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COMPANIES' ATTRIBUTES AND VOLUNTARY DISCLOSURE: A PANEL ANALYSIS OF LISTED INDUSTRIAL GOODS COMPANIES IN NIGERIA

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ABSTRACT
The study carried out a panel analysis of companies' attributes and voluntary disclosure of industrial goods in Nigeria. Using a quantitative research design, the study collected data (ranging from 2011 to 2020) from 11 listed industrial goods companies that were judgmentally sampled out of 13 companies on the Nigerian Exchange Group. The study findings show that; firm size has a 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 show that, leverage has a negative significant effect on the voluntary disclosure of listed industrial goods companies in Nigeria; while liquidity has a negative significant effect on the voluntary disclosure of listed industrial goods companies in Nigeria. Finally, it is found that,firms' age has a positive significant effect on the voluntary disclosure of listed industrial goods companies in Nigeria. As a result, the study recommends that, 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-rebate to companies for voluntary disclosure to offset the negative cost aspect of voluntary disclosure on profitability.

Keywords: Company attributes, voluntary disclosure, dynamic capability theory, and panel analysis.

1.0 INTRODUCTION:

Globalization, economic liberalization, and free capital mobility have resulted in strong and unprecedented competition in the world's capital markets, with developing countries suffering the most as a result of low levels of disclosure (Hassan, 2016). This contributes to a decline in investment as a result of investor skepticism and reliance on information contained in most firms' financial reports (Hasan, Omar, Abdul-Rahman & Hossain, 2015). According to Lobo and Zhou (2001), various stakeholders are interested in the firm success for different motives; while shareholders demand returns on their investments, creditors want their resources

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repaid on time, workers want to work for stable companies, and the government wants businesses to make money so that they can pay taxes. As with a firm's numerous stakeholders, it is assumed that the firm has the necessary financial and non-financial resources and capacity incorporated in its attributes to voluntarily release information that fulfills the expectations of the various stakeholders (Naser, Al-Khatib & Karbhari, 2002; Najm, Bilal & Sumaira, 2013).

Voluntary disclosure been heralded now has been a contentious issue around the world, and the amount of compliance remains unpredictable even as every stakeholder craves financial information disclosure. Private entities, by definition, are not required by law to fulfil certain mandatory disclosure standards, whereas public entities and corporate organizations are required to publicly meet specified information disclosure criteria relevant to shareholders and other whole stakeholders. One advantage of privately owned organizations may be the avoidance of mandated information disclosure (Garoui, 2016).

A firm has always had numerous methods for disclosing information. The annual report is one of the most significant and required methods for listed companies to disclose and connect with their stakeholders (Bruslerie&Gabteni, 2010). Listed firms must voluntarily provide financial and non-financial information in annual reports. Mandatory disclosure is defined as the minimum material information that the law requires listed companies to include in their financial statements (Abdullah, 2009), whereas voluntary information disclosure is defined as the voluntary release of financial as well as non-information through annual reports that goes above and beyond the mandatory requirements, whether related to International Accounting Standards (ISA) or any additional relevant regulatory standards (Abeywardana&Panditharathna, 2016).

Companies can be distinguished by several characteristics such as firm size, managerial ownership, audit committee attributes, executive duality, board independence, and board size. These characteristics are unique to certain companies and create a perception in the minds of the users of that information about the company's degree of success and prospects (Odili, 2018). Researchers such as Uddin and Hassan (2011), Sabo, Rabi, Usman, Fatima, and Tjjani (2015), and Uwuigbe, Olayinka, Olubukola, Ebeguki, and Jimoh (2017) have all carried out research on firm attributes as being key determinants of voluntary disclosure of companies but majority of the prior studies focused on economies (countries) other than Nigeria.

As a result, the current study contributes to this topical issue by investigating the effect of company attributes on voluntary disclosure in the Nigerian market. This is because the Nigerian market is one of the world's leading markets and provides a suitable foundation for studying the emerging market case with an emphasis on the industrial goods sector, which has been a hub for investment due to the country's ambition for infrastructure development.

Objectives of the Study

The main objective of the study is to examine the effect of companies' attributes on the 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.

LITERATURE REVIEW

Companies' attributes

The study's conceptual clarification is focused on the five aspects of companies' attributes outlined in the objectives of the study. The attributes discussed in this section are size, profitability, leverage, liquidity, and the company's age.

Size is an essential characteristic that influences the level of company disclosure. Larger organizations with more assets can efficiently handle the costs associated with voluntary disclosure (Tran, 2021). As a result, it implies that if the size is small, the level of disclosure will be reduced as well. According to the evidence, larger corporations release more voluntary information (Rakiva, 2019). Rahman and Rahman(2020) discovered a favourable association between business size and corporate disclosure level. According to Khaled, Abdulkareem, Ng, and Mohammad (2016), firm size is not a significant determinant in determining the level of corporate disclosure.

