Firm-Specific Characteristics and Voluntary Disclosure of Listed Manufacturing Firms in Nigeria

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***Abstract*: This study examined firm specific characteristics and the voluntary disclosure of information of listed manufacturing firms in Nigeria. The study collected its data from secondary source by means of the annual reports and account of firms under the study. The analysis was conducted on thirty-eight (38) out of the fifty-four (54) listed manufacturing firms in the Nigeria Stock Exchange (NSE) for a period of ten years 2009-2018. The firm specific characteristics such as firm size, firm age, leverage, profitability, liquidity and information and communication technology on the voluntary information disclosure of listed manufacturing firms in Nigeria were used. 97 disclosure items were used as disclosure index drawn from the companies' background general information, corporate strategic information, corporate governance information, financial performance information, risk management information, forward looking information, human intellectual information, the outlook of competitive environment and corporate social responsibilities. To achieve this objective, ordinary least square (OLS), generalized least square (GLS), descriptive statistics and correlation matrix were employed in carrying out the analysis, after the employment of the assumptions of regression model using STATA version 15. The findings of the study reveal that a positive and significant effect exists between firm size, firm age, leverage, and voluntary disclosure of the study firms. The study also shows a positive and insignificant association between ICT and voluntary disclosure. However, it recorded a negative and insignificant relationship between profitability, liquidity and voluntary disclosure of the firms under study. It recommended, among others, that the management of listed manufacturing firms should increase and expand their total asset by effective acquiring and efficient utilizing of its assets, maintained it sustainability to remain older in business, keep their leverage optimally for separation of risk, and upgrade their ICT.**

***Keywords:* Voluntary Disclosure Index (VDI), International Financial Reporting Standards (IFRSs), Namely (Viz), Security and Exchange Commission (SEC), Corporate Affairs Commission (CAC).**

I. INTRODUCTION

1.1 Background to the study

Agency conflict is the outcome of information asymmetries between management (agent) and shareholders (principal). Shareholders depend on the management to obtain vital information regarding their investment and to mitigate the flow of information asymmetries. Voluntary disclosure is a device used to reduce conflict between insiders and other stakeholders. Information asymmetry between company's stakeholders divested their relationship by initiation of an ethical threat (Jensen & Mecklen, 1976). Thus, managers (agents) can be hidden through devotion of more effort to their responsibilities; leaving shareholders (the principals) to make an educated prediction about their contractual counterparts' true effort. As a result of that, voluntary disclosure of information emerges. However, the issue of agency conflict between managers and shareholders still persist, some firms were adversely affected as a result of agency conflict and information asymmetries these includes: Emron, Worldcom, Cadbury Nigeria plc, Nigeria Textiles mills plc, Nigeria rope plc, Costain plc, Africa Nigeria paint plc, and the recent Fortis microfinance bank in Nigeria.

Annual disclosure are mechanism that provide significant, useful and secured financial and non-financial information to various users, viz shareholders, management, government, employees, lenders, competitors, trade unions, creditors, financial analysts and potential investors (Carmona & Trombetta, 2010). Wawure (2018) stated that annual reports are known as instrument use to disclose behaviors of a company. They have the power to improve the perception of accountability among stakeholders and the society in general. In addition, information disclosures in annual reports are strategic tools that help the company's ability to raise capital at cheaper rate (Healy & Palepu, 2001). Mandatory and voluntary disclosures are the two most common types of information supply by firm annual reports to their stakeholders. Both developed and emerging capital markets considered corporate disclosures as an imperative notion. The range of corporate disclosure is gigantic and can be varied from non-disclosure to complete disclosure (Elliott & Jacobson, 1994).

Tian and Chen (2009) argue that mandatory disclosure by listed companies is not sufficiently enough for firm stakeholders. Such arguments leverage from the view that societal demands are constantly changing, thereby leading to greater demands in information disclosure. On one hand, some are of the view that any incremental disclosures of information voluntarily upgrade the firm image and increase trust and confidence on investors and other stakeholders (Elfaky, 2017). On the other hand, others see mandatory disclosure as sufficient and feel that additional disclosure may lead to excessive information (Sejjaaka, 2003). As such, voluntary disclosure has been receiving increasing research interest (Laud & Schepers, 2009). It is a very common experience in developed nations that companies disclose more information voluntarily in their annual reports. But in developing countries like Nigeria, this kind of reporting is very low compared to developed countries and is still in a naive phase. Voluntary disclosures are used by various stakeholders of a company in their different decision making processes and could also help to understand when fraud has been perpetrated. It can also help to clarify issues under mandatory disclosures and help to reflect a clearer image of the state of the company (FRCN, 2011; & Hassan, 2014). However, the current study seek to investigate the influence of firms specific characteristics, such as firm size, firm, leverage, profitability liquidity and information and communication technology on the study firms voluntary disclosure, best on the researchers' knowledge, only Yusuf (2018) introduced (ICT) as new variable in his previous study on financial service sector in Nigeria, and recommended that further study should be conducted on other sectors of the economy more specifically manufacturing sector. Also the literature shows that previous study on voluntary disclosure in Nigeria terminated in 2016 and this study extended the period to 2018 on the entire manufacturing sector in Nigeria. However, the Nigeria stock exchange recently called for listed corporate firms to disclose as much information as possible to mitigates against prevalent agency conflict and the asymmetries of information within corporate stakeholders, thereby attracting investors' confidence and guarding against corporate failure (NSE, 2018). It is a result of these reasons this study emerged, using of modified un-weighted approach as suggested by Cooke (1989).

