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Article

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ACCOUNTING, CORPORATE GOVERNANCE & BUSINESS ETHICS | RESEARCH ARTICLE

Influence of selected company characteristics on voluntary disclosure of intangible assets in listed companies

Sylvia Eneh^{1*}, Emeka Emengini¹, Imaobong Nnam¹ and Ngozi Nwekwo¹

Abstract: Generally, companies have been faced with problem that ranges from non-disclosure to partial disclosure of intangible assets (IAs). This however, distorts the oversight function of the directors of companies from producing full and accurate financial information in the annual reports for various segments of the society for investment decisions. Intangible assets are generally pivotal due to its value creating attributes and enhancing healthy competitive advantages. This study examined the influence of certain company specific characteristics on voluntary disclosure of IAs of listed companies in Nigeria for 2011–2018 as a case study. Statistical analysis was conducted and the result showed a significant positive relationship between performances and industry size as factors that drives voluntary disclosure of intangible assets (IAs) in Nigeria while leverage and listing age does not have any impact on voluntary disclosure of IAs. Consequently, we recommend that government should provide incentives to companies that engage in voluntary disclosure of their IAs. Again, whistle blowing strategies may be adopted by shareholders and concerned public at least to extol compliance, continuous training and a shift in mindset of managers is also recommended.

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Sylvia Eneh is a post higher diploma research student at the University of Nigeria, Department of Accountancy, Faculty of Business Administration. Interest research in the field of intellectual capital, financial accounting and internal control.

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PUBLIC INTEREST STATEMENT

The greatest challenge for the provision of vital information to the public by management is when one has a leeway to escape because such information is at his or her discretion. This means that the management is not mandated or forced to do so. However, when the numerous benefits of providing information are pondered on, one will be quickened to willingly provide such without pressures. Here, we considered the importance of the provision of information willingly concerning the intangible assets of an organization as a pivot for improved performance, sustainable growth and expansion. Hence, the study examined the effects of voluntary disclosure of intangible assets (human capital, internal capital and external capital) in annual reports of listed companies for 2011 to 2018. Previous studies have researched the relationship between intangible assets voluntary disclosure and corporate governance in developing nations like Nigeria, Sudan and compared developed countries like Europe.

Subjects: Economics; Finance; Business, Management and Accounting

Keywords: Intangible assets (IAs); voluntary disclosure; performance; size; leverage; listing age; Nigeria

1. Introduction

Voluntary disclosure is a part of corporate disclosure that is discretionary and transcends beyond legal or regulatory mandates (Guthrie & Petty, 2000; Li, Pike & Haniffa, 2015) which is not backed by laws, regulations, and standards. Companies are not statutorily obliged to abide by them but are motivated to embark on as a result of the inherent advantages thereon. Some of the advantages of voluntary disclosures are: lower cost of capital, gaining investors' confidence, improving marketability of shares (Bontis, 2013; Omoye, 2013), used as a device for reducing information gap between directors and other stakeholders and enhance the credibility of financial reports (Abeywardana et al., 2016). However, (Asogwa et al.,) highlighted that mandatory disclosures are those disclosures which are in line with applicable rules, laws, regulations and standards prevalent at such point in time. Deviation there from attracts stiff and laid down penalties.

However, the disclosure that is pivotal to the overall efficiency and productivity of an organization are those of the intangible resources. The emergence of advancement in science and technology has paved way for the disclosure of intangible assets rather than those that appear on the face of the financial statements (Ngoc & Duke, 2020). This is consequent upon the prevalent era now which is driven by knowledge, experiences, skills, technological capabilities, talents, knows how, good customer and supplier relationships that seem to hold more values than tangible resources. (Ferreira et al., 2012; Onyekwelu, 2015) observed a drastic paradigm shift from the time of archaic dependence on physical resources or tangibles, manufacturing and processing outfits to an era that are fundamentally based on knowledge and other intangible resources (An et al., 2011). Within the past few decades, these ideas are uppermost in managers mindset as their belief are hinged on the fact that what controls or drives the organization to the next level are the reporting of intangible resources, (Omoye, 2013) and their disclosure controls the tangible resources for a quicker positive result. The disclosure of intangible assets (IAs) or resources in whole or in parts bridges the information gap between the principal and the agents (Singh, 2008). Previous literature exposes showed that a lot of studies abound on intangible assets (intellectual capital) dwelling on same variables but having divergent and conflicting empirical results. This could be attributable to the absence of a consensus benchmark for measuring the intangible assets (intellectual capital) (Ulum & Jati, 2016; Xu & Wang, 2018) and lack of extant standards, framework and regulations guiding their disclosure in financial reports.

This paper contributes to knowledge on the voluntary disclosure of IAs in annual reports of listed companies in Nigeria. For instance, we explored the need for voluntary disclosure on the listed manufacturing firms. Again, we adapted the value chain scoreboard (VCSB) as developed by (Lev, 2001) and subsequently modified by (Ibadin, 2013) to measure and comprehend the relationships between certain company characteristics and voluntary disclosure of IAs. Finally, some policy implications of this paper was shown in line with the findings.

The rest of the paper is arranged as follows: section 2 reviews the meaning and measurement of IAs, section 3 presents the theoretical framework, while the empirical studies and hypotheses development are contained in section 4. Research design, findings and discussion as well as conclusions are presented in section 5 and Section 6 respectively.

2. Meaning and measurement of intangible assets (IAs)

Intangible assets (IAs) are assets that lack physical substance and have been proven to be an outstanding resource to the present day business across the globe. Intangible assets aid businesses in developing high level of competitive advantage, (Onyekwelu, 2015) thus driving improved

earnings, value creation and sound corporate image (Li & Minor, 2015); Ibadin & Omoye, 2014). (Li & Minor, 2015); Sveiby, (2000) argues that intangible assets have been generally accepted as those innate potentials usually acquired by a company through research, training and development of the human capital within a structure in an organization and the relational capabilities with varied stakeholders. (Omoye, 2013 OECD, 2012; Spence, 2003) argues that intangible assets cover all long term outlays by forms aimed at increasing future performance other than by the purchase and use of fixed assets. (Morariu, 2012; Silvie & Tomas, 2012) addressed the challenges of OECD as they posit that the factors contributing significantly to the growth of a company which are not included in the annual corporate financial report as fixed assets should be recognized and disclosed as intangible assets.

In the same vein, (Morariu, 2012) reiterated that there has not been a comprehensive list of what constitute IAs and the level of disclosure has been low thus causing asymmetry of information between the organization and the varied segments of the society that need the information for diverse reasons. The absence of accounting standards for the measurement of the components parts of IAs (human capital, internal capital, external capital) paved way for its measurement through different models: the Navigator, (Edvinsson & Malone, 1997), intellectual capital index (ICI) index by (Roos, 1997), value chain scoreboard (VCSB) by (Lev, 2001).

The role of voluntary disclosure of intangible assets has been drawing the attention of International Accounting Standards setting bodies and stakeholders especially as it affects some firm specific characteristics such as size of a firm, level of performance, listing age, and industry size and type. In a statement in year 2000 December, the IASB considered it necessary that narrative reporting should supplement financial statements in order to provide useful information about such specific firm characteristics which would be a pointer to the generally known measures such as earning per share (EPS), earning yield (EY), dividend per share (DPS) of the company (Oliveira, 2006). The emergence and adoption of IFRS by most countries strengthened the need for corporate disclosures of company's intangibles assets or resources and assessing the relationship thereof to the firm characteristics viz a viz their inclusion in the annual reports.

3. Theoretical framework

3.1. The Resource based view (RBV)\ Knowledge based view (KBV) of the firm theories

RBV of the firm theory was developed in the 20th century by Penrose who perceived a firm as having series of administrative processes and multiples of production resources that could be human or tangible. These resources are within the organization and can be applied to explain performance and values in an organization (Penrose, 1980; Barney, 1991; Mahkija 2003 in Corrado et al., 2015; Onyekwelu, 2014). Barney et al, (1991) reiterated the key principle of RBV theory stands on competitive platform that may generate economic returns to the organization. They reiterated that the backbone of the platform cannot be severed from the human resources and their ingenuity. Consequently, the extent of investment in the human resources determines the level of productivity, performance and by extension voluntary disclosure. RBV promotes human resource management broadly and human capital management in particular.

On the other hand, KBV theory was developed by Stalk in 1992 and considers knowledge as the most strategically significant resource of the firm. He quipped that competitive abilities are based on capabilities and competences which are propelled by knowledge. Consequently, its management identifies, maintains and sustains the competences now and in the future, (Subramaniam, 2013). In relation to the study, the competencies and abilities are packaged within the human resources who apply them through multiple facets of activities in the organization. It is pertinent to note that KBV was rebirth by RBV of the firm theory and as a result cannot be separated.