Profitability is defined as the excess of income over expenses during a specific time. When a company's profitability is strong and its profit margin is large, management is motivated to provide more information to demonstrate a good reputation to customers, shareholders, investors, and other stakeholders (Jullobol and Sartmool, 2014). Indeed, corporations would generally only make voluntary disclosures if they had reaped some economic benefits. This is because revealing voluntary information incurs costs, which companiesare willing to incur if there is sufficient profit above and beyond fulfilling shareholders' obligations.

Using several proxies for gauging profitability including net income, return on capital, return on assets, and returns on equity, studies on the relationship between profitability and the level of voluntary disclosure yielded conflicting results (Kolsi, 2012; Jouirou&Chenguel, 2014; Khaled et al., 2016).

Investors and lenders rely only on financial statements to assess a company's financial standing or credit rating for leverage and liquidity. As a result, managers are inclined to raise information regarding the risk associated with the company's short-term and long-term credits (Hendra & Evelyn, 2015). In this study, liquidity refers to a firm's ability to fulfill urgent cash demands and repay short-term obligations, whereas leverage refers to a company's use of both stock and debt to finance its economic activities.

Past studies from authors like Emeka, Nwadialor and Nweze (2020) and Deumes and Knechel (2016) have evaluated the age of a company and how that affects voluntary disclosure of firms. They alluded that, the level of transparency provided by a firm may be influenced by its age, being a stage of development and growth. Similarly, Owusu-Ansah (1998), Omar and Simon

(2011) argued that, older and more established firms are more likely to disclose voluntary information than newer firms. This is based on arguments that new companies may have difficulty making changes to comply with legal requirements, and they also believe that the competition argument suggests that young companies are unlikely to disclose full details of their financial outcomes and position.

Voluntary Disclosure

Voluntary disclosure can be understood as a reaction to a variety of events, including changes in equity markets, alterations in business environments, and/or changes in organizational structures (Odili, 2018). Previous research has also demonstrated that firms that are forthright in their disclosures tend to have lower capital costs (Asmare and Viswanadham, 2022). Annual report information should be disclosed to demonstrate timeliness, relevance, comparability, and ease of understanding (Aluwong and Fodio, 2019).

However, discrepancies in disclosure practices exist between countries for a variety of reasons, including historical antecedents, legal, economic, and political trajectories, and institutional variances (Albitar, 2015).

In theory, when a company fully complies with all legal disclosure standards, it has met its communication duties to its investors and regulatory bodies. As a result, voluntary disclosure is unnecessary. In practice, however, several organizations have been reported to have voluntarily revealed more information in their reports than is statutorily required under the legal framework of their business environments (Adebayo and Ezejiofor, 2021). The process of communicating accounting measurements to their intended consumers is known as disclosure (Abubakar, Abdullahi, Alkantara& Saleh, 2021). However, several questions must be answered, including what information is to be revealed and to what amount, when, how, and whom the company should disclose. It is suggested that dependence on disclosure standards or norms has resulted in reports and disclosure limits and injustice. As a result, theorists and practitioners have begun to identify traditional reporting's inherent flaws and established models for extra voluntary disclosure (Katmun, 2012).

Theoretical framework

Dynamic Capability Theory

The research is anchored on the dynamic capacity theory, which is an extension of the firm's resource-based view (RBV) paradigm. Teece and Pisano proposed the dynamic capability theory in 1994. According to the dynamic capability theory, the primary dynamic capability thinking is that, competitive accomplishment arises from the continuous growth, alignment, and reconfiguration of company values and resources.

The theory addresses the shortcomings of the resource-based view theory. The RBV theory has been criticized for failing to account for environmental dynamism and how enterprises should respond to obsolescent resources (Blair, 2015). The dynamic capability enables enterprises to generate, develop, and safeguard the traits that lead to the firm's sustainability through proper voluntary disclosure to suit the needs of diverse stakeholders. According to the dynamic capability theory, resources and capabilities are always being developed within the organization.

As a result, Amer *et al*. (2014) believe that firm resources are all of the firm's assets, competencies, organizational practices,

business features, information expertise, and so on that allow the firm to strategically gain competitive advantage in the market. Goodwill are often considered to be firm resources, and so a company's goodwill in voluntary disclosure as a corporate asset, can be viewed as a substantial resource that can greatly influence the quality of the firm's value above the industry's competitors (Ismail & Rahman, 2013).

Empirical Review

Several studies were carried out concerning company attributes and voluntary accounting disclosure. The following is a review of such studies.