II. EMPIRICL REVIEW

The reviewed academic literature on disclosure in both developed and developing countries indicated that a number of empirical studies on voluntary disclosure in relation to firm characteristics have been conducted such as Rakiva (2019); Ofoegbu and Odoemelam (2018); Mmagmal (2017) Soliman (2013); Ogwe (2014); Yusuf (2018), Murucia and Santos (2012); Belgacem and Umri (2014); Rouf (2011); Ibrahim (2014); Hawashe (2014); Rabiu and Ibrahim (2017); Alfraih and Almutawa (2014); Bhasin, Makarov and Orazalin (2012); Owasu-Ansah (2005); Bhayani (2012); Hossain and Reiz (2007); Hossain (2009); Bhayani (2012); Allegrini and Greco (2011); Hieu and Lan (2015); Anderson and Falkore (2015); Hossai, Perera and Abdulrahman (1995); Kolsi (2012); Juhmani (2013); Elfaky (2017); Abewardana, and Panditharathma (2016); Tufail, Khan, Abbas and Saeed (2014); Monday and Nancy (2616); Das (2017); Mangala and Isha (2017); Uyar, Kilic and Bayyurt (2014); Albitar (2015), Barako, Hancock and Izan (2006); and Dandago and Rufai (2014). In Nigerian context, financial and non-financial voluntary reporting practices by Nigerian firms have been empirically investigated by Ibrahim (2014), Oluwagbemiga (2014), Monday and Nancy (2016), Onuagbon and Oziegbe (2016) Rabiu and Ibrahim (2017) and Yusuf (2018). Their findings are quite similar that the Nigerian corporate voluntary reporting practices were weak. Even though, most of these studies used various firm characteristics to determine their level of influence on voluntary disclosure, none of the studies use information and communication technology in their models as proxy of voluntary disclosure except Yusuf, (2018) in financial service sector. The reviewed literature indicated that limited studies on voluntary disclosure in relation to firm characteristics were conducted in Nigeria. However, arguments on the association between internal mechanisms and corporate voluntary disclosure still continue, as studies document mixed findings in the same area.

Rakiva (2019) envisaged and studied the association between firm specific characteristics and the voluntary disclosure of listed services and manufacturing companies in Bangladash. The firm specific characteristics used included size of the business, profitability, leverage and age and industry type. A content analysis technique was used to develop a voluntary disclosure reporting index (VDRI) containing 28 themes. The descriptive, correlation and ANOVA of variance were used in the data analysis. The findings revealed that the size of the business, profitability; and leverage had positively significant affects accept age, which revealed positive insignificant with voluntary disclosures reporting practices and industry type had significant negative effect in the practice by the companies.

Abeywardana and Panditharathna (2016) researched on the extent and determinants of voluntary disclosures in annual reports of all the 62 banking and finance companies listed in Sri Lanka. The study developed a voluntary disclosure index including 83 items and the nine sub-categories, which include in this index analyzed by employing content analysis in the annual reports of quoted public banking and finance companies for the time period of 2012 to 2015. Furthermore, the study analyzed the selected variable to identify the determinants of voluntary disclosure level by employing panel data analysis. The regression result showed that firm size, profitability, firm age, leverage and board independence as determinants of voluntary disclosure level and among them firm size, profitability and firm age had a positive relationship and leverage and board independence a negative relationship. The theoretical underpinning the study was absent as no research design adopted was explained. The study also failed to conduct any normality and validity test to ensure reliability of its explanatory variables of the study.

Abdurrauf (2017) examined the factors that influenced the voluntary disclosures of information in the annual reports of listed companies in Dhaka Stock Exchange (DSE) over the period of 2007 to 2011. A sample of 106 non-financial companies listed on DSE was selected by judgmental sampling. The data were collected through the annual reports and financial statements of the listed companies under study and analyzed using descriptive statistics, Pearson correlation analysis and multiple regressions. The result indicated that the total assets, the percentage of female directors and the board leadership structure of a firm were positively associated with the level of voluntary disclosure. The result also indicated that the percentage of equity owned by the insiders of a firm was negatively associated with the level of voluntary disclosures.

