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**Empirical Assessment of Firm Characteristics on Intangible Assets
Disclosure in Nigerian Listed Firms
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ABSTRACT

This study examined firm characteristics and the disclosure of intangible assets in Nigerian listed firms. The population of the study consisted of all the quoted firms as at 31st December 2016. A sample of forty-two (48) quoted firms was selected for the period 2012 to 2016. Inferential statistics using Panel Estimation Least Square (EGLS) with fixed effect was used for the data analysis. The study found that firm size and profitability did not contribute to the disclosure of intangible assets and were not statistically significant in the study period. Auditor type contributed to intangible assets disclosure and was statistically significant. The age of firms was ascertained to increase intangible assets disclosure in Nigeria and was not

statistically significant. Leverage and ownership concentration decreased the disclosure of intangible assets in Nigeria and were not statistically significant. Therefore, the study recommended that Regulatory authority should make it mandatory for large and multinational quoted firms in Nigerian to always employ the service of the big (four) 4 auditor firms to promote the full disclosure of intangible assets.

Key words: Firm Size, Profitability, Intangible Assets Disclosure, Ownership Concentration, Leverage.

INTRODUCTION

The disclosure of intangible assets is concerned with the disclosure that is more than legal requirements (Ibadin, 2013). Baxter (2010) states that the disclosure of intangible assets is an avenue in providing voluntary or additional information on assets recognized in financial statements. Such additional information more than mandatory requirements provides explanation on unrecognized assets and help users and other stakeholders to assess business risks inherent in such reports/disclosure (Oliveira, Rodriques & Craig, 2006). The world economy is now knowledge – based with concentration on investment in intangible assets with attendant future economic benefits to the firms and companies (Omoye, 2013). This has continued to engender the need to embrace more reliable, relevant and complete reporting model which emphasizes on financial reporting of intangible assets (Ibadin & Oladipupo, 2015). More often, investors' investments in intangible assets and the significant attention given by researcher in the disclosure is premised on its value creation. Albeit, the disclosure of the intangible assets is quite a difficult task by management perhaps due to inadequate knowledge / model to determine the factors influencing it on both theoretical and empirical fronts. Intangible assets are non-monetary assets that cannot be seen, touched or physically measured but create value for organizational growth in revenue and profitability (Ibadin, 2013). Intangible assets consist of the stock of immaterial resources that enters the production process and are necessary to the creation and sale of new or improved products and processes (Arrighetti, Landini & Lasagni, 2015). They include both internally produced assets such as designs, blue prints,

brand equity, in-house software and construction projects like assets acquired through external market such as technology licenses, patents and copy rights, and the economic competences acquired through purchases of management and consulting services. Intangible assets purpose is to acquire future earning haven and as such are made to be recognized and disclosed in financial statements. The classical taxonomy of an intangible asset is observed in its potential ability to generate future profits to firms. One of the bases of classifying intangible assets due to its representation future economic benefit for firm arises from past transactions or events. Unfortunately, most intangible assets not reflected in the statement of financial position are often expensed in the income statement. This presupposes that financial statements of firm fail to provide a true and fair. The basic reason financial statements are prepared is to keep abreast myriad users of financial information the information content of the firm's operation and performance for effective decision making. The contents of the annual reports are to provide relevant information to both existing and potential investors for critical financing and investment decision aims. This presupposes that every item, including firm characteristics items likely to hinder the true state of the firm operation should be disclosed.

Firm characteristics are very essential to the optimal operation and performance from time to time. Firm characteristics are often analyzed in relation to varying aspects of a company such as financial performance, firm value, corporate social responsibility disclosure, assets disclosure including intangible assets. Some of the firms' characteristics commonly examine in extant literature encompass firm age, which could be incorporation age or managerial age, industry type, ownership concentration, audit firm size, profitability, among others. These varying characteristics of firm interact and interplay to influence intangible assets disclosure, thus enhancing investor confidence. In the light of present day global challenges, the performance of firms and level of investors' confidence are not only hinged on the use of intangible assets, but how fully they are disclosed from time to time (Fapohunda, Ogbeide & Igbini, 2017). The full disclosure enables them to assess the quality of the firm's operations, earnings and market performance. The use of intangible assets is premised on the nature of the firm and industry it belongs to. A large firm in the manufacturing sector may use more of tangible assets like plant and machinery, buildings, furniture and fittings unlike companies in the service industry such as banks and telecommunication firms that may depend largely on intangible assets to have competitive advantage over their competitors in

the market place. The relationship between firm characteristics and intangible assets disclosure cannot be over accentuated. Interestingly, today, intangible assets are known to constitute a company's dynamic capabilities that are created by competencies and knowledge resources (Ibadin & Oladipupo, 2015). In fact, the worth of an organization is no more measured by the investments in tangible assets alone, but to a large extent by the volume of intangible assets and the disclosure it has (Arrighetti, Landini & Lasagni, 2011).