Asmare and Viswanadham (2022) investigated the extent of voluntary disclosure and the factors that influence it. To reach their research objectives, they created a voluntary disclosure index of 65 items divided into nine categories using content analysis in Ethiopian commercial bank annual reports from 2017 to 2021.

Using ordinary least square regression, they discovered that disclosures about business strategy were the highest and corporate governance information was the lowest in the annual reports of the research periods. Furthermore, their research found a statistically significant positive association between commercial bank age, size, return on capital employed and voluntary disclosure. 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.

Onuoha and Okoye (2022) investigated the drivers of voluntary human capital information disclosure using content analysis of the five-year financial statements of 12 Nigerian deposit money banks, drawing on signaling and proprietary cost theories. The panel-corrected standard error model was used to examine the data set collected for their investigation. According to their findings, while the business size and human capital performance have considerable positive effects on the breadth of human capital disclosure of information, corporate profitability has a negligible positive influence on voluntary disclosure. The study's findings provide knowledge that could serve as a solid empirical foundation for policymakers and regulators to construct human capital reporting guidelines for corporations in terms of company human capital.

Rahman and Rahman (2021) examined and explained how company features influence voluntary disclosure. The following corporate factors are investigated in this study: profits, solvency, leverage, and company size. Corporate governance was employed as a moderating variable to explain the effect of business characteristics on voluntary disclosure. The study's data came from enterprises listed on the Indonesia Stock Exchange and was evaluated using moderated regression analysis. According to their findings, company features do not affect voluntary disclosure, and the governance variable does not affect the effect of profitability on voluntary disclosure.

Seran (2021) investigated the impact of company characteristics and voluntary disclosure levels in annual reports of Indonesia Stock Exchange-listed companies. Seren (2021) calculates the degree of voluntary disclosure using an index that is based on background information, non-financial statistics, predicted data, and management analysis and discussion. Using 434 companies as a sample in 2021 and employing multiple regression analysis, he

discovered that firm characteristics such as profitability, firm size, liquidity, and industry type have a significant relationship with voluntary disclosure, whereas leverage, age, and ownership have no significant relationship 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.

From 2015 to 2019, Tran (2021) investigated the impact of corporate characteristics on the voluntary disclosure of the top 50 listed enterprises in Forbes Vietnam. His study used the ordinary least squares method to assess the regression model, while signalling and agency theory are employed to explain the relationship between business features and voluntary disclosure. According to Tran's findings, three firm factors had a beneficial impact on the voluntary disclosure of 50 listed firms: firm size, a growth rate of market share value to book value, and audit type, with audit type having the greatest influence.

Abubakar et al., (2021) investigate the impact of firm attributes on corporate disclosure by Nigerian-listed industrial goods manufacturers over ten years (2010-2019). Their study employed a census sampling technique to generate a sample size of ten (15) industrial product firms registered on the Nigerian Stock Exchange as of December 31, 2019. Multiple regression was used to evaluate data gathered from the sampled firms' annual reports and accounts. Their study results suggest that business size, profitability, leverage, age, and auditor type have a positive and significant impact on corporate information disclosure of the sampled firms, but liquidity and asset in place have a positive but negligible impact. Their study findings support the resource dynamism theory perspective which alludes to the proposition that, larger firms, profitable firms, more levered firms, older firms and companies audited by big audit firms disclosed more information in their annual report and accounts.

Rakiva (2019) imagined and investigated the relationship between firm-specific features and voluntary disclosure of listed services and manufacturing companies in Bangladesh. Firm-specific characteristics used were business size, profitability, leverage, age, and industry type. A voluntary disclosure reporting index (VDRI) with 28 themes was created using a content analysis technique. In the data analysis, descriptive, correlation, and ANOVA of variance were performed. The study findings revealed that the size of the business, profitability, and leverage had positively significant effects on accept age, which revealed a positive insignificant effect with voluntary disclosure reporting practices, and industry type had a significant negative effect on the companies' practice.

METHOD

Quantitative research design is used in this study. This is specifically about secondardata. This study's population consists of the 13 listed industrial products enterprises on the Nigeria Exchange Group (NGX) as of February 2021. The study used the judgmental sampling technique to select 11 listed industrial goods firms as the study's sample. The reason for selecting 11 listed industrial products enterprises is that two of them (BUA cement and NOTORE chemicals PLC) do not have complete data for the study period (2011-2020). As a result, the sample size is limited to the

companies listed (11) with complete data sets for the study period.Data collected from the annual reports of the companies is analyzed using the Panel regression technique with the aid of E-View version 9.