Modugu and Eboigbe (2017) studied on the corporate attributes and corporate voluntary disclosure level of listed companies in Nigeria for the period of 2012- 2014. The study covered the post International Financial Reporting Standards (IFRSs) adoption period. The data used in the study were obtained from the annual reports of 60 companies listed on the Nigerian Stock Exchange from the various sectors of the Nigerian economy. The data were analyzed using OLS regression. The findings showed that both leverage and firm size had a significant positive relationship with voluntary disclosure. The combined effects of leverage and firm size showed a significant positive relationship with total disclosure. The study recommended the increased of the time period.

Uyar, Kilic and Bayyurt (2015) studied the association between firm characteristics and corporate voluntary disclosure with evidence from Turkish listed companies. The study used the content analysis of the annual reports of the corporations listed on the BIST using 131 corporations' annual reports for the year 2010. Ordinary Least Square (OLS) and Two-Stage Least Squares (2SLS) regressions were employed to examine the association between the explanatory variables and the voluntary disclosure level. The findings revealed a positive association between voluntary disclosure level and the variables, such as firm size, auditing firm size, the proportion of independent directors on the board, institutional/corporate ownership and corporate governance. However, leverage and ownership diffusion were found to have a negative significant association with the extent of voluntary disclosure. The remaining variables, namely, profitability, listing age and board size were found to be insignificant. The study failed to show the analysis of validity and reliability test output since there were elements of multicolinearity, among others as noted by the article. The study was also limit to only a one-year accounting period and should have been conducted for longitudinal studies, which will reveal more substantial and interested output and trends.

Changuel and Jouirou (2014) developed a study on the determinant of voluntary disclosure of listed 22 firms in the Tunisia stock exchange. Multiple regression analysis was used to empirically analyze the data collected. The finding revealed that firm size, the independence of the board of directors and audit firm size had a positive significant influence on the firms' level of voluntary disclosure, while the age of the firm had a negative influence on the level of disclosure. They were not able to establish any relationship between the level of voluntary disclosure and leverage, as well as the ownership concentration and type of industry.

Ibrahim (2014) studied firm characteristics and voluntary segments disclosure among the largest firms in Nigeria. The study sampled 76 companies listed on the Nigeria stock Exchange for the year 2011, which was a pre-FIRS adoption period according to the study. The disclosure checklist was used based on the FIRS 8 requirements, which is an operating segment that requires classes of entities to disclose information about their operating segments, product and services, the geographical areas in which they operated and their major customers. Multivariate regression model and ordinary least square were used. The regression results documented that firm size and industry type had a positive association with voluntary segments disclosure. In addition, a negative association was observed between firm age, growth and return on investment, ownership diffusion and voluntary segments disclosure. The study failed to capture the list of FIRS 8, requirement which was used as a means for constructing voluntary disclosure index. Theoretical underpinning was not captured in the study.

III. RESEARCH METHODOLOGY

3.1 Research Design

The study used ex-post factor research design to describe the statistical association between dependent and independent. It is therefore, most appropriate for this study because the data was from historical source by means of annual reports and account of firms under study, it allows for testing the relationships between and among variables and also allow derivation of inference regarding these relationships. The population of the study comprises of all 54 listed manufacturing firms in the Nigerian Stock Exchange as at 31st December 2018. In view of the nature of the model used in the study, 2 filters were employed to eliminate some of the firms that have no complete records of all the data required for measuring the variables of the study within the study period (2009-2018). Consequently, the first filter stated that a firm must be listed in the floor of Nigeria stock Exchange for the covered in this study, after application of the first filter 12 firms were eliminated leaving 42 firms. The second filter eliminates all firms that have no complete financial statement on the basis of this filter, 4 firms were eliminated. The remaining 38 firms that meet the criteria were used as the sample of the study. Multiple regressions were used to examine the model of the study. The results of robustness tests such as (multicollinearity, heteroscedasticity, and normality test, Hausman specification to choose between fixed or random effect) were conducted in order to improve the validity and reliability of the study findings.