The international Accounting standard number 38(IAS38) defines intangible assets as non-monetary assets without physical substance held for use in the production or supply of goods or services, for rental to others or for administrative purpose which could be identifiable, controlled by an enterprise because of past events and from which future economic benefits are expected to flow to the firm. However, the recognition criteria adopted by most standard setting bodies are restrictive, leaving most intangible investments out of the concept of intangible assets as the accentuation appears to be on reliability to the detriment of relevance of the firms' non-physical assets position. Nonetheless, intangible assets are sources of future economic profits to firm. They ought to be considered as assets and reflected in the annual accounts. Similarly, the intangible assets value of firm is hardly reported in financial statements perhaps due to lack of ability of the accounting standard issued to date to clearly prescribe how to adequately do so. Additionally, the nexus between firm characteristics and disclosure of intangible assets of listed companies has not gained ascendancy in developing country like Nigeria. Studies related to intangible assets disclosure has been made in various countries such as Australia, Spain, Italy, Canada, US, Malaysia, among others with inconclusive results reported on the empirical fronts. Against this backdrop, this research seeks to empirically investigate how firm characteristics contribute to intangible assets disclosure in Nigeria.

LITERATURE REVIEW

Theoretical Framework

The most frequently used theories to explain the association between firm characteristics and intangible assets disclosure are agency theory, signaling theory, legitimacy theory and stakeholder theory (Freedman & Jaggi, 2005). Agency theory expresses the relationship between the managers and shareholders of a firm and explains why managers try to maximize their own benefit (Jensen & Meckling, 1976). Agency costs are incurred resulting from the conflict of interests and information asymmetry between owners and managers. Thus, managers are

expected to disclose more information to reduce agency costs (Marston, 2003). Another theory that explains voluntary intangible assets disclosure practices and firm characteristics is signaling theory. This theory suggests that managers need to disclose more information to lower information asymmetry between investors and themselves. The users of financial information need confidence of financial markets; information disclosure will increase this confidence (Hossain & Hammami, 2009). Thus, the investors will feel safer with the increased level of voluntary information disclosure. According to legitimacy theory, the firm tries to justify its existence in society by legitimizing its activities. Firms should behave in accordance with perceived goals of the society to alleviate the public pressures and to legitimize their activities (Freedman & Jaggi, 2005). One important way for firms to legitimize their activities is to disclose information to the public. Hence, they need more information disclosure. Stakeholder theory can be used to explain why firms tend to disclose information voluntarily to the myriad stakeholders with a view to enhancing their confidence in the firm. Stakeholders are the parties that have interest in the firm, and therefore, are interested in firms' activities. Stakeholders include the managers, stockholders, creditors, customers, suppliers, government, trade unions, and the public (Uyar & Kilic, 2012a). To gain the support of stakeholders, the companies should communicate clearly to them the level of intangible assets disclosure as well as pinpoint those firm specific characteristics driving them.

Empirical Review

Some studies have empirically examined firm level characteristics at influencing the disclosure of intangible assets in corporate organizations both in developed and developing countries. The results from these studies have remained mixed and inconclusive. For example, Ibadin and Oladipupo (2015) empirically investigated the determinants of intangible assets disclosure in quoted companies in Nigeria. They used the pooled and panel data of one hundred and fifty – seven (157) quoted companies for six (6) years from 2005 to 2010. The fixed effect was preferred as the choice of data analysis. The study findings indicated that age of company, size, and audit firm size were positively and significantly related to overall disclosure of intangible assets. They also found a positively and statistically significant relationship between debt and the disclosure of intangible assets in Nigeria. Bozzolan, Favotto & Ricceri (2006) investigated the relationship between size, leverage, ownership structure, industry, profitability and intangible assets disclosure of 60 Italian UK firms for the year 2001 using content analysis

technique. The study found size and industry as significant firm characteristics influencing intangible assets disclosure. Bontis (2003) analyzed one thousand Canadian firms with the aid of computerized word – searching programme. The study finding revealed that size did not contribute to the disclosure of intangible assets. Guthrie, Petty & Reicceri (2006). examined the relationship between size, time and industry and one hundred and fifty (150) Hong Kong and Australia quoted companies for the period 2002 using about twenty-four number of disclosure items in disclosure index. Multivariate regression technique was used to effectuate the data analysis. The study finding revealed that size contributes significantly to the disclosure of intangible assets. Chung (2008) studied the relationship between firm characteristic such as firm size and intangible assets disclosure using about one hundred and forty-two (142) listed companies for the period 1992 to 2006 in Taiwan content analysis based on the framework by Guthrie, Petty, & Reicceri (2006). having three dimensions with eighteen intangible assets disclosure keywords were used. The finding of the study indicated that large company size, defined by the number of employees had positive significant association to all dimensions of intangible assets disclosure. Kamath (2008) study on the relationship between firm characteristics and intangible assets disclosure showed that size is not a significant explanatory variable on the disclosure of intangible assets in India.