Stakeholders Theory

Stakeholders Theory was propounded in 1984 by Edward Freeman. The theory suggest that a business or organization must seek to maximize value for its stakeholders. He stressed the need for interconnections between all persons who has stake in them namely employees, suppliers, customers, shareholders, creditors, the government, local and international communities. In relation to the study, the information dissemination to all concerned are of paramount importance and can be met through disclosure of items of intangible nature in the annual reports which are not seen on the face of the financial statements.

4. Empirical literature review and hypotheses development

4.1. Empirical literature review

Human capital is that part of intangible assets that drives other vital resources which directly or indirectly affects profitability, company size and type, ownership concentration, listing age especially if they are disclosed without barriers or restrictions (Eng & Mak, 2003; Ibadin & Omoye, 2014). Other types of intangible assets in addition to the human capital as stressed by (Bontis, 2013) are the internal (structural) capital and the external (relational) capital. However, these capitals cannot be integrated directly in the financial statements or annual reports. But, human capital is widely known to be the driver of all the tangible or physical resources within an organization. This is because human capital has the capability of turning the physical resources into proactive virtues and advantages through the innate capabilities and skills acquired over time or developed via training (Ferreira et al., 2012). Suffice it to note that information on intangible assets (IAs) are lacking despite its centripetal role in organizations financial reporting.

Consequently, other studies had delved into several factors that determine the level of voluntary disclosure of IAs such as ownership concentration, internationalization of business, industry type board composition, auditor type are evidenced in developed nations thus, having very few studies in developing countries. Most of these studies dwelt on the effects of corporate governance on intangible assets (IAs) and market capitalization (Eng & Mak, 2003; Gerport et al., 2008; Onyekwelu, 2015). However, recently, the focus has shifted to the influence of certain company specific characteristics (performance, size, listing age and leverage) in determining discretionary disclosures of intangible assets in annual reports. Furthermore, proper development and harness of innate skills and competences of management and employees as well as other associated stakeholders place organizations on formidable platforms to gain competitive advantages thereby improving on growth potentials holistically and performance in particular.

For instance, (Onyekwelu et al, 2014) ventured into the effect of Intellectual Capital on performance, productivity and market valuation for companies that are listed in Nigerian Stock Exchange. They found that Intellectual Capital can explain performance (proxied by profitability) and productivity but not market prices. (White et al., 2010) examined the effect of intangible assets (IAs) on firm's performance. The result showed that there existed a direct and positive relationship between performance of Australian listed companies and their internal capital (structural capital) far more that the human capital. Hence, the findings suggest an intelligent moderation in the application and reporting of the different components of IAs so as to have outstanding performance (Abdulai & Moon, 2012) ventured into the factors that drive the success of software industry in Ireland, India, with respect to performance. The emphasis was the top management training, commitment and fast changing leadership style on IAs (human capital development) and its relationship with performance of the company. The result showed a significant positive relationship between the elements of IAs (human capital) and firms' capabilities on one hand and between competitive abilities and company's performance. The conclusion therefore, was that human capital contributed to the success of the software industry which was propelled by competitive advantages. Again, (Habbash et al., 2016) studied on the impact of skills and knowledge to increase person's productivity and creation of wealth. The result showed that education played an increasing central role in enhancing economic growth. This is because trainings, skills

and knowledge acquired with applicable motivation would be the catalyst, hence they quipped that human capital is a production factor.

This is in agreement with the resource based view (RBV) theory which was developed in 1959 by Penrose who perceived a firm as having series of administrative processes and multiples of production resources that could be human or tangible. These resources and capabilities are within the organization and can be applied in different ways to explain performance and values in the organization, (Haniffa & Cooke, 2005; Mahkija, 2003 in Curado, 2015). The existence of the different resources and capabilities is the outstanding principle of RBV which stands on competitive platform which could generate economic return to the firm, (Barney, 1991). The joint effect of these resources in the organization returns cannot be severed but rather show themselves as enhanced values which culminates into higher returns and by this the management has no alternative rather than to send news to the shareholders concerning their excelling status. RBV theory is not limited to traditional economic productive factors, technological or economies of scale but social relationships firm's management, industry cultures and built up reputation and goodwill amongst the other stakeholders.

Subsequently, many other studies supported that highly profitable firms and voluntary disclosures of IAs are significantly and positively associated. They are as follows: (Zourarakis, 2009; Haniffa & Cooke, 2002; Lev & Penman, 2010; Broberg et al., 2010; Li et al., 2008; Leventis & Weetman, 2004; Wallance et al., 1994; Haniffa & Cooke, 2005; Habbash et al., 2016). However, other studies supported the above notion and did not find any significant relationship between profitability and voluntary disclosure of any category of the intangible assets. Examples are as follows: (Anderson et al, 2015; Ibikunle & Oba, 2010; Barako et al., 2006; Eng & Mak, 2003; Ferreira et al., 2012; Hossain & Hammani, 2009; Oliveira et al., 2006; Yi & Davey, 2010).

Furthermore, there has been a general acclamation that the size of a firm largely influence the level of discretionary disclosure embarked upon. Most studies have explained the reason size affected level of disclosure practices of firms with diverse reasons. For example, (White et al, 2007) stressed that larger companies (that are subject to more regulations) are under political pressure and tries to reduce political costs by disclosing more of their IAs. (Gerport et al., 2008; Haniffa & Cooke, 2005) in their studies observed that firms that are larger in size have more attraction by the public and thus tend to disclose more of their intangible assets voluntarily. The production of information for larger companies are far cheaper because they use highly improved information system and this enables them to voluntarily disclose more transparent information (Garcia-Meca et al., 2005; Oliveira et al., 2006; Aljifri & Hussainey, 2007; Gerport et al., 2008; Lev & Gu, 2016;).

Again, (Branco & Rodrigues, 2008) reiterated that larger companies have greater competitive advantages since the disclosure of their IAs could be a source of obtaining additional edge as certain elements may differentiate a company from its competitors. However, firms that are not big tend to have greater sensitivity to the risk of news disclosure undermining their competitive advantages (Broberg et al., 2010; Lev & Gu, 2016). (Anderson et al, 2015) noted that the size of a firm causes differing levels of voluntary or discretionary disclosures. For instance, firms tend to use more sensitive instruments for the capital markets operations for outside financing of the company's business and discretionary disclosure might improve investor's beliefs (Hossain & Hammani, 2009; Retty & Guttrie, 2006).

Again, larger firms usually are exposed to higher magnitude of foreign capital and agency costs (Watson, Shrivs & Marston, 2002). In an attempt to reduce the cost, the organizations' management would embark on more disclosure thereby reducing the information gap between her and the shareholders (agency theory based). Consequently, the apparent upcoming gains from shareholders, debt holders and principals, in addition to step up disclosures would be high. (White et al., 2010). (Lev & Gu, 2016) opined that larger firms' exploits economics of scale in intangible

accumulation and are capable of developing and protecting such intangibles, thus tend to disclose more than smaller firms. No wonder, (Li & Minor, 2015) quipped that larger firms are capable of managing more of the uncertainty which is related to the intangible assets investment and its disclosures. in (Amunonye Ben, 2016) reiterated that company type, size, liquidity, and management competence as yardstick have a significant effect on the financial reporting of the sampled insurance companies. They suggested that only when top management and other personnel's are highly trained and qualified that the coherence between these company characteristics and human capital are most effective.

Also, larger companies have the capacity of recruiting highly skilled personnel and have sophisticated management reporting system which can provide a long range of corporate information, (Oliveira et al., 2006) that can take the organization to the next level of expansion. (Aripin et al., 2008) suggested that managers of larger firms are more likely to realize the possible benefits of better disclosure which are possible through the acquisition of sound and trained personnel while small companies are likely to avoid disclosures as a result of lower level of personnel training and this could endanger their competitive position in the industry.

In addition, (Barako et al., 2006; Hossain & Hammani, 2009; Li et al., 2008; Oliveira et al., 2006) found that bigger companies are been monitored by government and its agencies, and they have the mindset that better reporting would always reduce unnecessary pressures from the government and or its agencies. These companies are exposed to political costs, and thus, tend to pay a close attention on those policies that can reduce such inherent costs (Iatridis & Alexakis, 2012), Subramaniam, 2006). Also, it is usually easier for larger companies to participate in various markets or sectors as a result having different degrees of economies of scale (Lev, 2001); Oliveira et al., 2006), to attract financing from different countries (Leadbeater, 2000). The relationship between size of an organization and the level of voluntary disclosure are linked to the stakeholder's theory which stipulated that a firm should not only position itself to attend to the needs of her shareholders alone, rather develop strategies to incorporate all the other stakeholders (government, potential investors, customers, suppliers). (Abeyesekera, 2010) upheld the view that re instating that management brings different interest and capabilities to bear and uses them to control the affairs in the organization.