3.2 Model Specification

The multiple regressions model was employed to explore the association between the dependent and independent variables. This study adapted the econometric model used by Ogwe (2014) and Mangala and Isha (2017) is presented as follows:

VDI = *f* (FSIZ, FAG, LEV, PRO, LIQ, ICT) ------------- (1)

With the expression of the model thus:

$VDI_{it} = \alpha_0 + \beta_1(FSZ)_{it} + \beta_2(FAG)_{it} + \beta_3(LEV)_{it} + \beta_4(PRO)_{it} + \beta_5(LIQ)_{it} + \beta_6(ICT)_{it} + \varepsilon_i$ --------(2)

Where: VDI = Voluntary Disclosure Index, FSZ = Firm Size, FAG = Firm Age, LEV = Leverage PRO = Profitability, LIQ. = Liquidity, ICT = Information Communication Technology,

α_0= Intercept/constant, $\beta_1 ... \beta_7$ = Beta coefficient, Ɛ = Residual/error term, **i =** firm, **t** = time

IV. DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.1 Result and Discussion

The regression results of the dependent variable (voluntary disclosure) and independent variables (firm specific characteristics) are presented with the interpretation on the effects of independent variables over dependent variable using both OLS and GLS analysis. It begins with the discussion of descriptive statistics and correlation matrix.

Table 4.1: descriptive statistics

Varia	Mean	Std. dev	Min.	Max.	Obs
VDI	0.697	0.097	0.4	0.89	380
FSZ	5.70	1.05	101120	826	380
FAG	27.8	14.11	1	66	380
LEV	0.524	0.153	0.04	0.85	380
PROF	0.120	0.0139	-0.07	0.91	380
LIQ	1.243	0.619	0.02	4.1	380
ICT	0.0309	0.049	0.002	0.6	380

Source: Stata Output version (15) 2020

Table 4.1 describes the voluntary disclosure practices by the listed manufacturing firms in Nigeria. The average mean of voluntary disclosure is 0.697 with standard deviation of 0.097, indicating of no wide dispersion between the mean value and the std. dev. The mean value shows that larger percentages of listed firms under study are disclosing voluntary information. The minimum and maximum of voluntary disclosure are 0.4 and 0.89 respectively. Firm size recorded a mean value of #5.70 Billion with standard deviation of #1.05 Billion implying no wide dispersion between the mean value and the std. dev. of sample firms. It also recorded a minimum of #101,120 million and maximum of #826 billion worth of total asset. Firm age had a mean of value of 27.89 with std dev. Of 14.11 do not indicate wide variation. It also recorded the minimum of 1 year and maximum of 66 years of listing age. However, leverage had a mean value of 0.524 with std. dev. of 0.152 indication of no wide variation with mean value. It also recorded a minimum of 0.04 and maximum 0.85 leverage maintained by the quoted firms under study. Profitability recorded a mean value of 0.120 with std dev. of 0.137 and the minimum and maximum value of -0.07 and 0.91 respectively. Liquidity had a mean of 1.24 with std dev. of 0.619, it equally recorded a minimum and maximum liquidity of 0.02 and 4.1 respectively. ICT was found to have a mean value of 0.031 with std dev. of 0.048 and a minimum of 0.002 and maximum of 0.6 of listed manufacturing firms in Nigeria.

Table 4.2 Pearson Correlation Matrix

Variable	VDI	FSZ	FAG	LEV	PROF	LIQ	ICT
VDI	1.000						
FSZ	0.067	1.000					
FAG	0.1733	-0.0152	1.000				
LEV	0.3133	-0.115	0.157	1.000			
PROF	0.068	0.031	-0.058	-0.052	1.000		
LIQ	-0.269	0.051	-0.075	-0.044	0.064	1.000	
ICT	0.086	0.033	-0.051	-0.018	0.029	0.064	1.000

Source: Stata Output, version (15)2020

Table 4.2 above shows a weak positive association between voluntary disclosure and firm size with coefficient of 0.067. The relationship between VDI and firm age is also positively weak by 0.1733. While VDI and leverage recorded a moderate relationship of 0.3133 and profitability was positively weak of 0.068 with VDI. Liquidity was found to be negatively associated with voluntary disclosure with coefficient of -0.0269 and ICT was positively weak of 0.086. However, firm size and firm age, firm size and leverage were negatively weak associated with coefficient of -0.152 and -0.115 respectively. Firm size and profitability, firm size and liquidity and firm size and ICT were positively weak with the coefficient of 0.031, 0.051 and 0.033 respectively. Also, Firm age and leverage had a positive relationship of 0.157. Firm age and profitability, firm age and liquidity and firm and ICT were negatively weak related with the respective coefficient of -0.058, -0.075 and -0.051. The table 4.2 also recorded a weak negative relationship between profitability, ICT with leverage, and the liquidity with leverage is strongly related with the coefficient of their association is -0.052, -0.44 and -0.018 respectively. Profitability recorded a positive weak relationship with liquidity and ICT with 0.064 and 0.029. Finally the relationship between liquidity and ICT was found to be negatively weak with the coefficient of -0.096. Despite negative weak association between some explanatory variables do not cause threat to the study analysis. The study relied on the hypothesis that none of the variable reaches a threshold of 0.8 as noted by Hair at el (2010).