Kang and Gray (2006) examined the relationship between leverage and intangible assets disclosure using a sample size of two hundred (200) companies across different countries with the aid of multivariate regression method for the period 2005. The study finding revealed that leverage has a positive but insignificant impact on intangible assets disclosure for the period. Firms which have higher debt in their capital structure are prone to higher agency cost (Alsaeed, 2006). Listing age is the length of time a company has been listed on a capital market, and it may be relevant in explaining the voluntary disclosure level (Haniffa & Cooke, 2002). Haniffa and Cooke (2002) investigated the association between listing age and the extent of voluntary disclosure of intangible assets and found no significant association between the two variables. Profitability reflects firm performance for a period. The more a firm performs, the better the shareholders and potential investors are interested in knowing more about the disclosure of the assets, both tangible and intangible assets which contribute to the performance. Companies having higher profitability may disclose more information relating its intangible assets in their corporate annual reports than the companies with lower profitability

Context
(or losses) for several reasons. Firstly, if the profitability of a company is high, management may disclose more detailed information in their corporate annual reports to experience the comfort of communicating it as good news. On the other hand, if profitability is low, management may disclose less information to cover up the reasons for losses or lower profits (Singhvi & Desai, 1971).

The empirical study of Skinner (1994) revealed non-significant and inconclusive relationship between profitability and intangible assets disclosure in listed firms. The study by Garcia-meca, Parra, Larran and Martinez (2005) found that profitability is significant and positively related with the disclosure of intangible assets. This finding is an affirmation of the signaling theory which holds that better performance signals the need for managers to fully disclose their level of assets generating it. Many authors have suggested that auditors play a role in defining the disclosure policy of their clients (Raffournier, 1995). Large audit firms are widely scattered across the world while small audit firms operate domestically. The classification of audit firms into two groups has been drawn on the assumption that the large firms have more concern for their reputation and therefore are more willing to associate with firms that disclose more information in their published financial reports. On the other hand, small audit firms do not possess the power to influence the disclosure practices of their clients. Rather they attempt to meet the needs of their clients in order to retain them (Wallace, Naser & Mora, 1994). Chalmers and Godfrey (2004) argue that high profile auditing companies are more likely to demand high levels of disclosure to maintain their reputation and to avoid reputation costs. Dumontier and Raffournier (1999) observed that the auditors want their clients to comply with complex accounting standards for the sake of their reputation and in their own interest. They may use the information disclosed by their clients as a signal about their own quality. The other reason may be that the audit by big-audit firm is believed to bring enhanced credibility to the financial reports. This is also linked to the fact that major international auditing companies have more knowledge about International Accounting Standards (IAS) and so the costs of implementing and auditing them to their clients is lower than for smaller auditing companies. Another firm characteristic that influence intangible assets disclosure is ownership concentration. Ownership concentration measures the voting power distribution either to the owners or the managers. Sometimes it can also be measured as the proportion of management ownership, representing a motivation for non-financial disclosures to promote alignment of interests between owners and managers (Broberg et al 2010). High ownership concentration in a firm

equates owners control whereas low ownership concentration in firms equates manager control (White et al. 2007).

METHODOLOGY

- i. **Research Design:** The research design adopted in this study was the longitudinal research design. This type of research design involves observation of variables of interest over defined period across certain units.
- ii. **Population of the study:** The population consisted of all companies in both the financial services and industrial goods sectors quoted on the Nigerian Stock Exchange (NSE) as at December 31st, 2016.
- iii. **Sample Size and Sampling Technique:** They were fifty-five (55) companies in financial services and industrial goods companies listed on the Nigerian Stock Exchange (NSE Fact book, 2016) as at December 31, 2016. The sample size of 48 financial services and industrial goods sector companies' financial statements from 2012-2016, were drawn using the Taro Yamane's sampling techniques. This technique provided an insight into the derivation of the sample size. The formula deriving the sample size is given as:

$$n = \frac{N}{1+N(e^2)}$$

Where:

n=sample size

N=Population size (finite population)

e = level of significance desired (5%).