Consequently, some other studies have found a significant positive effect between a firm's size and voluntary disclosure (Guttrie et al, 2006; Yi & Davey, 2010; Wallance et al., 1994; Leventis & Weetman, 2004; Barrako, 2006; Hossain & Hammani, 2009; Uyar, 2013; Eng & Mak, 2003; Broberg et al., 2010; Oliveira et al., 2006; Ferreira et al, 2006; Ibadin et al, 2014; Omoye & Ibadin, 2013; Garcia-Meca et al., 2005; Li et al., 2008; Li et al, 2012). However, some scholars did not find any significant effect between size of a firm and voluntary disclosure (Bukh & Mouritsen, 2005; Attan & Rahim, 2012).

In addition, (Ibadin et al, 2014) observed that leverage shows the dominance of that part of capital that is associated with fixed interest in the capital structure. The extent to which an organization manages the portfolio of its debt capital (loan) and the equity (share capital) is of paramount importance. A company that has a low profit would struggle to pay interests to the providers of capital, which leads to the risk of sudden liquidation and further difficulty in accessing funds for future operations, (Haniiffa & Cooke, 2005). A higher level of gearing indicates that the company has high financial leverage and is more exposed to downturn in the course of its operations. An organization having a high gear would have more agency costs as a result of the value shift from debt owners to shareholders.

Furthermore, the firm with more debt has greater willingness to send out news, thus bringing down agency cost (Corrado et al., 2015; Oliveira et al., 2006). By extension, these suggest a positive correlation between discretionary disclosure and a firm debt profile (leverage). On the contrary, a company that has low leverage tends to have greater rewards and incentive to signal the market

as it concerns the financial structures thus, implying higher voluntary disclosure, (Haniffa & Cooke, 2005). Also, stressed that management and monitoring of the level of debt are keenly associated to the value inherent in the skills and knowledge possessed by the directors, managers and personnel in the organization. Hence, this is appropriately linked to the knowledge based view of the firm (KBV) theory which posited that the competitive abilities owned by a firm are totally dependent on the capabilities, competences and knowledge possessed by the human beings in the establishment or organization.

However, (Omoye, 2013) reiterated that the discretionary disclosure may not be so important to creditors a company has as they are to the other stakeholders and even potential investors in particular. Also, (Striukova et al., 2008) expressed that debt level in the capital structure is not a factor that may determine the voluntary disclosure of R & Ds while a negative and weak correlation exists between the level of debt in the capital structure and IAs disclosures practice. (Whiting & Miller, 2008) in (Anderson & Folkare, 2005; Oliveira et al., 2006), proved that from signaling point of view, larger firms tends to signal their advantages to the market than smaller firms which invariably depicts voluntary disclosure.

Previous studies on leverage and voluntary disclosure showed varieties of results. For instance, (Sujan & Abeysekera, 2007; Hossain, 2004; Lev & Gu, 2016; Kang & Gray 2010; Broberg et al., 2010; Williams, 2001; White et al, 2007) observed a significant and strong relationship between a firms level of leverage and their financial structure viz aviz their disclosures levels in the annual reports. But, some others found no significant or positive relationship between leverage and discretionary disclosures (Whiting & Woodcock, 2008; Haniffa & Cooke, 2005; Oliveira et al., 2006) amongst others. On the other hand, (Leventis & Weetman, 2004; Wallance et al., 1994; White et al., 2010; Zourarakis, 2009) found that there was no effect in the relationship between leverage and voluntary disclosure of IAs,

Moreover, there has been a general belief that older firms are mostly exposed to developing greater value chain and producing more IAs as part of their normal business operations and this could be attributable to long years of experience, training and development. (White et al., 2010) observed that older organization embark on developing of the human capital through trainings rather that outsourcing. They quipped that dangers abounds for companies that outsource in business: loss of sensitive data and confidentiality, over dependence on outsourcing providers and fear of imitation from competitor's etc. The training and experiences acquired by the management and staff over time becomes the centripetal framework upon which the organization stands building a formidable future and thus, in the reporting of their IAs in the annual reports.

In the same vein, (Broberg et al., 2010; Omoye, 2013; White et al., 2010); attributed that the creation of more time to build and establish excellent customers' relationships, better network of suppliers, good retirement plan, contribute towards community social responsibility, set up good grounds for research centers alliances would provide a good platform for sound and better disclosure practice for the benefit of different segments of the society. (Hannifa et al, 2002; Habbash et al., 2016) reiterated that firms that are older are prone to disclosing more news adding that they are much more comfortable to absorb R & D costs as against newer firms that would likely run from such costs as they lack the capacity to carry such. However, this is divergence to the study carried by (Sveiby et al, 2000) that supported the claims that younger companies would disclose more of their IAs in order to reduce doubt and uncertainty, reduce skepticism and amplify investors' (White et al, 2009) confidence who judge them as riskiest firms. (Silvie & Tomas, 2012) was nudged to link experiences as a result of the long years of embarking on business operations to the resource based view (RBV) of a firm theory. The theory anchored on human resource management (generally) and human capital management (particularly) stressing that a company should build valuable resources over time and use them to create lasting success. Hence, one of the valuable resources is experience acquired over time by management, personnel and employees. RBV theory is an off shoot of knowledge based view of a firm (KBV) theory which was modified by Barney, (1991).

There has been mixed empirical evidence on the effects of age of a company and their discretionary disclosures of intangible assets (IAs). (Kang & Gray, 2006) found an insignificant positive effect of listing age on IAs voluntary disclosures practice since such company would prefer access of capital from global market. But, (Corrado et al., 2015; Ferreira et al., 2012; Garcia-Meca & Martinez, 2007; Haniffa & Cooke, 2005); Hannifa & Cooke, 2002; Bukh & Mouritsen, 2005) found no effects of age on the disclosure of a firms intangible assets. However, some studies found a negative relationship between age of a company and voluntary disclosures of IAs, (Habbash et al., 2016; Uyar et al.,).

From the foregoing, it is obvious that a good number of studies have been carried on the topic across the globe which emanated and are domiciled outside the shores of this country while few studies done in Nigeria looked at certain company characteristics and how they affected voluntary disclosure of intangible assets. A cursory look at the results produced by the above studies ex-rayed mixed evidence on the drivers of discretionary disclosure of intangible assets for the listed companies. The studies done in Nigeria were tilted towards the financial sector (Banks and insurance companies) and because of the nature of this sector and the inherent regulation guiding them, the findings there from may not be generalized for other firms in Nigeria let alone across the globe. It therefore, became imperative to consider the topic germane especially now that knowledge intensive and information driven economy has overtaken the traditional economy when tangible assets are given more considerations.

4.2. Hypotheses development

Obviously, a good number of studies have been carried on the topic across the globe which emanated and are domiciled outside the shores of this country. (Abeyesekera, 2010; Ferreira et al., 2012; Zourarakis, 2009); dwelt on the effect of corporate governance on intellectual capital. Majority of the studies focused on the relationship between voluntary disclosure of certain firm specific characteristics (performance, ownership concentration, size, auditor type, internationalization of business, board composition) on the performance of a company (Oliveira et al 2006; Ibadin, 2013; Ibadin & Omoye, 2014; Weronika, 2015). Few other studies dwelt on the effect of intellectual capital on corporate valuation of quoted companies (Banimahad & Mohammadrezai, 2012; Onyekwelu, 2015). Quite a good number of studies tilted towards the relationship between IC voluntary disclosure and performance on either industrial or financial services sector (banks and insurance companies), but this could not be used to generalize other companies in other sectors because of the inherent regulations they are exposed to.

A cursory look at the results shows mixed evidence on the drivers of discretionary disclosure of intangible assets (IAs) for the listed companies. Some scholars observed that discretionary disclosure enhances a balanced and detailed reporting to various stakeholders while others ascertained that intangible assets disclosure improves the marketability of shares, reduces agency costs and information asymmetry or leads to increase in expected returns. Some quipped that corporate governance does not have a direct link to company's intangible assets disclosure. However, some literature expose posited that human capital (management) is the major factor that drive all corporate governance principles and therefore could affect company's leadership or reporting style.