Voluntary disclosure measurement: The research is aware of many voluntary disclosure checklists developed by various professional accounting associations as well as international organizations (for example, the IMF checklist, and the Global Reporting Initiative). However, because most checklists are not industry specific, writers such as Jouirou and Chenguel (2014) and Nurudeen et al. (2018) have developed disclosure checklists for their respective studies to meet the purpose of their investigations. As a result, the current study aims to modify Abeywardana and Panditharathna's (2016) disclosure index in order to create a checklist that categorizes disclosure items into five categories: financial data disclosure, general/strategic information disclosure, forward-looking disclosure, social/environmental disclosure, and corporate governance disclosure. Scores will be allocated to companies whose annual reports disclosed the contents required by this checklist. The checklist is shown in Table 1.

Table 1: Voluntary Disclosure checklist

S/N	Item	Checklist	Measurement
1	Financial data disclosure	Disclosure that includes data about the financial risk associated with investment made by the company	'1' if disclosed and '0' if not disclosed
2	General/strategic information disclosure	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.	'1' if disclosed and '0' if not disclosed
3	Forward looking disclosure	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	'1' if disclosed and '0' if not disclosed
4	Social and environmental disclosure	This are information reported in the annual reports of the companies about their contribution to social welfare of workers, customers, suppliers, and the host communities. It also includes information about how the companies' economic activities affect the environment	'1' if disclosed and '0' if not disclosed
5	Corporate governance disclosure	This is the companies' disclosure of information about the board members in terms of their nationality, qualification, gender diversity, renumeration, and other	'1' if disclosed and '0' if not disclosed

	characteristics that enables external stakeholders assess the level of the companies' adherence to global corporate governance standards.

Source: Authors compilation 2021.

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.

Model Specification

The study adapts the model previously used by Onuoha and Okoye (2022). The model is stated as:

Human capital information disclosure = f (Human capital performance + firm size) (1)

Although the study by Onuoha and Okoye (2022) is based on the Nigerian market, it does not take into cognizance a wider view of voluntary disclosures like social and environmental issues which other global studies like that of Rahman and Rahman (2021) have done. Accordingly, the current study includes social, environmental, governance, and strategic information into the study's voluntary disclosure measure to formulate the study's model. The study's model is expressed in equation 2

VD = f (FS, PROF, LEV, LIQ & FA) (2)

In econometric function;

$VD_{it} = \alpha + \beta_1 FS_{it} + \beta_2 PROF_{it} + \beta_3 LEV_{it} + \beta_4 LIQ_{it} + \beta_5 FA_{it} + U_{it}$ (3)

where;

α = Constant

FS= Firm size (Log of total assets of the firm at that time)

PROF= Profitability (Net profit divide by total assets of the firm at that time).

LEV= Leverage (Total liability to total equity of the firms at a time).

LIQ= Liquidity (Current assets to current liability of the firm at a time).

FA= Firm age (Log of number of years the firm has been incorporated & is in operation of the firm at a time).

VD= Voluntary Disclosure (The total number of content "1" found divided by the total disclosure criteria "5").

it= Cross-section($_i$) at time ($_t$)

U = Error term used in the model.

$\boldsymbol{\beta_1 - \beta_5}$= Beta coefficient of the independent variables

RESULTS AND DISCUSSION

Table 2 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 checklist criteria 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.

Table 2: Descriptive statistics table

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

Source: E_View Output in the appendix

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 21.000 and 63.0000. FA also recorded a mean of 37.77273 and a standard deviation of 14.49749.

Skewness statistics are used to test for data normality/stationarity. The skewness to standard error ratio can be used to determine normalcy. Berenson and Levine (1999) state that normalcy can be rejected if the ratio is less than -2 or more than +2. A big positive number for skewness suggests a long right tail, while a very negative value shows a long left tail, indicating data non-normality.

The data set for all variables reveals skewness statistic values between -2 and +2, indicating that all data values are within the permitted skewness range for normality, and therefore all 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.

Diagnostic test

The VD model results in Table 3 show centered VIF statistics values of less than 10, proving that the set of independent variables data is free of multicollinearity concerns. The test for Heteroscedasticity yields a Breusch-Pagan statistic of 0.0.1446>0.05 (P.Value), indicating that the collection of data for the variables is also free of Heteroscedasticity concerns.

Regression of the estimated model summary

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

The Hausman test is used to enable the study to pick between the pooled model, fixed-effect model, and random effect model, with comparable results/tables given in Appendix II at the end of the study for review. The Hausman correlation test result from Table 4 reveals a probability value of 0.1553>0.05, which is not significant and hence informs the choice of the random-effect model from the Hausman test. Thus, the random effect model is analyzed below:

Table 5, 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 5to determine the relationship between FS, PROF, LEV, LIQ, FA, and VD offirms 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 disclosureof 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%.