$$n = \frac{55}{1+55(0.05^2)} = 48$$

Model Specification

The model adopted for this study is as used by Kang and Gray (2011). Where;

$$\text{INTGAD} = f(\text{FSIZE}, \text{LEV}, \text{PROF}, \text{AT}, \text{OWNCONC}, \text{Fage}) \text{-----} (1)$$

The above function is stated in stochastic form as:

$$\text{intgad}_{it} = \beta_0 + \beta_1 \text{fsize}_{it} + \beta_2 \text{lev}_{it} + \beta_3 \text{prof}_{it} + \beta_4 \text{at}_{it} + \beta_5 \text{owncon}_{it} + \beta_6 \text{fage}_{it} + \varepsilon_{it} \dots \dots \dots (2)$$

Where: INTGAD= Intangible Assets Disclosure. FSIZE= Firm Size, LEV=Leverage, PROF=Return on Assets (ROA), AT=Auditor Type, OWNCON= Ownership Concentration, Fage= Firm age, $\beta_0 \dots \beta_6$ = Coefficients

ε = Error term

i = Firms over a cross section

t = Time over a period

Apriori Sign: $\beta_1, \beta_6 > 0$

Measurement of Variables

S/N	Variables	Types of Variable	Measurement
1.	Intangible assets disclosure by firms	Dependent	Disclosure Index (see Appendix)
2.	Firm size	Independent	Natural logarithm of total assets
3.	Leverage	Independent	<u>Total liability</u> Equity
4.	Profitability	Independent	Profit after tax divided by total assets
5.	Auditor Type	Independent	The type audit firm providing services to the firm. AT=1 if big4 auditor, 0 if otherwise.
6.	Ownership concentration	Independent	Measured by proportion of shares held by major shareholders who own more than 5% of the company's share to the total shares
7.	Firm's age	Independent	The number of years the company has existed from the year of incorporation

DATA ANALYSIS INTERPRETATION OF RESULTS

Summary of the Levin-Lin-Chiu-Panel Unit Root Test.

Table 1: Panel Unit root test at level

Variables j	Adjusted t- statistics	Adjusted t-critical value	Remark
INTAD	-37.866	0.0000	Stationary at level
ROA	-2.600	0.0000	Stationary at level
AT	-11.678	0.0000	Stationary at level
FAGE	-9.713	0.0000	Stationary at level
LEV	-11.405	0.0000	Stationary at level
FSIZE	-3.600	0.0000	Stationary at level
OWCON	0.674	0.0000	Stationary at level

Source: Author's computation from E-views 8.0 version (2017).

The table above presented summary results of the unit root test at 5% using Levin-Lin-Chin version of the stationary test. The Levin-Lin-Chiu adjusted statistic result is compared against the t- critical values at 5%. Given this, it can be observed the result shows that at level all the variables were all stationary. This portends that there is absence of unit root effects in the variables, thus removing possible spuriousness. Given that the time series used are stationary, it then affords the study to conduct the preliminary analyses and apply the appropriate econometric estimation.

Table 2: A Zero- Order Correlation Showing the Relationships among the Variables of the Study

	INTAD	ROA	AT	FAGE	LEV	FSIZE	OWCON
INTAD	1						
ROA	0.005	1					
AT	0.240	0.123	1				
FAGE	0.009	0.200	0.233	1			
LEV	0.190	-0.183	0.026	-0.037	1		
FSIZE	0.420	-0.144	0.287	-0.101	0.604	1	
OWCON	-0.227	0.007	0.094	0.020	-0.362	-0.390	1

Source: E-view 8.0 output, 2017.

Note: INTAD= Intangible Assets Disclosure; ROA= Return on Assets; AT= Auditor Type; FAGE= Firm Age; LEV= Leverage; Fsize= Firm Size and OWCON= Ownership Concentration.

