and voluntary disclosure of the listed industrial goods companies in Nigeria. But the result revealed an insignificant effect of profitability on voluntary disclosure of listed industrial goods companies in Nigeria.

iii. There is a negative relationship between leverage and voluntary disclosure of the listed industrial goods companies in Nigeria. But the result revealed a significant effect of leverage on voluntary disclosure of listed industrial goods companies in Nigeria.

iv. There is a negative relationship between liquidity and voluntary disclosure of the listed industrial goods companies in Nigeria. But the result revealed a significant effect of liquidity on voluntary disclosure of listed industrial goods companies in Nigeria.

v. There is a positive relationship between firm age and voluntary disclosure of the listed industrial goods companies in Nigeria. Also, the result revealed a significant effect of firm age on voluntary disclosure of listed industrial goods companies in Nigeria.

**Conclusions**

This study was carried out with the broad objective of examining the effect of corporate' attributes on voluntary disclosure of listed industrial goods companies in Nigeria. The study has five proxies that represent the corporate attributes and each was used to form a research hypothesis aimed at answering the
research questions in the study. Based on the study findings, the following conclusions are outlined:

i. Firm size has a positive significant effect on the voluntary disclosure of listed industrial goods companies in Nigeria.

ii. Profitability has a positive insignificant effect on the voluntary disclosure of listed industrial goods companies in Nigeria.

iii. Leverage has a negative significant effect on the voluntary disclosure of listed industrial goods companies in Nigeria.

iv. Liquidity has a negative significant effect on the voluntary disclosure of listed industrial goods companies in Nigeria.

v. Firm age has a positive significant effect on the voluntary disclosure of listed industrial goods companies in Nigeria.

**Recommendations**

In consonance with this study's findings, the following recommendations become imperative:

i. Listed industrial goods companies should continuously grow their assets to sustain growing demands of manufacturing dynamism and should disclose such dynamic assets to interested stakeholders. Part of that assets should include structural assets in terms of human intellectual capacity needed to address growing market demands that is highly influenced by information technology. Should companies disclose information concerning use of assets, it will repose investors' confidence that companies are poised for growth.

ii. The cost burden of voluntary disclosure on the profitability of the companies is a setback for the companies to attain their disclosure demands. Despite profit made by companies, they are lukewarm in engaging in voluntary disclosure due to the cost implication on profit. Thus, government should provide incentive through tax-rebait to companies for voluntary disclosure to offset the negative cost aspect of voluntary disclosure on profitability. This will encourage more voluntary disclosure by the industrial firms in Nigeria.

iii. Although leverage has a negative effect on voluntary disclosure by the companies, it is pertinent to understand that, more companies are funded by outsiders (debt), the more demand for voluntary disclosure to external stakeholders. As a result, companies should continuously improve their level of voluntary disclosure in order to access repose in the external financiers the needed confidence on how their funds are invested. This will help the company access more capital on the market should the need arise.

iv. Liquidity as well shows a negative effect on voluntary disclosure but there is need to provide more quarterly voluntary disclosures on the liquidity performance of the companies to inform short term creditors of how effective the companies meet their obligations. The more liquid the firm, the more demand for voluntary disclosure that tells the short term lenders and customers how responsive the firm is in catering for short term obligations.

v. Industrial goods companies should put into consideration the length of time they engage in a business method into consideration to become acquainted with the business environment for enhanced voluntary disclosure of business activities. The knowledge of the industrial as a result of age of the company will serve as a comparative advantage which might attract more financiers and customers to the companies.
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