Table 3: Result for Multicollinearity and Heteroscedasticity

TEST	TEST STAT	FRQ Model
Multicollinearity	Variance Inflation Factor (VIF)	<10 (1.17 – 1.53) Appropriate Centered
Heteroscedasticity	Breusch-Pagan	0.1446 (Obs. Chi. Sq. Prob) Appropriate

Source: Authors' computation using E-view 9

Table 4: Pre regression estimation test table

	Statistic	P-value
i.	Hausman Test	0.1553
	Decision	Random effect model

Source: Author's computation using E-view 9

Table 5: VD model summary Table

Dependent Variable: VD

Variable	Coefficient		Tau-Statistic	Prob (Sig).
C	0.110330		0.389220	0.6979
FS	0.093944		2.112006	0.0371
PROF	0.067444		0.644924	0.5204
LEV	-0.142829		-3.638606	0.0004
LIQ	-0.047326		-2.009412	0.0471
FA	0.164153		2.009152	0.0471
R^2	0.168692			
Adjusted R^2	0.128726			
Fisher-statistic	4.220824	DW		1.147945
Prob of Fisher-statistic	0.001560			

Source: Author's computation using E-view 9

Test of Hypotheses

The hypotheses outlined in chapter one of the study are hereby tested;

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

To test the significance of the model, the decision rule stated in section 3 is used. Since the calculated probability value for FS (0.0371<0.05) against VD is less than the accepted probability value of 0.05. The null hypothesis is rejected and the alternative accepted thus; firm size has a significant effect on voluntary disclosure of industrial goods companies in Nigeria.

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

To test the significance of the model, the decision rule stated in section 3 is used.

Since the calculated probability value for PROF (0.5204<0.05) against VD is greater than the accepted probability value of 0.05. The null hypothesis is accepted and the alternative rejected thus; profitability has no significant effect on voluntary disclosure of industrial goods companies in Nigeria.

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

To test the significance of the model, the decision rule stated in section 3 is used. Since the calculated probability value for LEV (0.0004<0.05) against VD is less than the accepted probability value of 0.05. The null hypothesis is rejected and the alternative accepted thus; leverage has a significant effect on voluntary disclosure of industrial goods companies in Nigeria.

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

To test the significance of the model, the decision rule stated in section 3 is used. Since the calculated probability value for LIQ (0.0471<0.05) against VD is less than the accepted probability value of 0.05. The null hypothesis is rejected and the alternative accepted thus; liquidity has a significant effect on voluntary disclosure of industrial goods companies in Nigeria.

HO_5: Firm age has no significant effect on voluntary disclosure of listed industrial goods companies in Nigeria.

To test the significance of the model, the decision rule stated in section 3 is used. Since the calculated probability value for FA (0.0471<0.05) against VD is less than the accepted probability value of 0.05. The null hypothesis is rejected and the alternative accepted thus; firm age has a significant effect on voluntary disclosure of industrial goods companies in Nigeria.

Discussion of results

From the study evidence, the outcome of the result shows that, firm size, leverage, liquidity, and firms' age have significant effects on voluntary disclosure of listed industrial goods companies in Nigeria. While, profitability as a firm attribute has no significant effect on voluntary disclosure of listed industrial goods companies in Nigeria. This shows that, companies incur direct cost for making voluntary disclosures which they are unwilling to offset using their profit. This is in line with the study done by Rahman and Rahman (2021) who posited that, profit as a firm attribute does not affect voluntary disclosure of companies. On the other hand, the current study aligns with that of Abubakar et al., (2021), in support of the resource dynamism theory perspective which alludes to the proposition that, larger firms, more levered firms, and older firms disclosed more information in their annual report and accounts.

CONCLUSION

This study was carried out with the broad objective of examining the effect of companies' 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. 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. Companies' 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 to should disclosure such dynamic assets to interested stakeholders. Part of those 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 they 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-rebate 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 other to access repose in the external financers 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.

REFERENCES

Abdullah, M. (2009). The association between firm-specific characteristics and voluntary disclosure of listed companies in Kuwait. A thesis submitted to the Graduate School Universiti Utara Malaysia in partial fulfillment of the requirements for the degree Master of Science in Accounting (International Accounting).

Abeywardana, T. &Panditharathna, K. (2016). The extent and determinants of voluntary disclosures in annual reports: Evidence from banking and finance companies in Sri Lanka. *Accounting and Finance Research*, 5(1), 147.163.

Abubakar, A., Abdullahi, Z., Alkantara, A. & Saleh, I. (2021). Firm attributes and corporate voluntary information disclosure of listed industrial goods firms in Nigeria. *Gusau Journal of Accounting and Finance*, 2(1), 23-34.

Adebayo, M. &Ezejiofor, R. (2021). Voluntary environmental disclosure and corporate performance: A study of quoted consumer goods manufacturing firms in Nigeria. *European Journal of Business and Management Research*, 6(6), 261-275.