The Pearson's correlation matrix above showed the association between intangible asset disclosure (INTAD) and all explanatory variables. As expected, intangible asset disclosure (INTAD) was positively and significantly correlated with return on assets (ROA) ($r = 0.005$); auditor type (AT) ($r = 0.240$); firm age (FAGE) ($r = 0.009$); leverage (LEV) ($r = 0.190$); firm size (FSIZE) ($r = 0.420$); and ownership concentration (OW CON) ($r = 0.227$) respectively. It implies that all the firm characteristics variables are related together towards contributing to intangible assets disclosure (INTAD) in the period observed. Return on assets (ROA) and auditor type (AT) are positively correlated ($r = 0.123$, $r = 0.240$) towards engendering the disclosure of intangible assets in Nigerian quoted firms. Thus, the higher the profitability (ROA) of the firm and use of high audit quality, the better is the reflection of firms' tendency to engage in intangible asset disclosure. The high amount of profitability and use of audit type, perhaps a big four audit firm reveals disclosure of intangible assets. This has a way of influencing stakeholders, including shareholders perception and trust in firms. By these shareholders are encouraged to continuously invest in those companies that disclose the level of intangible assets. Return on asset (ROA) and firm age are positively associated towards influencing the disclosure of intangible assets ($r = 0.200$, $r = 0.009$). it therefore means that firm age, in this case, the incorporation age is related to the performance (profitability) of firms at disclosing the level of intangible assets. Return on assets (ROA) and leverage are positively related ($r = 0.183$, $r = 0.190$). Return on assets (ROA) and firm size are positively related ($r = 0.144$, $r = 0.420$). Firm size therefore has a relationship with profitability. A larger firm should drive performance given that all other factors are held constant. Both the increase in size of firms and profitability are therefore influencing factors on intangible assets disclosure in quoted firms in Nigeria. Ownership concentration and return on assets are positively associated ($r = 0.007$, $r = 0.227$) towards the disclosure of intangible assets in Nigerian listed companies. Auditor type (AT) is positively associated with firm age (FAGE) ($r = 0.233$, $r = 0.009$). Conventionally, older firms are believed to always employ the services of quality audit firm due to the attendant advantages. The big 4 audit type (firm) usually would want to avoid damage of reputation and litigation based on long time association with the client company. This behaviour disposition makes them to report every materiality and by extension disclosure of intangible assets. Leverage (LEV) and auditor type (AT)

are positively related ($r = 0.026$, $r = 0.190$), firm size and auditor type are positively associated ($r = 0.287$, $r = 0.420$). this positively in the association between the two variables may be held sway given the fact that larger firms do employ the services of big audit firms compared to small firms as a result of costs and affordability. So, if a larger company can afford the services of a big audit firm type, the tendency is that it can easily report every materiality including disclosure of intangible assets. Auditor type (AT) is positively related with ownership concentration (OW CON). Firm age is negatively related with leverage ($r = 0.037$, $r = 0.190$), negatively related with firm size ($r = 0.101$, $r = 0.420$) and positively associated with ownership concentration ($r = 0.020$). Leverage is negatively related with firm size ($r = 0.604$), and ownership concentration ($r = 0.302$); while firm size is positively associated with ownership concentration ($r = 0.390$). The import of these explanatory variables is that they reformed towards influencing the disclosure of intangible assets in a mutual manner. In a nutshell, the results connote that there exist no signs of multicollinearity among the variables which has also been confirmed by the variance inflation factors (VIFs).

Presentation of Panel Regression Results

To test which firms' specific characteristics, influence intangible asset disclosure in the Nigerian context, the panel least squares with either the random effect or fixed effect result is presented and analyzed. The acceptance of either the fixed effect results or random effect result is predicated on the outcome of the Hausman test. Thus, the result of the Hausman test is presented below:

Presentation of Hausman Test Result

Table 3: Summary Table of Hausman Test

Test Summary	Chi-Square Statistic	Chi-Sq. d. f.	Prob.
Cross section random	3.321	6	0.7676

Cross section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
ROA	-0.001	-0.001	0.000	0.259
AT	0.049	0.039	0.000	0.552
FAGE	0.007	0.000	0.000	0.219
LEV	-0.000	-0.000	0.000	0.673
FSIZE	-0.085	0.044	0.009	0.184
OWCON	-0.000	-0.000	0.000	0.849

Source: E- view 8.0 output, 2017.

The result of the Hausman test above showed that the fixed effect is preferred since the probability chi-square value is less than 5% significant level. Following this, the result of the cross-section fixed (dummy variable) effect is presented below.

Fixed Effect Model Regression Equation

Table 4: A Summary Table of Fixed Effect Results Showing Coefficient of dependent variables and P-values.

Variable	Coefficient	P-value
C	0.719***** (0.656) [1.096]	0.275
ROA	-0.001***** (0.001) [-1.389]	0.167
AT	0.049***** (0.027) [1.788]	0.076
FAGE	0.007***** (0.006) [1.244]	0.215
LEV	-0.000***** (0.001) [-0.315]	0.752
FSIZE	-0.085***** (0.095) [-0.863]	0.389
OWCON	-0.000 (0.000) [-0.677]	0.499
R-square =0.770		
Adjusted R-square = 0.680		
F-statistic = 9.051		
Prob.(F-statistic) = 0.000		
Durbin-Watson stat = 2.406		