Table 4.3 Multicollinearity test

Variables	VIF	1/VIF
Leverage	1.28	0.778974
Liquidity	1.27	0.790150
Firm Age	1.05	0.952795
Firm Size	1.03	0.967422
ICT	1.02	0.982042
Profitability	1.01	0.991276
Mean VIF	1.11	

Sources: Stata Output Version (15) 2020,

Table 4.3 presents multicolinearity test result, and was conducted to check the problem of collinearity using variable inflation factor. The result shows the absence of multicolinearity problem as evidence from the VIF being less than 10 and tolerance being greater than 0.1 as a rule of thumb (Gujurati & porter 2009).

Table 4.4 Regressions results:

Table 4.4: Summary of Regressions Results

Variables	OLS			GLS (Fixed Effect)		
	Std. Error	Coefficient	T	Std Error	Coefficient	t
Constant	0.0450634	0.5205654	11.55	0.0357075	0.278226	7.79
Firm Size	0.0047946	0.0120197*	2.51	0.0048601	0.013859*	2.85
Firm Age	0.0003344	0.0010444*	3.12	0.0007602	0.0107979*	14.2
Leverage	0.0340994	0.1526456**	4.48	0.0193458	0.0417881**	2.16
Profitability	0.0336401	0.06616583*	1.97	0.0179757	-0.0055058	-.31
Liquidity	0.0083587	-0.0244816*	-2.93	0.0050332	-0.0019477	-.39
ICT	0.0960024	0.1544753	1.61	0.0499424	0.0247251	0.50
Robustness Test:						
Hetroskedasticity	0.0000					
Normality test	0.0315					
Hausman spe. Test				0.0000		
R- Square	0.1645					
F- Stat.	12.24			53.54		
Sig.	0.000			0.000		
R2:						
Within				0.4888		
Between				0.0180		
Overall				0.381		
Rho				0.9472		

Source: Stata Output Version (15) 2020, ** Significant at 5% and * Significant at 1%

Table 4.4 presents the OLS and GLS regression results of the dependent and independent variables used in this study. The robustness test was conducted to ensure the validity and reliability of the results. Hetroskedasticity test was performed using Breuch-Pegan test which reveals a chi2 of 27.97 and significant at 1% (p-value 0.000). It implies that the data is not homoskedestic that is the present of hetroskedastic meaning OLS cannot suit the study analysis and was checked using robust regression and the result shows the model can be relied upon for drawing statistical inference. Normality test was carried out using Shapiro Wilk test to check the data follow the trend of normal curve or not. The result shows that the data was not normally distributed being the p-value of variables are less than 5%, and was checked using pearson correlation matrix. Hausman specification test were also conducted to choose between fixed or random effect. The results it suggested for fixed effect model from the value of chi2 of 76.41 which is significant at 1% as such the null hypothesis of hausman test is rejected.

However, the findings reveal the cumulative R2 which is the multiple coefficients that explain the proportion of the variation between the dependent and independent variable simultaneously at (0.1645) implies that 16.45% of the total variation was explained by firm size, firm age, leverage, profitability, liquidity and ICT. While the remaining 83.55% is explain by other factors captured in this model. Moreover, from the GLS result the R2 of fixed effect within model was 0.4888 with the F-statistics 53.54 and significant at 1% level of acceptance. Implies model fitted the study variables and significant in influencing the disclosure of voluntary information of the quoted manufacturing firms in Nigeria. However, from the suggestion of hetroskedasticity test result, and the hausman specification result study used robust GLS (fixed effect) for hypotheses testing

Table 4.4 firm sizes as measured by the logarithm of total asset produce a positive significant coefficient of 0.0138 with t-value of 2.85 of GLS (fixed effect model) and significant at 1% level. As such the null hypothesis one which stated that firm size has no significant effect on voluntary disclosure of listed manufacturing firms in Nigeria is rejected. This means that larger firms are prone to disclose more voluntary information than the smaller firms. This finding is in line with the study findings of Rakiva (2019); Ofoegbu and Odoemelam (2018); Mmagmal (2017) Soliman (2013); Ogwe (2014); and Yusuf (2018). Contrary with the study findings of Murucia and Santos (2012); Belgacem and Umri (2014); Rouf (2011) and Ibrahim (2014) whose findings reveals negative relationship

The regression result from table 4.4 shows that firm age recorded a positive coefficient of GLS of 0.107 with the t-value of 14.20 and significant at 1% level of acceptance of the listed manufacturing firms in Nigeria. Therefore, it served as a statistical evidence of rejecting the null hypothesis two, which stated that firm age has no significant effect on voluntary disclosure of listed manufacturing firms in Nigeria. This result is in line with studies of Hawashe (2014); Rabiu and Ibrahim (2017); Alfraih and Almutawa (2014); Bhasin, Makarov and

Orazalin (2012) and Owasu-Ansah (2005). However, the study contradicted those of Rakiva (2019); Bhayani (2012); Hossain and Reiz (2007) and Hossain (2009), who reported that firm age has no effect on voluntary information disclosure.