Albitar, K. (2015). Firm characteristics, governance attributes and corporate voluntary disclosure: A study of Jordanian listed companies. International Business Research, 8(3), 1-10.

Aluwong, D. & Fodio, M. (2019). Effect of corporate attributes on environmental disclosure of listed oil and gas companies in Nigeria. *European Journal of Accounting, Auditing and Finance Research*, 7(10), 32-47.

Amer, A., Ravindran, P. & Mahmoud, A. (2014). The impact of corporate governance and ownership structure on voluntary disclosure in annual reports among listed Jordanian companies. *Procedia - Social and Behavioral Sciences*, 129 (1), 341–348.

Asmare, D. &Viswanadham, P. (2022). Determinants of corporate voluntary disclosures in annual reports: Evidence from Ethiopian commercial banks. *International Journal of Accounting Research*, 7(1), 1-8.

Blair, M. (2015). Corporate governance and corporate social responsibility and interrelationships, *Corporate Governance*, *6*(4), 43–45.

Bruslerie, H. &Gabteni, H. (2010). *Voluntary financial disclosure, introduction of IFRS and the setting of communication policy: An empirical test on SBF French companies using a publication score*. Multinational Financial Society, Barcelona: Espagne.

Deumes, T. & Knechel, D. (2016). Effect of risk management disclosure on firm's performance in Germany. *Journal of Empirical Literature, 7*(1), 39–56.

Emeka, O., Nwadialor, E. & Nweze, A. (2020). Effect of non-financial disclosures on performance of non-financial companies' in Nigeria. *Journal of Accounting and Financial Management,* 6(1), 17-44.

Garoui, N. (2016). Determinants of financial information disclosure: A visualization test by cognitive mapping technique. *Journal of Economics Finance and Administrative Science,* 21(1), 8–13.

Hassan, N. (2016). Investigating the impact of firm characteristics on the risk disclosure quality. *International Journal of Business and Social Science, 5(9), 109-121.*

Hasan, M., Omar, N., Abdul-Rahman, R. & Hossain, S. (2015). Corporate attributes and corporate accruals. *Aestimatio The IEB international journal of finance,* 12(1), 24-47.

Hendra, G. & Evelyn, O. **(2015).** Mandatory and voluntary disclosure of annual report on investor reaction. ***International Journal of Economics and Financial Issues,* 5, 311-314.**

Ismail, R. & Rahman, R. (2013). Effect of non-financial disclosures on performance of financial service companies listed in Bangladesh. *Journal of Business Administration and Management Sciences Research, 2*(7), 172–177.

Jouirou, M. &Chenguel, M. (2014). The determinants of voluntary disclosure in Tunisia: A study of the firms listed in the Tunisian stock exchange. *Journal of Business and Management Research,* 4, 84-95.

Jullobol, N. &Sartmool, S. (2014). The effect of firm performance on voluntary disclosure in annual reports: A case study of technology industry in the stock exchange of Thailand. *RMUTT Global Business and Economics Review,* pp. 115-129.

Katmun, M. (2012). The role of information in the corporate world evidence from Europe. *European Journal of Business and Management, 2*(4), 34-39.

Kolsi, M. C. (2012). The determinants of corporate voluntary disclosure: evidence from the Tunisian capital market. *The IUP Journal of*

Accounting Research and Audit Practices, 11(4), 49-68

Khaled, A., Abdulkareem, A., Ng, C. & Mohammad, T. (2016). The association between firm characteristics and corporate financial disclosures: Evidence from UAE companies. *The International Journal of Business and Finance Research,* 8(2), 101-125.

Lobo, G. & Zhou, J. (2001). Disclosure quality and earnings management. *Paper presented at the 2001 Asia-Pacific Journal of Accounting and Economics Symposium in Hong Kong*.

Najm, U., Bilal, G. & Sumaira, T. (2013). Determinants of voluntary disclosure in annual report: A case study of Pakistan. *Management and Administrative Sciences Review ISSN: 2308-1368,* 2(2) 181-195.

Naser, K., Al-Khatib, K. & Karbhari, R. (2002). Empirical evidence on the depth of corporate information disclosure in developing countries: The case of Jordan. *International Journal of Commerce and Management,* 12(4), 122-155.

Nurudeen, S., Ahnda, I. &Shalli, A. (2018). Effect of corporate characteristics on voluntary disclosure of listed financial service firms in Nigeria. *Amity Journal of Corporate Governance,* 3(2), 29-41.

Odili,T. (2018). Relevance of non-financial disclosures for investment decision making. *Scientific Journal of Management, 2,* 45-56.