*******Coefficient values**

() *standard error in bracket

[] * T- statistic value in parenthesis

E-views 8.0 Output, 2017

The R-squared value being coefficient of determination from the fixed effect result above is 0.77; implying that about 77% systematic variation in intangible assets disclosure is explained by the independent variables, firm characteristics, leaving only 23% unaccounted due to the presence of the stochastic error term. After adjusting for the degree of freedom, the adjusted R-squared dropped to 0.685. It suggests that about 68.5% systematic variation in intangible assets disclosure (INTAD) is explained by firm characteristics, leaving 31.5% unexplained because of the stochastic error term in the construct. It can be inferred from the analysis that the firm characteristics such as return on asset (ROA), auditor type, firm age, leverage, firm size and ownership concentration contribute largely in determining intangible asset disclosure (INTAD) in Nigerian quoted firms. The f-statistic of 9.05 compared with the prob (f – statistic) is statistically significant at 1% level. This reveals the goodness of fit of the model. The individual coefficients of the explanatory variables reveal that a unit change in return on assets (ROA) causes 0.00 units decrease in intangible asset disclosure and is not statistically significant at 5% level. A unit change in auditor type (AT) results to 0.04 units increase in intangible assets disclosure and is statistically significant at 5% level. A unit change in firm age, particularly the incorporation age causes 0.00 units increase in intangible assets disclosure and is not statistically significant at 5% level. The non-significance of the result may be adduced to the shortness of the period observed and the variable measurement error. The import of the empirical result connotes that firms that have existed for a long period of time tend to be more aggressive at disclosing intangible assets. Leverage as one of the firm characteristics shows that a unit change in it results to 0.00 units reduction in intangible assets disclosure and statistically not significant at 5% level. A unit change in firm size results to 0.68 units decrease in intangible assets disclosure in the sampled quoted firms and is not statistically significant at 5% level. The implication of the result is that the longer the size of a firm, the less they are prone to disclosing intangible assets. Ownership concentration as observed in the table above shows that a unit change in it, causes 0.00-unit reduction in intangible assets disclosure and statistically not significant at 5% level. The Durbin-Watson statistic value of

2.40 showed that the absence of serial correlation in the regression output, thus making the result fit for use.

Discussion of findings

The relationship between firm characteristics and intangible assets disclosure is positive. The implication of the finding is that firm characteristics largely determine disclosure of intangible assets in Nigerian quoted firms. The finding supports the agency and stakeholders' theory and goes in tandem with the finding of Allves and Martins (2010). Return on assets (ROA) and leverage were positively related. This positive association implies that a lower amount of debts cause improvement in profitability. These two firm characteristics variable connotes that they influence the disclosure of intangible assets. The finding corroborates with the view of Gerpott et al. (2008) where they opined that intangible assets such as highly skilled employees or sophisticated organization process contributes to achieving a high level of efficiency attaining efficiency suggests that management is able to minimize every expenses with available strategy including the strategy to employ optimal mix of debts. Ownership concentration and profitability are influencing factors in the disclosure of intangible assets. Intuitively, the extent at which ownership structure influences disclosure of intangible assets depends on the level of agency costs. This finding is in tandem with Fama and Jensen (1983) expression in this regard. Auditor type (AT) is positively related with ownership concentration (OW CON). Firms with concentrated ownership may choose to use the service of a big four audit firm to audit financial statement, including disclosure of intangible assets. This is in tandem with the assertion of Omoye (2013).

The individual coefficients of the explanatory variables reveal that return on assets (ROA) causes a decrease in intangible asset disclosure and is not statistically significant. It is a pointer that profitability is not really a significant contributor to the intangible assets disclosure in Nigerian listed firms. The finding is contrary to the assertion of Prencipe (2004) and stands of agency theory. It is not in tandem with Ousams et al. (2012); Broberg et al. (2010); Hanniffa and Cooke (2002). However, the empirical finding agrees with Hossain and Hammami (2009); Oliveira et al. (2006); and Gerpott et al. (2008) who found profitability not significant in the disclosure of intangible assets in quoted firms. Auditor type (AT) results to increase in intangible assets disclosure and is statistically significant. The empirical finding is an affirmation of prior researchers' claim. For example, Jensen and Meckling (1976) suggested that the disclosure policies and the extent of