However, the finding shows that leverage is positively related and statistically significant at 5% level acceptance of GLS (fixed effect model) with coefficient of 0.0417 and the t- value 2.16. Therefore, the result is statistically evidence of rejecting the null hypothesis three which stated that leverage has no significant effect of voluntary disclosure of listed manufacturing firms in Nigeria. This result prove the argument of agency theory that higher levered firm are more prone agency cost, but with the disclosure of additional information voluntarily will mitigate against agency cost and asymmetries of information. This findings is consistence with the findings of Ogwe (2014); Bhayani (2012); Allegrini and Greco (2011); Hieu and Lan (2015) and Anderson and Falkore (2015). Conversely, the study contradicts the findings of Rakiva (2019); Hossai, Perera and Abdulrahman (1995); Kolsi (2012); Juhmani (2013) and Elfaky (2017). That shows insignificant effects of leverage on the voluntary disclosure of information.

Profitability from the result in table 4.4 indicates a negative association and insignificant at the level of acceptance with the coefficient of -0.0055 and the negative t-value of -0.31. Based on the above result the study failed to reject the null hypothesis four which stated that profitability has no significant effect on voluntary disclosure of listed manufacturing firms in Nigeria. This result contradicts the signaling theory which stated that if firm performance is good it would be eager to signal their performance to it various stakeholders. This may be because some firms under study operate at lost in some years covered within the study period. The findings is in line with study findings of Balgacem and Umri (2014); Monday and Nancy (2616); Rauf (2011) and Ibrahim (2014) and contrary to those of Abewardana, and Panditharathma (2016); Tufail, Khan, Abbas and Saeed (2014); Ogwe (2014) and Alfraih and Almutawa (2014) whose findings reveal significant positive relationship between profitability and voluntary disclosure of information.

Furthermore, liquidity recorded negative association with voluntary information disclosure of listed manufacturing companies in Nigeria. The finding shows the liquidity negative coefficient of -0.0019 with a negative t- value of -0.39 of GLS (fixed effect model), which is not significant at the level of acceptance. Based on the statistical result, the study accepted the null hypothesis five which stated that liquidity has no significant effect on voluntary disclosure of listed manufacturing firms in Nigeria. The implication of this result is that an increase of voluntary disclosure of sampled firms in this study will lead to a decrease of firms' liquidity. The finding is consistence with the study findings of Yusuf (2018); Albitar (2015) and Barako, Hancock and Izan (2006) and contrary to those of Das (2017); Mangala and Isha (2017); Uyar, Kilic and Bayyurt (2014) and Alfrai and Almutawa (2014) whose findings reveal a significant positive relationship.

Finally, information communication technology recorded positive insignificant association with voluntary disclosure of listed manufacturing firms in Nigeria. Its evidence from table 4.4 using GLS fixed effect regression model. The study recorded a positive coefficient of 0.247 with a t-value of 0.50. As such it serves as enough reason for this study to accept the null hypothesis six which state that ICT has no significant effect on voluntary disclosure of listed manufacturing firms in Nigeria. This means as firms under study upgrade their ICT the disclosure of voluntary information would increase insignificantly. This finding is contrary to the study of Dandago and Rufai (2014) and Yusuf (2018).

V. CONCLUSION AND RECOMMENDATION

Conclusively, the study has provided both empirical as well as statistical evidence on the utility of firm specific characteristics; firm size, firm age, leverage, and ICT in explaining and predicting voluntary disclosure of information in the annual reports of the Nigerian listed manufacturing firms. It is therefore recommended that all the firm characteristics used in this study should be encouraged by the regulating agencies of government (SEC & CAC) and all other stakeholders in the Nigerian manufacturing sector because of the role that the firm characteristics play in motivating managers to act opportunistically in disclosing more voluntary information in their annual reports for the use of firm stakeholder to mitigate against agency cost and asymmetries of information. However, profitability and liquidity were found to be negative, firms should keep their liquidity level optimally and effectively and imbibe the idea of profit maximization. It is further recommended that subsequent study can centered on other economic sector (oil and gas and communication) using additional corporate governance variables.

REFERENCES

[1] Abdurrauf, M.D. (2017). Firm-specific characteristics, corporate governance and voluntary disclosure in annual reports of listed companies in bangladesh; *International Journal of Managerial and Financial Accounting*, 9,(3), 263-282

[2] Abeywardana, N.L.E., & Panditharathna, K.M. (2016). The extent and determinants of voluntary disclosures in annual reports; *Journal of Accounting and Finance Research*, 5(4).