Omar, B. & Simon, J. (2011). Corporate aggregate disclosure practice in Jordan. *Advances in Accounting incorporating Advances in International Accounting*, *27,* 166-186.

Onuoha, N. & Okoye, G. (2022). Determinants of voluntary human capital information disclosure: Evidence from deposit money banks in Nigeria. *International Journal of Academic Research in Accounting Finance and Management Sciences*, 12(1), 144–154.

Owusu-Ansah, S. (1998). The impact of corporate attributes on the extent of mandatory disclosure and reporting by the listing companies in Zimbabwe. *International Journal of Accounting*, *33*(5), 605-631.

Rahman, J. & Rahman, R. (2020). The effect of company characteristics on voluntary disclosure with corporate governance as a moderated-variables. *International Journal of Managerial Studies and Research,* 8(10), 24-33.

Rakiva, M. (2019). Firm- specific characteristics and voluntary disclosure reporting: An empirical research on listed companies of Bangladesh. *Journal of Accounting,*

Finance and Auditing Studies, 5(1), 298-317.

Sabo, M., Rabi, U., Usman., Fatima, B. &Tjjani, B. (2015). The effect of working capital management on corporate profitability: Evidence from Nigerian food product companies. *Applied Finance and Accounting*, 1(1), 2-4.

Seran, A. (2021). Analysis the effect of firm characteristics on the completeness of public company's voluntary disclosure. *JurnalCendekiaIlmiah*, 1(5), 687-702.

Tran, Q. (2021). The impact of firm characteristics on the voluntary disclosure: Evidence on the top 50 listed firms of Forbes Vietnam. *Investment Management and Financial Innovations*, 18(1), 215-222.

Uddin, M. & Hassan, M. (2011). Corporate risk information in annual reports and stock price behavior in the United Arab Emirates. *Academy of Accounting and Financial Studies Journal*, 15(1), 59-84.

Uwuigbe, U., Olayinka, E., Olubukola, U., Ebeguki, I. & Jimoh, J. (2017). Ownership structure and financial disclosure quality: Evidence from listed companies in Nigeria. *Journal of Internet Banking and Commerce*, 22(8), 1-12.

Appendix

Output from Data Analysis

	VD	FS	PROF	LEV	LIQ	FA
Mean	0.785455	5223205.	0.167245	0.699753	1.434092	37.77273
Median	0.800000	1743718.	0.099590	0.594171	1.452470	39.50000
Maximum	1.000000	91444954	0.958652	3.258212	5.896033	63.00000
Minimum	0.400000	116376.0	0.001854	0.015552	0.024486	21.00000
Std. Dev.	0.181146	12558124	0.191358	0.482125	0.852771	14.49749
Skewness	-0.228830	2.388573	1.955904	1.566846	1.745115	-0.677386
Kurtosis	1.950716	25.15499	6.705336	8.652106	9.837275	3.135511
Jarque-Bera	6.006229	2602.792	133.0622	191.4290	270.0960	8.496454
Probability	0.049632	0.000000	0.000000	0.000000	0.000000	0.014290
Sum	86.40000	5.75E+08	18.39698	76.97282	157.7501	4155.000
Sum Sq. Dev.	3.576727	1.72E+16	3.991347	25.33650	79.26678	22909.32
Observations	110	110	110	110	110	110

Regression Pooled

Dependent Variable: VD
Method: Panel Least Squares
Date: 02/28/22 Time: 08:43
Sample: 2011 2020
Periods included: 10
Cross-sections included: 11
Total panel (balanced) observations: 110

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.293388	0.199267	1.472339	0.1439
FS	0.074943	0.033035	2.268589	0.0254
PROF	0.125774	0.091297	1.377649	0.1713
LEV	-0.149834	0.035765	-4.189461	0.0001
LIQ	-0.046455	0.023112	-2.010020	0.0470
FA	0.117088	0.059947	1.953186	0.0535

R-squared	0.198026	Mean dependent var	0.785455
Adjusted R-squared	0.159469	S.D. dependent var	0.181146
S.E. of regression	0.166076	Akaike info criterion	-0.699743
Sum squared resid	2.868443	Schwarz criterion	-0.552444
Log likelihood	44.48586	Hannan-Quinn criter.	-0.639998
F-statistic	5.135993	Durbin-Watson stat	1.071807
Prob(F-statistic)	0.000299		

Regression Fixed

Dependent Variable: VD
Method: Panel Least Squares
Date: 02/28/22 Time: 08:45
Sample: 2011 2020
Periods included: 10
Cross-sections included: 11
Total panel (balanced) observations: 110

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.851029	0.699885	1.215957	0.2274
FS	0.012343	0.097113	0.127097	0.8992
PROF	-0.071242	0.117945	-0.604026	0.5474
LEV	-0.059079	0.044287	-1.334003	0.1858
LIQ	-0.014830	0.024802	-0.597912	0.5515
FA	-0.044803	0.183672	-0.243931	0.8079