disclosure of a company is influenced by the type of external auditors engaged by the company while Fama and Jensen (1983) also pointed out that large international audit firms are more likely to be independent from their clients; and as a result, they are constrained from the reporting client's material errors when providing their opinion. What they preferred to do is to expose clients' errors as much as they can in order to safeguard their reputation before the general public. Empirically, the finding is in tandem with Hossain, Perera and Rahman (1995); Wallace, Naser and Mora (1994) and is however not in consonance with Raffournier (1995). Firm age, particularly the incorporation age causes an increase in intangible assets disclosure and is not statistically significant. The non-significance of the result may be adduced to the shortness of the period observed and the variable measurement error. The import of the empirical result connotes that firms that have existed for a long period of time tend to be more aggressive at disclosing intangible assets. The empirical finding is in tandem with White et al. (2007), Rimmel et al. (2009); Whiting and Woodcock (2011); Nurunnabi et al. (2011); Taliyang et al. (2011); and Bransorijck et al. (2012). The finding is however contrary to the study finding of Oliveira et al. (2006), Kang and Gray (2011). Leverage as one of the firm characteristics result to a reduction in intangible assets disclosure and statistically not significant.

Leverage is a major aspect in firm financing that is usually imbued with agency cost / market friction. Occasioned by this, firms do sometimes restraint from disclosing the source and exactitude of factors surrounding the amount of leverage used. This further hampers their ability to disclose it and consequently the intangible assets that may have been financed with the leverage from time to time. The empirical finding agrees with the study of Kang and Gray (2011), Oliveira et al. (2006); Broberg et al. (2010); Prencipe (2004), White et al. (2009) and Williams (2001) and is contrary to Bozzolan, Favotto and Ricceri (2003); Ferreira et al. (2012) and Omoye (2013). Firm size results to a decrease in intangible assets disclosure in the sampled quoted firms and is not statistically significant. The implication of the result is that the longer the size of a firm, the less they are prone to disclosing intangible assets. Anyway, this finding is contrary to theoretical stance. Longer firms are supposed to be abreast of the implication of disclosure of intangible assets compared to small firms. Longer firms are presumed to be more experienced in management of assets and stick to regulatory framework given that they know the serious implication of not engaging in full disclosure of assets. While the finding agrees with Olibeira et al. (2006); White et al. (2007); Kang and Gray (2011);

Nurunnabi et al. (2011); Taliyang et al. (2011), it is however contrary to studies like Branswijck et al. (2012), Dasilva et al. (2013) and Al-Hangdeen and Suwariden (2014). Ownership concentration as observed causes a reduction in intangible assets disclosure and statistically not significant. Theoretically, firms with large ownership concentration are engaged in disclosing intangible assets because the owners want to know the constituents of the assets and how they are used to generate returns on investment from time to time. Going by this empirical result obtained, the reverse appears to be the case. Here ownership concentration reduces the level of intangible assets disclosure. This may be adduced to be caused by the need to hide certain information from the general public, thus resulting to the development of asymmetric information. The empirical finding is in consonance with Dewi et al. (2014), Ferreira et al. (2012); White et al. (2007) and Whiting and Woodcock (2011); Kang and Gray (2011). It is however contrary to the empirical estimation of Oliveira et al. (2006), Branswijck and Everaet (2012), Al-Hamadeen and Suwaideun (2014).

CONCLUSION AND RECOMMENDATIONS

The nexus between firm characteristics and intangible assets disclosure of listed firms in Nigeria is the focus of this study. Quoted companies in developing countries like Nigeria face a lot of challenges in the day to day efficient management of the business. This may be due to issues relating to profitability, aging, issue relating to audit quality, size, amongst others. Majority of the firms that use more of intangible assets do so to gain competitive advantages over their rival in the industry. In attempt to engage in this, the management may undermine certain characteristics of the firm that should be taken into critical consideration. The study concluded that only auditor type and firm age contribute to the disclosure of intangible assets in Nigerian listed firms while profitability, leverage, firm size and ownership concentration do not as stated in the a priori expectation. The study also concluded that firm characteristics promote the disclosure of intangible assets by listed companies in the Nigerian context. It is therefore recommended that firm managers must constantly weigh the policy implication of investing in intangible assets as stakeholders in the firm will require additional disclosure of information on intangible assets beyond legal requirements. Firms should always invest in intangible assets and disclose same taking into cognizance the age, size, profitability and leverage in the capital structure. Regulatory authority should make it mandatory for large and multinational quoted firms in Nigerian to always employ the service of a big four (4) audit firms to promote the full disclosure of

intangible assets so as to enhance investors' confidence and promote public scrutiny of their investment in intangible assets.