Additionally, intangible assets voluntary disclosure (IAVD) were measured with different parameters in most of the previous studies using the balanced score cards(BSC) by Kaplan, (1992); intangible assets monitor (IAM) by Sveiby, (1997); The Navigator (N) by Edvinsson, (1997); Value platform (VP) by (Petrash, 1996); intellectual capital index (ICI) by Roos, (1997). However, this study adapted the value chain scoreboard (VCSB) developed by Lev (2001) and adopted by (Ibadin, 2013) which has three identifiable segments (human capital- HC), internal capital, and external capital) with only thirty six items for measurement. Hence, this study used forty seven items for measurement to take cognizance of and accommodate the changes that occurred after IFRS adoption in Nigeria. VCSB were used by numerous researchers to measure in parts the components

of intangible assets (IAs) (Al-Hammaden, ; Kateb, 2012; Kang & Gray, 2006) but the study applied the three components parts of IAs. Finally, the VCSB places emphasis on the core values of management, employees, internal organization, structure and the relationship between the organization and the other stakeholders.

A formidable framework for enhanced performance in an organization is dependent on the caliber of management and employees it has. Optimum performance assures investors and the providers of capital of continuity and good returns. Moreover, to generate good economic returns to an organization, one would not forget the pivot and framework upon which it stands which is the knowledge based view of the firm (KBV) theory as developed by Stalk in 1992 which reiterated that the competitive abilities possessed by a firm are specifically hinged on the platform of capabilities and competences that are driven by knowledge inherent in human beings within the organization.

Furthermore, (Corrado et al., 2015) stressed that that KBV theory are considered as the topmost strategy vital to create and sustain competitive advantage and went further to impress that superior talents are the rider for competitive advantage and by extension leading to sustained performance. (Sveiby, 2001) observed that a knowledge strategic formulation as the main intangible resource is peoples capability. Consequently, one could nudge that human experiences are the core foundation for improved performance of a firm. According to the generic consensus by most scholars (White et al., 2010; Amunonye Ben, 2016; ; Naser, 2012) on the direct effects of human beings in melting, kneading and molding their skills and capabilities over time to yield unflinching positive results in terms of performance (Ibadin & Omoye, 2014) which culminates to quickened voluntary disclosures by managements has supported this statement.

H₁: Performance has significant impact on intangible assets voluntary disclosure (IAVD).

The size of a company largely affects the level of disclosure practice of management. Extant literature exposes has diverse views on the subject. For instance, (Branco & Rodrigues, 2006) reiterated that companies embark on more disclosure to reduce information gap between her and the shareholders (agency theory based). Large sized firms keenly observe how they are monitored by government and its agencies and decide to embark on better reporting (Barako et al., 2006; Firer & Stainbank, 2003; Oliveira et al., 2006) to reduce unnecessary pressures from the government or its agencies. Also, larger companies recruits highly skilled personnel and have sophisticated management reporting system (Oliveira et al., 2006); realize the inherent benefits in the acquisition of sound and trained personnel (Aripin et al., 2008).

The size of a firm and the level of voluntary disclosure are linked to the stakeholder's theory which stipulated that a firm should not only position itself to attend to the needs of her shareholders alone, rather develop strategies to incorporate all the other stakeholders (government, potential investors, customers, suppliers). (Abeysekera, 2010) upheld the above view re instating that management brings different interest and capabilities to bear and uses them to control the affairs in the organization generally and in reporting particularly. Hence, this finding has led to the formulation of the following hypothesis.

H₂: Size of a company has a significant impact on intangible assets voluntary disclosure (IAVD).

Leverage depicts the dominance of fixed interest in the capital structure of a company and the management of the debt capital portfolio is of a great value (Ibadin & Omoye, 2013). Whether a company has high or low gearing with the associated benefits and problems are largely dependent on the skills, knowledge and competences inherent on the management ability to

manage the debt portfolio (Hannifa et al 2002; Flaida & Lemmes, 2015). This is appropriately linked to the knowledge based view theory (KBV) which posited that the competitive abilities owned by a firm are totally dependent on the capabilities, competences and knowledge possessed by the human beings in the organization for at least proper debt management.

Also, in line with signaling theory, a company develops the disclosure attributes to let out good news to the public with the intension of showcasing high level of competitive capabilities when compared with the others (Whiting & Miller, 2008) in (Anderson & Folkare, 2005; Oliveira et al., 2006). The value of the company generally is enhanced by voluntary disclosure of information to the varied segments of the society that needs information for divers' reasons and to provide a solution to the asymmetry of information problems which exists between management and other stakeholders. Therefore, the following hypothesis was developed.

H₃: Leverage has a significant impact on intangible assets voluntary disclosure (IAVD).

Older firms exposed to acquiring greater value chain, producing more intangible assets (IAs) which are as a result of experience, training and development. They embark on human capital development and through trainings instead of outsourcing (Whiting et al 2008) and that young organizations try to reduce skepticism and amplify investors' confidence who judge them as riskiest firms. The training and experiences acquired by the management and staff over time becomes the framework upon which the organization stands and builds a formidable future hence, in the reporting of their intangible assets (IAs).

In the same vein, (Eng & Mak, 2003; Omoye, 2013; White et al., 2010); attributed that the creation of more time to build and establish excellent customers' relationships, and other associated relationships would provide a good platform for sound and better disclosure practice for the benefit of different segments of the stakeholders. This is linked to the stakeholders theory which postulated that a firm should not only attend to the needs or desires of the shareholders alone rather have strategies to incorporate all persons that have business relationship with the firm (Anderson, 2005; Banimahad & Mohammadrezai, 2012; Omoye, 2013). This shows that when the management has done the needful concerning her stakeholders, voluntary reporting would be upheld. Therefore, the following hypothesis was developed.

H₄: Listing age has a significant impact on intangible assets voluntary disclosure (IAVD)

5. Research design

A cross sectional research design was adopted for the study. This research was conducted in 2019 using data from the annual reports of listed companies as published by the Nigerian stock exchange (NSE) as at 31/12/2018. The population was the non-financial companies. Thirty (30) companies were selected based on availability and accessibility of required data using judgmental sampling technique. These companies have filed a complete published account for the period 2011–2018.

Intangible asset voluntary disclosure (IAVD) was measured using the 36 items as developed by (Lev, 2001) and adopted by (Ibadin, 2013). These items were expanded to 47 (Table 1) using modifications as proposed by (Al-Hammaden, & Silvie & Tomas, 2012). These items was expanded to enhance a clearer understanding and to accommodate the changes that occurred after the adoption of IFRS in Nigeria. The IAVD index was calculated using actual scores by company divided by maximum score times a hundred).

Performance was measured with ROA (return on asset) which is given by the profit after tax divided by total asset while industry size adopted a total asset base as a proxy for a company's size

Table 1. Descriptive statistics 47 items used for measuring VD of intangible assets (IAs)

| | Frequency | Percent |
|-----------------------------|--|----------------|
| human resource | 19 | 63.3 |
| human value | 19 | 63.3 |
| employee/remuneration | 0 | 0.0 |
| employee/welfare | 24 | 80.0 |
| employee/health | 24 | 80.0 |
| employee/expertise | 13 | 43.3 |
| employee/knowhow | 11 | 36.7 |
| employee/knowledge | 11 | 36.7 |
| employee/productivity | 11 | 36.7 |
| employee/skill | 19 | 63.3 |
| teamwork | 21 | 70.0 |
| employee/training | 24 | 80.0 |
| Qualitative hiring | 8 | 26.7 |
| H/R policy/Dept | 20 | 66.7 |
| health/safety | 22 | 73.3 |
| Human Capital (%) | Mean ± SD = 54.67 ± 31.78, n = 30 | |
| patent/copyright | 29 | 96.7 |
| corporate culture | 25 | 83.3 |
| work process | 17 | 56.7 |
| Information system | 14 | 46.7 |
| Knowledge management | 15 | 50.0 |
| trade mark | 30 | 100.0 |
| networking system | 16 | 53.3 |
| financial relation | 16 | 53.3 |
| research project | 11 | 36.7 |
| Development outlook | 13 | 43.3 |
| Assembled workforce | 12 | 40.0 |
| new product line | 10 | 33.3 |
| new technology | 10 | 33.3 |
| Internal Capital (%) | Mean ± SD = 42.46 ± 17.31 n = 30 | |
| Existence for no of years | 28 | 93.3 |
| Brand | 30 | 100.0 |
| Company name | 30 | 100.0 |
| Customers name | 5 | 16.7 |
| Customer satisfaction | 18 | 60.0 |
| Customer loyalty | 19 | 63.3 |
| Average customer size | 1 | 3.3 |
| Customer involvement | 11 | 36.7 |
| Customer relation | 17 | 56.7 |
| Annual sale per seg/product | 0 | 0.0 |
| Distribution channel | 22 | 73.3 |
| Other stakeholders relation | 24 | 80.0 |
| Community relation | 13 | 43.3 |
| website quality | 7 | 23.3 |