[3] Alfraih, M. M., & Almutawa, A.M. (2014). Firm-specific characteristics and corporate financial disclosure: Evidence from an emerging market; *International Journal of Accounting and Taxation*, 2(3), 55-78

[4] Albitar, K. (2015). Firm characteristics, governance attributes and corporate voluntary disclosure; *International Business Research*; 8 (3), 9004-9012

[5] Allegrini, M., & Greco, G. (2011). Corporate boards, audit committees and voluntary disclosure: Evidence from Italian listed companies. *Journal of Management and Govenance*, 17(1), 187-216.

[6] Andersson, A., & Folkare, E. (2015). Company characteristics and voluntary disclosure of intellectual capital –A study on swedish listed companies, master's thesis in business administration;

Jonkoping International Business School, and Jonkoping University.

[7] Barako, D.G., Hancock, P., & Izan, I.H.Y. (2006). Factors influencing voluntary corporate disclosure by kenyan companies. corporate governance; *An International Review, 14*(2), 107-125.

[8] Belgacem, I., & Umri, A. (2014). Studied the value relevance of voluntary disclosure on tunisia stock exchange market; *International Journal of Management, Accounting and Economics,* 1(5) 353-370

[9] Bhayani, S. (2012). Association between firm-specific characteristics and corporate disclosure: The case of India; *International Conference on Business, Economics, Management and Behavioral Science,* Dubai 7-8, 2012.

[10] Bhasin, M. L., Makarov, R., & Orazalin, N. S. (2012). Determinants of voluntary disclosure in the banking sector: An empirical study. *International Journal of Contemporary Business Studies,* 3(3), 60-71

[11] Carmona, S., & Trombetta, M. (2010). The IASB and FASB convergence process and the need for 'concept-based' accounting teaching; *Advances in Accounting*, *26*(1), 1-5.

[12] Changuel, M. B., & Jouirou, 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, 86-97.*

[13] Cooke, T.E. (1989). Voluntary corporate disclosure by swedish companies; *Journal of International Financial Management and Accounting,* 28(1), 171-95.

[14] Dandago, K. I., & Rufai, A. S. (2014). Information technology and accounting information system in the nigerian banking industry; *Asian Economics and Financial Review*, 4(5), 655-670.

[15] Elliott, R.K., & Jacobson, P.D. (1994). Costs and benefits of business information disclosure: A commentary; *Accounting Horizon*, *8*, 80-96. http://dx.doi=10.1.1.364.5227

[16] Elfeky, M. I. (2017). The extent of voluntary disclosure and its determinants in emerging markets: Evidence from egypt, *Journal of Finance and Data Science* 3, 45-59.

[17] Flack, T., & Douglas, E. (2017). The role of annual reports in a system of accountability for public fundraising charities, *unpublished PhD dissertation,* queensland: Queensland University of technology.

[18] FRCN, Act. (2011). Financial reporting council of nigeria act; *Federal republic of nigeria official gazette.*

[19] Gujurati, D. N., & Porter, D. C (2009). Basic econometrics. Mcgraw international editor. 5th ed. New York, Mcgraw companies.

[20] Healy, M. P., & Palepu, G. K. (2001). Information asymmetry, corporate disclosure, and the capital markets: A review of empirical disclosure literature; *Journal of accounting and economics*, 31(1-3) 405-440.

[21] Hassan, T.M. (2014). Impact of firm size on the level of non-mandatory disclosure in the annual reports of listed banks in bangladesh; *International Journal of Economics, Commerce and Management,* 2(2).

[22] Hawashe, A. A. (2014). An Evaluation of voluntary disclosure in the annual reports of commercial banks; *empirical evidence from libya*, *unpublished PhD thesis,* university of salford, uk.

[23] Hair Jr. J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). Multivariate data analysis (7th ed.). New Jersey: Prentice Hall.s

[24] Hieu, P.D., & Lan, D.T.H. (2015). Factors influencing the voluntary disclosure of Vietnamese listed companies: *Journal of Modern Accounting and Auditing*, 11(12) 656-676.

[25] Hossain, M. (2009). The extent of disclosure in annual reports of banking companies: The case of India.

[26] Hossain, M., Perera, M. H.B., & Abdulrahman, R. (1995). Voluntary disclosure in annual reports of New Zealand companies: *Journal of International Financial Management and Accounting,* 6(1), 69-87

[27] Hossain, M., & Reaz, M. (2007). Determinants and characteristics of voluntary disclosure by indian banking companies: *Corporate Social Responsibility and Environmental Management,* 14(5), 274-288

[28] Ibrahim, K. (2014). Firm characteristics and voluntary segments disclosure among the largest firms in nigeria: *International Journal of Trade, Economics and Finance,* 5 (4),

[29] Jensen, M.C., & Mecling, W.H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure; *Journal of Financial Economics*, 3(4), 303-360.