Effects Specification

Cross-section fixed (dummy variables)
Period fixed (dummy variables)

R-squared	0.538140	Mean dependent var	0.785455
Adjusted R-squared	0.407732	S.D. dependent var	0.181146
S.E. of regression	0.139408	Akaike info criterion	-0.906102
Sum squared resid	1.651949	Schwarz criterion	-0.292357
Log likelihood	74.83561	Hannan-Quinn criter.	-0.657164
F-statistic	4.126594	Durbin-Watson stat	1.425326
Prob(F-statistic)	0.000001		

Regression Random

Dependent Variable: VD
Method: Panel EGLS (Cross-section random effects)
Date: 02/28/22 Time: 08:46
Sample: 2011 2020
Periods included: 10
Cross-sections included: 11
Total panel (balanced) observations: 110
Swamy and Arora estimator of component variances

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

Effects Specification

	S.D.	Rho
Cross-section random	0.066215	0.1537
Idiosyncratic random	0.155348	0.8463

Weighted Statistics			
R-squared	0.168692	Mean dependent var	0.468000
Adjusted R-squared	0.128726	S.D. dependent var	0.168825
S.E. of regression	0.157585	Sum squared resid	2.582632
F-statistic	4.220824	Durbin-Watson stat	1.147945
Prob(F-statistic)	0.001560		
Unweighted Statistics			
R-squared	0.183540	Mean dependent var	0.785455
Sum squared resid	2.920253	Durbin-Watson stat	1.015227

Hausman Test

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

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	8.016953	5	0.1553

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
FS	0.229448	0.093944	0.006886	0.1025
PROF	0.060862	0.067444	0.004848	0.9247
LEV	-0.123544	-0.142829	0.000617	0.4376
LIQ	-0.033687	-0.047326	0.000134	0.2384
FA	0.407352	0.164153	0.022392	0.1041

Cross-section random effects test equation:
Dependent Variable: VD
Method: Panel Least Squares
Date: 02/28/22 Time: 08:47
Sample: 2011 2020
Periods included: 10
Cross-sections included: 11
Total panel (balanced) observations: 110

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.130916	0.608916	-1.857262	0.0664
FS	0.229448	0.094154	2.436939	0.0167
PROF	0.060862	0.125635	0.484434	0.6292
LEV	-0.123544	0.046456	-2.659407	0.0092
LIQ	-0.033687	0.026240	-1.283794	0.2024
FA	0.407352	0.170491	2.389282	0.0189
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.365762	Mean dependent var		0.785455
Adjusted R-squared	0.264554	S.D. dependent var		0.181146
S.E. of regression	0.155348	Akaike info criterion		-0.752578

Sum squared resid	2.268495	Schwarz criterion	-0.359781
Log likelihood	57.39178	Hannan-Quinn criter.	-0.593257
F-statistic	3.613964	Durbin-Watson stat	1.250776
Prob(F-statistic)	0.000061		

Heteroskedascity test

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	1.679591	Prob. F(5,104)	0.1460
Obs*R-squared	8.218787	Prob. Chi-Square(5)	0.1446
Scaled explained SS	4.193426	Prob. Chi-Square(5)	0.5219

Test Equation:
Dependent Variable: RESID^2
Method: Least Squares
Date: 02/28/22 Time: 08:54
Sample: 1 110
Included observations: 110

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.060202	0.033072	1.820349	0.0716
FS	-0.010064	0.005483	-1.835659	0.0693
PROF	-0.030113	0.015152	-1.987404	0.0495
LEV	0.009160	0.005936	1.543259	0.1258
LIQ	0.004655	0.003836	1.213491	0.2277
FA	0.013458	0.009949	1.352712	0.1791

R-squared	0.074716	Mean dependent var	0.026077
Adjusted R-squared	0.030231	S.D. dependent var	0.027989
S.E. of regression	0.027563	Akaike info criterion	-4.291687
Sum squared resid	0.079010	Schwarz criterion	-4.144388
Log likelihood	242.0428	Hannan-Quinn criter.	-4.231942
F-statistic	1.679591	Durbin-Watson stat	1.756197
Prob(F-statistic)	0.146009		

Variance Inflation Factor Test

Variance Inflation Factors
Date: 02/28/22 Time: 08:56
Sample: 1 110
Included observations: 110

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	0.039707	158.3616	NA
FS	0.001091	169.4546	1.518929
PROF	0.008335	2.136001	1.206188
LEV	0.001279	3.672914	1.175008
LIQ	0.000534	5.916272	1.535096
FA	0.003594	34.09804	1.353622