(Continued)

Table 1. (Continued)

| | Frequency | Percent |
|-----------------------------|--|---------|
| market share | 13 | 43.3 |
| Customer training | 2 | 6.7 |
| sale breakdown/Customer | 1 | 3.3 |
| Dependent on key customer | 1 | 3.3 |
| Ave Customer size | 0 | 0.0 |
| External Capital (%) | Mean ± SD = 55.89 ± 30.63, n = 30 | |

(Lim et al., 2007; Ibadin, 2013). Leverage was calculated by dividing total liability by total equity (white et al, 2007). Listing age was represented by the time between the date of incorporation of a company and the year 2018. Moreover, both univariate and multivariate linear regression analyses were applied for the study and the models are as follows:

$$Y = B_0 + B_1X + e_i \tag{1}$$

Where, Y = dependent variable

B_0 = constant

B_1 = regression coefficient parameters

X = independent variable

e_i = error term

The multivariate OLS is also given by:

$$Y = B_0 + B_1X_1 + B_2X_2 + B_3X_3 + \dots + B_nX_n + e_i \tag{2}$$

Where, Y = dependent variable

B_0 = constant

$B_i = (B_1, B_2, B_3 \dots B_n)$ = coefficient parameters

$X_i = (X_1, X_2, X_3 \dots X_n)$ = independent variables

$$VDI = B_0 + B_1ROA + B_2IND.SIZE + B_3LEV. + B_3AGE \tag{3}$$

Where, VDI: Voluntary disclosure index

B_0 : Constant

ROA: Return on asset

IND.SIZE: Industry size

LEV: Leverage

AGE: Listing age

6. Empirical results and discussion

6.1. Empirical results

The descriptive statistics of the variables in Table 1. above showed a fairly good value for human capital with mean value 54.6% (SD = 31.78) indicating than more than half of the company studied upheld human values and resources, employee welfare, health and training etc as impacting on VD while mean value 42.46% (SD = 17.31) was obtained for external capital, thus showing that few items (patents, copyright, corporate culture and trademark) played significant part in VD. Also, internal capital had mean 55.89% (SD = 30.63) x-rayed some items (customer and other stakeholders satisfaction, existence for number of years) that highly impacted on VD.

Furthermore, return on assets (ROA) was 0.04 (SD = 0.10) indicating a fairly good performance while, the average of total assets was N229, 004,338.00 with a SD of N77, 833,334.42. Also, the level of debt (Lev) in the capital structure was high as indicated by mean 5.7550 (SD = 0.68170) while most of the companies are relatively old having mean 34.1 (SD = 18.81919)

For all the items tested, the null hypothesis is rejected and alternative hypothesis accepted since p-value obtained (Human capital—0.032, External capital—0.023, Internal capital—0.029) is less than 0.05. The correlation coefficients $R = 0.417, 0.401$ and 0.322 for human capital (HC), external capital (EC) and internal capital (IC) respectively, indicated that the relationship between performance and VD of IAs is positive. The coefficients of determination (R^2) indicated that less than 20% of the variation in VD can be attributed to performance. The regression coefficients (B) indicated positive impact of performance on VD of IAs by companies in Nigeria.

Since the significant values (p value) are less than 0.05 level of significance for all the items tested, the null hypothesis is hereby rejected and the alternative accepted. Therefore, there is a significant effect of industry size on VD of IAs by companies in Nigeria. The correlation coefficients $R = 0.400, 0.348$ and 0.420 for human capital, external capital and internal capital respectively, indicates that the relationship between industry size and VD of intangible assets is positive. The coefficients of determination (R^2) indicated that less than 20% of the variation in voluntary disclosure can be attributed to industry size. The regression coefficients (B) showed positive impact of industry size on voluntary disclosure of intangible assets by companies in Nigeria.

Since the significant values (p value) are greater than 0.05 level of significance for the three categories of items tested, the null hypothesis is hereby accepted. Therefore, there is no significant effect of leverage on VD of IAs by companies in Nigeria. The correlation coefficients $R = 0.143, 0.133$ and 0.185 for human capital, external capital and internal capital respectively, indicates that the relationship between leverage and VD of intangible assets is negative. The coefficients of determination (R^2) showed 0.021, 0.018 and 0.133 for human capital, external capital and internal capital respectively. The regression coefficients (B) showed 0.220, 0.111, and 0.274 for human capital, external capital and internal capital.

Since the significant values (p value) are greater than 0.05 level of significance for all the items tested, the null hypothesis is hereby accepted. Therefore, there is no significant effect of listing age on VD of IAs by companies in Nigeria. The correlation coefficient R is 0.017, 0.015 and 0.004 for human capital, external capital and internal capital respectively indicating that the relationship between listing age and voluntary disclosure is negative while, the coefficient of determination (R^2) results showed 0.000 for the three components of intangible assets indicating that the age of a company does not impact on the level of voluntary disclosure of IAs of a company.

The multivariate analysis of the predictors of voluntary disclosure of intangible assets by companies in Nigeria shows that none of the predictors in the multivariate model has a significant effect on voluntary disclosures of IAs by companies in Nigeria. This is because p-values obtained are greater than 0.05, i.e ($p > 0.05$). Again, the correlation coefficient R ,

Table 2.

| | N | Minimum | Maximum | Mean | Std. Deviation |
|---------------|----------|----------------|------------------|----------------|-----------------------|
| Performance | 30 | -0.17 | 0.39 | 0.04 | 0.10 |
| Industry size | 30 | 507,219.75 | 3,908,883,781.50 | 229,004,338.48 | 777,833,334.42 |
| Leverage | 30 | 0.13 | 113.91 | 5.7550 | 0.68170 |
| Listing age | 30 | 10.00 | 73.00 | 34.1000 | 18.81919 |

Table 3. Effect of performance on VD of intangible assets (IAs)

| | R | R² | B | P value |
|-------------------------|----------|----------------------|----------|----------------|
| Human Capital | | | | |
| Performance | 0.417 | 0.175 | 25.311 | 0.032 |
| External Capital | | | | |
| Performance | 0.401 | 0.150 | 14.002 | 0.023 |
| Internal Capital | | | | |
| Performance | 0.322 | 0.187 | 26.224 | 0.029 |

coefficient of determination (R^2) and coefficient of determination B indicated the different effects of each predictors on VD of IAs.

6.2. Discussion of result

The result in Tables 1 and 2 above showed a fairly good value for human capital, indicating that more than half of the company studied upheld human values and resources, employee welfare, health and training as impacting on VD of their intangible assets. But the result obtained for external capital, showed that few items (patents, copyright, corporate culture and trademark) played significant part in VD. However, internal capital items (customer and other stakeholders' satisfaction, existence for number of years) had highly impacted on VD of intangible assets. This is in line with the resource based view (RBV) of the firm theory that promotes human resource and human capital management. Consequently, the effect of training to enhance human values cannot be over emphasized as it propels the other facets of an organization. For instance, the

Table 4. Effect of industry size on VD of intangible assets (IAs)

| | R | R² | B | P value |
|-------------------------|----------|----------------------|----------|----------------|
| Human Capital | | | | |
| Industry size | 0.400 | 0.182 | 20.111 | 0.002 |
| External Capital | | | | |
| Industry size | 0.348 | 0.161 | 18.011 | 0.013 |
| Internal Capital | | | | |
| Industry size | 0.420 | 0.177 | 28.432 | 0.021 |

Table 5. Effect of leverage on VD of intangible assets (IAs)

| | R | R² | B | P value |
|-------------------------|----------|----------------------|----------|----------------|
| Human Capital | | | | |
| Leverage | 0.143 | 0.021 | 0.220 | 0.450 |
| External Capital | | | | |
| Leverage | 0.133 | 0.018 | 0.111 | 0.483 |
| Internal Capital | | | | |
| Leverage | 0.185 | 0.177 | 0.274 | 0.329 |

management asset and debt in the capital structure of a company could be done effectively by experienced personnel through increased knowledge and by extension enhance better VD.

The result obtained in Table 3 correlation for human capital (HC), external capital (EC) and internal capital (IC) respectively, indicated that the relationship between performance and VD of IAs is positive. This implies that the higher the performance of companies, the more information they are likely to disclose beyond the normal mandatory limits, hence a sustainable platform for growth and expansion abounds. Consequently, this was in line with some studies that revealed the relevance of training and education (Abdulai & Moon, 2012; Habbash et al., 2016; Zourarakis, 2009), development of innate potentials of employee as pivotal in enhancing performance as a result of the inherent competitive capabilities (Naser 2012) that would be upheld. Hence this was in line with the resource based view (RBV) of the firm theory by Penrose, (1980) who posited that resources and capabilities can explain performance and by extension enhance voluntary disclosure of IAs.