REFERENCES

- AbdulHalim, H. & Baxter, T. (2000). Voluntary disclosure of intangibles among Australian publishing listed companies. *Global Review of Accounting and Finance*, 1(1), 60–76.
- Al-Hamadeen, R., & Suwaiden, M. (2014). Content and determinants of intellectual capital disclosure: Evidence from annual reports of the Jordanian industrial public listed companies. *International Journal of Business and Social Science*, 5(8), 165-175.
- Al-Handeen, M.J. & Suwariden, G.M. (2014). Voluntary disclosure by state owned enterprises listed on the stock exchange of Hong Kong. *Journal of International Financial Management and Accounting*, 13(2), 125–152.
- Arrighetti, A., Landini, F. & Lasagni, A. (2011). The determinants of intellectual capital assets in manufacturing firms. Evidence from Italy, being a paper presentation to IFKAD 6th edition – knowledge-based foundations of the service economy. Tampere University of Technology, Tampere (Finland).
- Barney, K.F. (2009). Intangible capital disclosure in IPO prospectuses: evidence from Malaysia. *Journal of Intellectual Capital*, 13(1), 57-80.
- Bontis, N. (2003). Intellectual capital disclosure in Canadian corporations. *Journal of Human Resources Costing and Accounting*, 7(1/2), 9–20.
- Bozzolan, S., Favotto, F., & Ricceri, F. (2006). Italian annual intellectual capital disclosure an empirical analysis. *Journal of Intellectual Capital*, 4(4), 543–36.
- Branswijck, D. & Everaert, P. (2012). Intellectual capital disclosure commitment: Myth or reality? *Journal of Intellectual Capital*, 13(1), 39-56.
- Brennan, N. (2001). Reporting intellectual capital in annual reports: evidence from Ireland. *Accounting, Auditing & Accountability Journal*, 14(4), 423-436.
- Broberg, P., Tagesson, T., & Collin, S-O. (2010). What explains variation in voluntary disclosure? A study of the annual reports of corporations listed on the Stockholm Stock Exchange. *Journal of Management & Governance*, 14(4), 351-377.
- Chalmers, K., & Godfrey, J. (2004). Reputation costs: The impetus for voluntary derivative financial instrument reporting. *Accounting, Organizations and Society*, 2(29), 95-125.
- Chung, M. (2008). Corporate mandatory disclosure practices in Bangladesh.

- International Journal fo Accounting*, 40(1), 399 – 422.
- Dewi, K., Young, M.&Sundari, R. (2014).Firm characteristics and intellectual capital disclosure on service companies listed in Indonesian Stock Exchange period 2008-2012.*Merit Research Journal of Accounting, Auditing, Economics and Finance* 2(2), 022-035.
- Dumontier, P.&Roffournier, B. (1999). Why firms comply voluntarily with IAS: An empirical analysis with Swiss data. *Journal of International Financial Management and Accounting*, 9(3), 216-245.
- Fapohunda, F.M., Ogbeide, S.O., & Igbinigie, O.O. (2017). Empirical assessment of manufacturing companies efficiency in Nigeria. Data Envelopment Approach (DEA). *Research Journal of Finance and Accounting*, 8(22), 137-147.
- Ferreira, A.L., Branco, M.C., & Moreira, J.A. (2012).Factors influencing intellectual capital disclosure by Portuguese companies.*International Journal of Accounting and Financial Reporting*, 2(2), 278-298.
- Freedman, H. &Jaggi, A. (2015). Impact of corporate attribute on disclosure of intangible assets: A study of selected Indian Companies. *Zenith International Journal of Business Economics and Management Research*, 5(1), 119-131.
- Garcia,-Meca, E., Parra, I., Larran, M. & Martinez, I. (2005).The explanatory factors of intellectual capital disclosures to financial analysis.*European Accounting Review*, 14(1), 63 – 94.
- Gerpott, T. J., Thomas, S. E., & Hoffmann, A. P. (2008).Intangible asset disclosure in the telecommunications industry.*Journal of Intellectual Capital*, 9(1), 37-61.
- Guthrie,J., Petty,R. &Reicceri, F. (2006). The voluntary reporting of intellectual capital: Comparing evidence from Hong Kong and Australia. *Journal of Intellectual Capital*, 7(2), 254-271.
- Haniffa, R. M., & Cooke, T. E. (2002).Culture, corporate governance and disclosure in Malaysian corporations.*Abacus* 38(3), 317-348.
- Hossain, M., &Hammami, H. (2009). Voluntary disclosure in the annual reports of an emerging country: The case of Qatar. *Advances in Accounting*, 25(2), 255- 265.
- Ibadin, P.O. &Omoye, A.S. (2014).Voluntary disclosure of intangible assets in post-IFRS Nigeria.*Accounting Frontier*, 5(3), 91 – 109.
- Ibadin, P.O. (2013). Determinants of voluntary disclosure of intangible asset of intellectual capital in Nigeria. Being a Ph.D dissertation defended on the