[30] Juhmani, O. (2013). Conducted a research on ownership structure and corporate voluntary disclosure on listed companies in bahrain stock exchange; *International Journal of Accounting and Financial Reporting 3(2)*

[31] Kolsi, M. C (2012). The determinants of corporate voluntary disclosure: Evidence from the Tunisian capital market. *IUP Journal of Accounting Research & Audit Practices,* 11(4), 1-20.

[32] Laud, R. L., & Schepers, D. H. (2009). Beyond transparency: Information overload and a model for intelligibility; *Business and society review*, 114(3), 246-271.

[33] Mgammal, M. H. (2017). The Effect of ownership structure on voluntary disclosure: Evidence from saudi arabia; *Journal of Advanced Management Science,* 5(2), 138-151

[34] Mangala, D., & Isha, (2017). Influence of corporate characteristics on extent of disclosure in published annual reports in India; *Amity Journal of Finance* 1(2), 22-34

[35] Monday, I.I., & Nancy, A. (2016). Determinants of voluntary disclosure quality in emerging economics: Evidence from firms listed in nigeria stock exchange; *International Journal of Research in Engineering & Technology*, 4 (6) 37-50.

[36] Murcia, F.D., & Santos, A.D. (2012). Discretionary-based disclosure: Evidence from the brazilian market; *Brazilian Administration Review*, 9(1) 88-109

[37] Ogwe, J.A. (2014). Determinants of voluntary disclosure in the annual reports of companies listed at the nairobi securities exchange: *(Msc. Thesis)*, school of business university of Nairobi.

[38] Ofoegbu, N.G., & Odoemelam, N. (2018). International financial reporting standards (IFRS)

[39] disclosure and performance of nigeria listed companies; *Accounting corporate Governance and Business Ethics Research,* 1(1), 1-18

[40] Oluwagbemiga, E. O. (2014). The use of voluntary disclosure in determining the quality of financial statement from nigeria listed companies; *Serbian Journal of Management,* 9 (2), 263 – 280.

[41] Onuagbon, E.O., & Oziegbe D.J. (2016). Financial reporting and voluntary disclosure in nigeria quoted companies; *Igbinedion University Journal of Accounting*, 1 42-58.

[42] Owusu-Ansah, S. (2005). Factors influencing corporate compliance with financial reporting requirements in new zealand; *International Journal of Commerce and Management*, *15*(2), 142-157.

[43] Rabiu, S.A., & Ibrahim, M.M. (2017). Ownership structure and voluntary disclosure of listed

[44] financial service companies; *International Journal of Advanced Scientific Research* | IJASR, 2(2).

[45] 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.

[46] Rauf, M. A. (2011). The relationship between corporate governance and value of the firm in developing countries: evidence from Bangladash. *The International Journal of Applied economics and Finance*, 5(3), 237-244.

[47] Sejjaaka, S. (2003). Corporate mandatory disclosure by financial institutions in Uganda, *unpublished Ph.d thesis,* submitted to Makerere university.

[48] Soliman, M. (2013). Firm characteristics and the extent of voluntary disclosure: the case of Egypt. *Research Journal of Finance and Accounting,* 4(17), 71-81

[49] Tahidurrahan, M.D., & Main'uddin, M. (2016). Influence of corporate attributes on magnitude of disclosure by private commercial banks in bangladesh; *Journal of Business and Technology,* 11(1-2)

[50] Tian, Y., & Chen, J. (2009). Concept of voluntary information disclosure and a review of relevant studies; *International Journal of Economics and finance*, 1(2), 55-59.

[51] Tufail, B. S., Khan, J., Abbas, A. & Saeed, A. (2012). The association between firm specific characteristics and corporate disclosure in pakistan; *Journals of Contemporary Issues in Business Research*, 4(2), 124- 134

[52] Uyar, A., Kilic, M., & Bayyur, N. (2014). Association between firm characteristics and corporate voluntary disclosure: Evidence from turkish listed companies; *Intangible Capital*, *9*(4), 1080–1112.

[53] Wareru, W. F. (2018). Voluntary accounting disclosures and market performance of non-financial firms listed in nairobi securities exchange, Kenya.

[54] Yusuf, I. (2018). Impact of firm attributes on voluntary accounting disclosure of listed financial servise compnies in nigeria. *unpublished doctoral dissertation*, school of business studies Ahmadu Bello University, Zaria.