Table 4, there is an indication that the relationship between industry size and voluntary disclosure of intangible asset is positive from the correlation for human capital (HC), external capital (EC) and internal capital (IC) respectively. Thus, the bigger the size of a company, the more information that are likely to be disclosed as good competitive advantage paves way for diversification and growth. Consequently, extant literatures had supported that larger companies are attracted by the public (Gerport et al., 2008; Branco et al, 2006) even as highly improved information system (Oliveira et al., 2006; Lev & Gu, 2016; Liu et al 2010) and greater competitive advantages (Branco et al 2008) are the lots of big sized companies and all these quicken voluntary disclosure. Moreover, larger companies are exposed to high agency cost and would embark on more voluntary disclosure to reduce information asymmetry (agency theory based) (Ibadin, 2013; Ferreira et al, 2006). Again, larger companies recruit skilled personnel (Oliveira et al., 2006), trains existing personnel (knowledge based view of the firm theory) and maintains sophisticated

Table 6. Effect of listing age on VD of intangible assets (IAs)

| | R | R² | B | P value |
|-------------------------|----------|----------------------|----------|----------------|
| Human Capital | | | | |
| Listing Age | 0.017 | 0.000 | -0.029 | 0.928 |
| External Capital | | | | |
| Listing Age | 0.015 | 0.000 | -0.014 | 0.937 |
| Internal Capital | | | | |
| Listing Age | 0.004 | 0.000 | 0.007 | 0.982 |

Table 7. Multivariate analysis of the predictors of VD of intangible assets (IAs)

| | R | R² | B | P value |
|-------------------------|----------|----------------------|----------|----------------|
| Human Capital | | | | |
| Performance | 0.461 | 0.213 | -4.717 | 0.936 |
| Industry size | | | 0.000 | 0.810 |
| Leverage | | | 0.183 | 0.569 |
| Listing age | | | | |
| External Capital | | | | |
| Performance | 0.423 | 0.179 | 18.516 | 0.572 |
| Industry size | | | 0.000 | 0.823 |
| Leverage | | | 0.065 | 0.714 |
| Listing age | | | 0.030 | 0.876 |
| Internal Capital | | | | |
| Performance | 0.555 | 0.308 | 15.531 | 0.770 |
| Industry size | | | 0.000 | 0.542 |
| Leverage | | | 0.307 | 0.294 |
| Listing age | | | 0.115 | 0.712 |

reporting system which paves way for a high level of discretionary disclosure of intangible assets (Aripin et al., 2008).

From Table 5, the result x-rayed the relationship between leverage and voluntary disclosure of intangible asset as negative. Thus, the larger the level of leverage of a company, the less information that are likely to be disclosed as they would be battling with them management of debt portfolio and the associated interests. Consequently, previous literatures showed mixed results on the effects of leverage on voluntary disclosure of intangible assets. (Berger et al, 2010; Oliveira et al., 2006) reiterated that highly geared companies do have high agency cost which could be reduced by more disclosure. In addition, debt or gearing management are done by trained professional as a result of skills and knowledge acquired over time. This is in line with the knowledge based view (KBV) of the firm theory). However, several other scholars did not find any relationship between level of debt and voluntary disclosure (Oliveira et al., 2006; Striukova et al., 2008; Zourarakis, 2009).

In Table 6, the relationship between listing age and voluntary disclosure of intangible asset was negative. Hence, the age of a company does not have influence on the level of information that are likely to be disclosed. However, older companies develop human capital over time through training and obtain competitive capabilities to enhance voluntary disclosure (White et al., 2010), while others absorbs more R& D costs which invariably leads to more disclosures (Habbash et al., 2016). However, (Kang & Gray, 2006) recorded insignificant relationship between listing age and voluntary disclosure adding that it cannot be explained by the number of years a company has operated from inception. Some other literature recorded a no effect relationship between VD and listing age (whiting et al, 2008; Ferreira et al., 2012; Haniffa & Cook, 2002; while Li et al., 2008; Haniffa & Cooke, 2005; Uyar et al 2013; Habbash, 2012).

Table 7 x-rayed the multivariate analysis of different predictors of VD in each of the three categories of IAs and had no significant effect on VD. However, varied company characteristics on their own can affect voluntary disclosure taking cognizance of the categories it has and the results would be on a standalone. For instance, performance and industry size have positive

influence on VD of intangible assets while leverage and listing age have no significant relationship with voluntary disclosure of IAs.

7. Summary and conclusions

7.1. Findings

The dire need for the voluntary disclosure of IAs for improved performance in developed, developing and emerging enterprises cannot be over emphasized. Adopting a cross sectional study for 2011–2018, the empirical findings showed that performance and industry size significantly affect the VD of IAs in listed companies in Nigeria. For instance, the relevance of training and education (Abdulai & Moon, 2012; Habbash et al., 2016; Zourarakis, 2009), development of innate potentials of employee as pivotal in enhancing performance as a result of the inherent competitive capabilities are upheld. On the other hand, extant literature that supported that the bigger the size of a company, the more information that are likely to be disclosed as good competitive advantage paves way for diversification and growth abounds (Gerport et al., 2008; Branco et al, 2008; Oliveira et al., 2006; Lev & Gu, 2016; Ibadin et al, 2014;Liu, et al 2010).

Furthermore, our empirical findings showed that leverage and listing age do not have significant influence on VD of IAs. Some scholars did not find any significant relationship between level of debt and voluntary disclosure of IAs ; Oliveira et al., 2006; Striukova et al., 2008; Zourarakis, 2009) while other studies that validated our result for listing age are (Habbash et al., 2016). However, (Kang & Gray, 2006) recorded insignificant relationship between listing age and voluntary disclosure adding that it cannot be explained by the number of years a company has operated from inception. Some other literature recorded a no effect relationship between VD and listing age whiting et al, (2008; Ferreira et al., 2012; Haniffa & Cook, 2002; Uyar et al 2011).

7.2. Implications

The results of study has directed some implications to the concerned stakeholders (directors of companies and government). We observed that performance and industry size are drivers of voluntary disclosure of IAs in listed companies in Nigeria while leverage and listing age are not. On these note, government has a regulatory role for smooth operations. This can be achieved by the provision of incentives for the companies that voluntarily disclose their intangible assets in annual reports in Nigeria. Again, the management of companies should provide basic training and retraining programs to keep the employees up to date knowledge wise for competitions that may abound in the business environment. Consequently, the human capital accumulation and relational capital maintenance will improve voluntary disclosure and by extension performance. The mindset of directors or management of companies should shift from only acquiring, maintaining and sustaining tangible resources to the intangible ones which are the bedrock of improved performance in this currently stiff and competitive global environment.

7.3. Contributions

This study has made important contributions to already existing literature exposes on the influence of certain company characteristics that drive the voluntary disclosure of IAs in annual reports of listed companies in Nigeria. The empirical findings can assist company management the dire need for training the employees as they are the carriers of knowledge, developers of knowledge and subsequently becomes the executors for improved performance which will sail on a fertile competitive environment like Nigeria. Also, the relationship with other stakeholders should not be taken for granted. The government are not left out. For instance, management should provide mouthwatering benefits and training for their employees.

7.4. Limitations

From all indications, studies of this nature has limitations. As voluntary disclosure of intangible assets in the corporate annual reports for the use of all stakeholders are of paramount importance, a need to outlined and streamlined the components of IAs (human capital, structural capital and

relational capital) by the standard setting bodies and adopting a standardized intangible assets index (SIAI) or list has become necessary. This will aid the comparison of one company and another and country versus country in relation to the level of disclosure. Only at this point that consideration may be given to several factors that can meaningfully drive voluntary disclosure of the IAs.

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References

- Abdulaj, & Moon, J. (2012). IC and firm performance. An empirical study of software firm in West Africa. *The African Journal of Information System*, 4(1), 1–30.
- Abeyesekera, I. (2010). The influence of board size on IC disclosure by Kenyan listed firms. *Journal of IC*, 11(4), 504–518. <https://doi.org/10.1108/14691931011085650>
- Abhayawansa, S., & Guthrie, J. (2016). Importance of Intellectual capital Information: A study of Australian Analyst Reports. *Australian Accounting Review*, 24 (1), 66–83
- Abu-Naser, S. S. (2012). *Predicting learners performance using artificial neural networks in linear programming intelligent tutoring system*.
- Aljifri, K., & H. Hussainey, (2007). Annual report disclosure in a developing country: The case of UEA. *Advances in Accounting*. 24, 93–100.
- Amunonye Ben, N. (2016). Effect of IC on ROA of insurance firms in Nigeria. *Global Journal of Management & Business Research & Finance* !, 6(1). Global Journal inc.
- An, Y., Davey, H., & Eggleton, I. R. C. (2011). Towards a comprehensive theoretical framework for voluntary IC disclosure. *Journal of Intellectual Capital*, 12(4), 571–585. <https://doi.org/10.1108/14691931111181733>
- Anderson, A. F. (2005). *Company characteristics and voluntary disclosure of IC. A Sweden study*. *Journal of Intellectual Capital*, 44(1), 43–67.
- Anderson, A.F. (2015). *Company characteristics and voluntary disclosure of intellectual capital*. Sweden 46, 1065–1102.
- Aripin, N., Tower, G., & Tarlor, G., (2008), *The determinants of financial ratio disclosure of quality Australian evidence. A paper presented at the AFAANZ conference Sydney*. Available at www.afaanz.or/open.confafaanz.2008/modules/request.Php.
- Asogwa, C., Oforegdu, G. N., & Nnam, I. J. Effect of corporate governance board leadership model and attributes on earnings quality of quoted firms in Nigeria. *Cogent Business and Management*, 6(1), 1–24.
- Attan, R. & Rahim, A. (2012). Corporate reporting and intellectual capital; evidence from Ace market of Bursa Malaysia, IEEE Symposium on humanities, Science and Engineering Research, 1021--1026
- Banimahad, B. M., & Mohammadrezai, M. (2012). *The impact of IC on profitability, productivity amd market valuation; evidence from Iranian high knowledge industries*. *Journal of Basic and Applied Science Research*, 2(5), 4477–4484.
- Barako, D. G., Hanock, P., & Izan, H. Y. (2006). *Relationship between corporate governance attributes and voluntary disclosure in annual reports: The Kenyan experience*. *Financial Reporting and Governance*, 5(1), 1–25.
- Barney, J. B. (1991). Firm resources and sustained competitive advantages. *Journal of Management*, 17 (1), 99–120.
- Bontis, N. (2013). Assessing knowledge assets: A review of the model used to measure intellect-tual capital. *International Journal of Management Review*, 3(1), 41–60. <https://doi.org/10.1111/1468-2370.00053>
- Branco, M.C. & Rotrigues, I.I. (2008). Factors influencing social responsibility disclosure by Portuguese company. *Journal of Business and Ethics*. 83(4) 685–701. doi:10.1007/s10551-007-9658-2
- Broberg, P., Tagesson, T., & Collins, S. (2010). What explains variation in voluntary disclosures a study of annual corporations listed on the Stockholm stock exchange. *Journal Management & Governance*, 14(4), 351–377. <https://doi.org/10.1007/s10997-009-9104-y>
- Bukh, G., & Mouritsen, J. (2005). Disclosure of information on intellectual capital in Danish 40 prospectuses. *Accounting, Auditing and Accountability Journal*, 8(6), 713–732. <https://doi.org/10.1108/09513570510627685>
- Corrado, C., H. Hulten & Sichel D. (2015). *Measuring Capital and Technology; An expanded Frame work in measuring capital in New York*. National Bureau of Economics Research studies, University of Chicago Press.
- Corrado, C., Hulten, C., & Sichel, D. (2015). Measuring capital and technology; an expanded framework, in measuring capital in the new economy. In J. Carol Corrado & S. Daniel (Eds.), *National bureau of economic research studies in IC*. University of Chicago Press.
- Edvinsson, L. (1997). *Developing intellectual capital at Skandia*. *Long range planning*, 30(3), 366–373.
- Edvinsson, L. & Malone, M.S. (1997). *Intellectual Capital* (London, Piatkus),
- Eng, L. L., & Mak, Y. T. (2003). Corporate governance and voluntary disclosure. *Journal of Accounting and Public Policy*, 22(4), 325–345. [https://doi.org/10.1016/S0278-4254\(03\)00037-1](https://doi.org/10.1016/S0278-4254(03)00037-1)
- Ferreira, A. L., Branco, M. C., & Moreira, J. A. (2012). *Factors influencing IC disclosures by portuguese companies*. *International Journal of Accountancy and Financial Reporting*, 2(20), 278–298. <https://doi.org/10.5296/ijaf.v2i2.2844>
- Ferreira, A.L., Branco, M.C. & Moreira, J.A. (2006). Factors influencing IC disclosure by Portuguese companies. *Internatiobnal Journal of Accountancy and Financial reporting* 2(20), 278–298.
- Firer, S., & Stainbank, L. (2003). Testing the relationship between intellectual capital and a company's performance: Evidence from South Africa. *Meditari*

- Accountancy Research*, 11(1), 25–44. <https://doi.org/10.1108/10222529200300003>
- Garcia-Meca, E., & Martinez, I. (2007). The use of intellectual capital information in investment decisions: An empirical study using analyst reports. *The International Journal of Accounting*, 42(1), 57–81. <https://doi.org/10.1016/j.intacc.2006.12.003>
- Garcia-Meca, E., Parra, L., Larran, M., & Martinez, I. (2005). He explanatory factors of intellectual capital disclosure to financial analysis. *The European Accounting Review*, 14(1), 63–94. <https://doi.org/10.1080/0963818042000279713>
- Gerport, T. J., Thomas, S. E., & Hoffmann, A. P. (2008). Intangible asset disclosure in the tele communication industries. *Journal of Intellectual Capital*, 9(1), 37–61. <https://doi.org/10.1108/14691930810845795>
- Guthrie, J. Petty R., (2000). Intellectual capital, Australian annual reporting practices. *Journal of Intellectual Capital*, 12(3), 241–251.
- Guthrie, J. & Petty, R. (2006). The voluntary reporting of Intellectual capital: comparing evidence from Hong Kong and Australia. *Journal of intellectual capital*, 7(2), 254–271.
- Habbash, M., Hussainy, K., & Awd, A. E. (2016). The determinant of voluntary disclosure in Saudi Arabia: An empirical study. *International Journal of Accounting, Auditing and Performance Evaluation*, 12(3), 213–236. <http://dx.doi.org/10.1504/IJAAPE.2016.077890>
- Haniffa, R. M., & Cooke, T. E. (2005). The impact of culture and governance on corporate social reporting. *Journal of Accounting and Public Policy*, 24(5), 391–430. <https://doi.org/10.1016/j.jaccpubpol.2005.06.001>
- Haniffa, R.M., and Cooke, T.E. (2002). The impact of culture and governance on corporate social reporting. *Journal of Accounting and Public Policy*; 24, 391–430.
- Hossain, M. & Hammani, H. (2004). Voluntary disclosure in the annual reports of an emerging country. The case of Qatar. *Advances Accounting*. 25(2), 255–265.
- Hossain, M., & Hammani, H. (2009). Voluntary disclosure in the annual reports of an emerging country. *The Case of Qatar. Advances in Accounting*, 25(2), 255–265. <https://doi.org/10.1016/j.adiac.2009.08.002>
- Iatridis, G., & Alexakis, P. (2012). Evidence of voluntary accounting disclosure in the Athen Stock market. *Review of Accounting and Finance*, 11(1), 73–92. <https://doi.org/10.1108/14757701211201830>
- Ibadin, P. O. (2013). *Determinants of voluntary disclosure of intangible assets of intellectual capital in Nigeria*. being a Ph.D dissertation defended on the 20th January, 2013. International Accounting Standard Board (IASB) at www.iasb.org/.
- Ibadin, P. O., & Omoye, A. S. (2014). Voluntary disclosure of intangible assets in post IFRS Nigeria. *Accounting Frontier*, 5(3), 91–109.
- Ibikunle, J., Oba, v & Nwufu, C. (2010). Determinants of Intellectual Capital Disclosure in Nigeria. *Economica audce*, 9(6) 195–206
- Kang, H. H., & Gray, S. (2006). *Reporting intellectual capital assets. Voluntary disclosure practices of top emerging market companies*. http://www.businessillinois.edu/accountancy/research/.../Kang_Gray
- Kang, H.H & S. Gray (2010). Reporting intellectual capital assets. Voluntary disclosure of top emerging market companies. http://www.businessillinois.edu/accountancy/research/.../Kang_Gray
- Kaplan, S. (1992). *Environmental preference in a knowledge-seeking, knowledge-using organism*.
- Kateb, I. (2012). An analysis of the determinants of voluntary structural capital disclosure by listed French companies. *International Journal of Business and Management*, 7(11), 95.
- Leadbeater, C. (2000). *New measures for the economy, centre for business performance*. The Institute of Chartered Accountants.
- Lev, B. (2001). *Intangibles: Management measurement and reporting*. Brookings Institution Press.
- Lev, B., & Gu, F. (2016). *The end of accounting and the path forward for investors and managers*. Wiley Finance Series. Level. Science-Technology Industry Review, Paris, OECD, 9(8), 9–43.
- Lev, B., & Penman, S. (2010). Voluntary forecast disclosure, nondisclosure, and stock prices. *Journal of Accounting Research*, 28(Spring1), 49–76. <https://doi.org/10.2307/2491217>
- Leventis, S., & Weetman, P. (2004). Impression management: Dual language reporting and Voluntary disclosure. *Accounting Forum*, 28(3), 307–328. <http://dx.doi.org/10.1016/j.accfor.2004.07.004>
- Li, F., & Minor, D. (2015). CEO power, corporate social responsibility and firm value; A test of agency theory. SSRN. *Electronic Journal*. <http://doi.org/10.2139/ssrn.2612733>
- Li, J., Pike, R., & Haniffa, R. (2008). Intellectual capital disclosure and corporate governance structure in UK firms. *Accounting and Business Research*, 38(2), 137–159. <https://doi.org/10.1080/00014788.2008.9663326>
- Li, J., Pike, R., & Haniffa, R. (2015). Intellectual capital disclosure and corporate governance structure in UK firms. *Accounting and Business Research*. 38,(2), 137–159.
- Lim, S., Matolesy, Z., & Chow, D. (2007). The association between board composition and different types of voluntary disclosure. *European Accounting Review*, 16(3) 555–583. <http://dx.doi.org/10.1080/09638180701507155>
- Morariu, C. M. (2012). The determinants of IC disclosure: Evidence from Romania. Research in Accounting in Emerging Economies, 21, 163–186. [https://doi.org/10.1108/s/1479-3563\(2013\)0000013012](https://doi.org/10.1108/s/1479-3563(2013)0000013012)
- Ngoc, P. N., & Duke, H. C. (2020). Human capital efficiency and firm performance across sectors in An emerging market. *Cogent Business & Management*, 7(1), 1738832. <https://doi.org/10.1080/23311975.2020.1738832>
- OECD (2012), *Corporate reporting of intangible assets: A progress report on OECD*
- Oliveira, L., Rodrigues, L. L., & Craig, R. (2006). Firm-specific determinants of intangibles reporting: Evidence from the Portuguese stock market. *Journal of Human Resource Costing and Accounting*, 10(1), 11–33. <https://doi.org/10.1108/14013380610672657>
- Omoye. (2013). Characteristics of IAs disclosures in annual reports of quoted companies in Nigeria. *International Journal of Asia Social Science*, 1152–1165. <https://doi.org/10.18844/prosoc.v4i10.3091>
- Omoye, A., & Ibadin, P. (2013). Determinants of intangible assets disclosure in annual report: Evidence from Nigerian quoted companies. *International Journal of Asian Social Science*, 3(5), 605–631.
- Onyekwelu, L. U. (2015). *Effect of intellectual capital on corporate valuation of firms in Nigeria: A Thesis presented to the department of Accountancy, Enugu State University of Science & Technology*.
- Onyekwelu, U.L. (2014). Corporate social Accounting and the enhancement of information disclosure among firms in Nigeria. A case of selected firms in Nigeria. *Journal of Economics and Sustainable development*. 5(6), 35–44.

- Penrose, (1980). The managerial limitation to the growth of firms. *The Economic Journal*, 90(359), 520–528.
- Petrash, G. (1996). Dow's journey to a knowledge value management culture. *European management journal*, 14(4), 365–373.
- Robert, B., White, B. J., Renter, D. G., & Larson, R. L. (2009). Evaluation of three-dimensional accelerometers to monitor and classify behavior patterns in cattle. *Computers and Electronics in Agriculture*, 67(1-2), 80–84.
- Roos, J. Roos, G., Dragnetti, N.C. & Edvinsson, L. (1997). *Intellectual Capital: Navigating the new business landscape*. New York: Mac Macmillian
- Silvie, C., & Tomas, V. (2012). Relationship between HC and economic growth. *The Case of Australian Listed Firms*, 1(44).
- Singh, I., Van der Zahn, J. (2008). Determinants of Intellectual capital disclosure in prospectuses of initial public offerings. *Accounting and Business Research*, 38(5) 409–431.
- Souza, F. Ê. A. D., Botinha, R. A., Silva, P. R., & Lemes, S. (2015). Comparability of accounting choices in future valuation of investment properties: an analysis of Brazilian and Portuguese listed companies. *Revista Contabilidade & Finanças*, 26, 154–166.
- Spence, M. (2003). Job market signaling. *Quarterly Journal of Economics*, 87(3), 355–374. <https://doi.org/10.2307/1882010>
- Striukova, I., Unerman, J., & Guthrie, J. (2008). Corporate reporting of intellectual capital: Evidence from UK companies. *The British Accounting Review*, 40(4), 297–313. <https://doi.org/10.1016/j.bar.2008.06.001>
- Subramaniam, (2013). Relationship between motivational factor and job performance. *Asian social science Journal*. 9(9).
- Subramaniam, N. (2006). Agency theory and accounting research: An overview of some conceptual and empirical issues. In Z. Hoque (Ed.), *Methodological Issues in Accounting research: Theories and methods and issues* (pp. 51–81). Spiramus Press.
- Sveiby, K. (2000). *The organizational Wealth. Managing and measuring knowledge based Assets*. San Francisco: Berrett-Koehler Publishers Inc.
- Sveiby, K. E. (1997). *The new organizational wealth: Managing & measuring knowledge-based assets*. Berrett-Koehler Publishers
- Sveiby, K. E. (2001). A knowledge-based theory of the firm to guide in strategy formulation. *Journal of intellectual capital*
- Ulum, I., Rizqiyah, R., & Jati, A. W. (2016). Intellectual capital performance: A comparative study between financial and non-financial industry of Indonesian biggest companies. *International Journal of Economics and Financial Issues*, 6(4), 1436–1439
- Uyar, A., Kilic, M. & Bayyur, N. (2013). Association between firm characteristics and corporate voluntary disclosure. Evidence from Turkish listed companies. *Journal of intellectual capital*.9(4), 1080–1112. <http://dx.doi.org/10.3926/ic.439>
- Wallace, R., Masser, K., & Mord, A. (1994). The relationship between comprehensiveness of corporate annual reports and firms characteristics in Spain. *Accounting and Business Research*, 25(97), 41–46. <https://doi.org/10.1080/00014788.1994.9729927>
- Watson, A. Shrivies, P. & Martson, C. (2002). Voluntary disclosure of Accounting ratios in UK. *British Accounting Review*. 34(4), 289–313.
- Weronika, K. (2015). *Advantages and disadvantages of voluntary disclosure of universitat*. Autonomade Barcelona.
- White, G., Lee, A. & Tower, G. (2007). Drivers of voluntary capital disclosure in listed biotechnology companies. *Journal of Intellectual capital*, 8(3) 517–537.
- White, G., Lee, A., Yuningsih, Y., Nielsen, C., & Bukh, P. N. (2010). *The nature and extent of voluntary intellectual capital disclosures by Austrian and UK biotechnology companies*. *Journal of Intellectual Capital*, 11(4), 519–536. <https://doi.org/10.1108/14691931011085669>
- Whiting, H.W. & Miller, J.C. (2008). Voluntary disclosure of IC in New Zealand annual reports and hidden values. *Journal of Human resource, costing and Accounting* 12(1), 26–50. <https://doi.org/10.1108/14013380810872725>
- Williams, S.M. (2001). is intellectual capital performance and disclosure practices related? *Journal of intellectual capital* 293), 192–203
- Xu, J., & Wang, B. (2018). Intellectual capital, financial performance and companies sustainable growth: Evidence from the Korean manufacturing industry. *Journal of Finance & Accounts*, 10(12), 46–51. <https://doi.org/10.3390/su10124651>
- Yi, A., & Davey, H. (2010). Intellectual capital disclosure in Chinese (mainland) companies. *Journal of Intellectual Capital*, 11(3), 326–347. <https://doi.org/10.1108/14691931011064572>
- Zourarakis, N. S. (2009). *Voluntary disclosure. Evidence from the U.K*. Erasmus University Rotterdam. http://publishing.eur.nl/ir/repub/asset/15574/Accountability_zourarakis.pdf



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