Relevance Of Intellectual Capital On Firms' Revenue And Market Valuation Of Quoted Information & Communication Technology(Ict) Industry In Nigeria

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Abstract: This paper assessed the effect of intellectual capital on revenue and market values of firms in information and communication technology firms in Nigeria. Human Capital , Structural Capital and Capital Employed were the proxies for Intellectual capital while Fims's Gross Revenue and Markket Price per Share were bases for measuring earnings and market values respectively. The study adopted the ex post facto research design as data used were secondary. The data were sourced from annual reports and accounts of three firms selected from the industry under study. Data were analysed using the Ordinary Linear Regression. Data for the study covered the ten years spanning 2004-2013. The study shows that Intellectual capital as measured by Human Capital Efficiency, Structural Capital Efficiency(SCE) and Capital Employed Efficiency(CEE) has positive and insignificant relevance on revenue of ICT firms in Nigeria. However, Human Capital Efficiency has positive and insignificant relevance on share price of ICT firms in Nigeria but Structural Capital Efficiency(SCE) and Capital This outcome implies that any additional investment of the firms to increase HCE, SCE and CEE will increase revenue insignificantly. Again , increase investment in HCE suggest an insignificantly enhance share price of the industry while increase in SCE and CEE will lead to significant decrease in Share Price of the firms studied.. The paper thus recommends that firms in the industry enhances efficiency and productivity of human capital and capital employed to grow both revenue and share price while they moderate expenses on SC and CE to achieve optimal revenue and share price of the firms in Nigeria.

Keywords: Intellectual Capital, Human Capital Efficiency, , Structural Capital Efficiency,Capital Employed Efficiency, Firms' Revenue, Market Value , Share Price, Nigeria.

I Introduction

1.1 Background of the Study:

The need to ensure an all-encompassing corporate valuation model for corporate organizations has received more advocacy in recent times. In view of the tremendous challenges posed by the afore mentioned, corporate managers also sought for ways of harnessing tangible assets as well as the intangible assets at firms' disposal by encouraging knowledge development which they hoped could create values(Deep & Narwal, 2014). The International Accounting Standards Board (IASB) had in in recent times heightened its effeorts at recognizing intangible assets as an integral part of corporate assets heralded key debates on defining the place of intellectual assets in corporate valuation and by extension financial reporting. These circumstances have been argued to have culminated into the knowledge economy that is driven by 'Intellectual Capital'(Triparthy, Sar & Sahoo, 2014).

The emergence of knowledge and its preference to production economy has also been argued to have ushered in a paradigm shift from a period when firms were exclusively assessed on their physical assets(tangible assets) to an era of an all-encompassing platform that saw firms' worth being an aggregate of both tangible and intangible assets(Maditinos, Chatzoudes, Tsairidis & Theriou(2011). This is because the 'Knowledge Economy' views as important factor 'Intellectual Capital' of firms as it distinguishes a firm's capabilities in creating a sustainable competitive advantage in the market (Djhamil, Razafindrambinina & Tandeans, 2013). Further to this, traditional financial reporting that only coveres the value of tangible assets while ignoring intangible assets has been argued to underestimate the true value of firms (Tripathy,et al., 2015; Anuonye, 2015, Berzkalne & Zelgalve, 2014; Henry, 2013).

According to Mehralian, Rasekh, Akhavan & Sadeh(2012), in the current century, the industrial development model must elaborately accommodate knowledge-based and innovation intensive companies by

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providing valuations models which is not achievable by the traditional techniques. They argued that intangible assets of knowledge and intellectual capital are exceedingly overwhelming conventional valuating means such as land, property and capital assets and intellectual assets is turning into the determinants and credible sources of companys' success. The pharmaceutical, telecom firms among others are involved in high capital intensive knowledge development through Research and Development(R&D) and this is likely to have a large impact on their economic success(Mehralian,et.al.,2012). They argued that investors are likely to seek for indicators of 'good- knowledge-handling' in order to assess whether their investment will be an appropriate decision.

Previous studies have also attributed the rate of growth in the value of stock of high-brid telecom industries and other knowledge-based firms to the impact of their huge investments in intellectual capital (Stewart, 1997; Banimahd, et al. 2012; Surdarsanam, Sowar & Marr,2003; Berzkalne & Zelgalve, 2014).

Edvinsson(1997) as cited by Milost(2013) postulates that intellectual capital is the derived insights about head value and future capabilities based on Human Capital, Structural Capital and Relational Capital. Banimahd, Mohammadrezeai & Mohammadrezeai(2012) and Sudarsanam, Sorwar & Marr(2003) note that human capital basically contains knowledge provided by employees in the form of competencies, commitment, motivation and loyalty. Accordingly human capital could come from advice or tips with key components as known-how, technical expertise and problem-solving capabilities, education, attitudes and entrepreneurial spirit. Structural capital includes organizational culture, intellectual procedure, processes, philosophy, systems, databases and contracts. Customer capital also referred as relational capital is the ability of a company to protect its relationship with customers and other stakeholders. Customer satisfaction, relationship with network of suppliers, repeated business and relationship with strategic partners, financial growth and price sensitivity can all be considered as indicators of customer capital (Banimahd, Mohammadrezaei & Mohammadrezaei, 2012).

 Intellectual Capital is also argued to have the capacity of filling the difference between market value and book value of firms (Ahangar, 2011 and Rahman, 2012). Intellectual capital if well harnessed and properly managed could enhance firms' competitive advantage through enhancing value creation efficiency from human creativity, the firms' operational structure and customer–supplier relationship (Malik, Aslam & Latiff, 2012). Epetimehin & Ekundayo(2011) note that intellectual capital is a vital corporate asset and will melt away, unless company do something to stop the brain-drain and retain critical knowledge. Anuonye(2015) argues that financial performance in relation to Intellectual Capital connotes notable actions or achievements which accrue to an enterprise as a result of IC measurement and application including its effect on Earnings per Share(EPS).

The International Accounting Standards Board(IASB) as earlier highlighted through International Accounting Standard(IAS)38 on Intangible Assets and the subsequent International Financial Reporting Standards 3 on Business combinations further attest to the need for integration of Intellectual capital in asset value of firms. IAS 36 on Impairment of Assets applied by IFRS adopting countries and the treatment of Goodwill, Research and Development and other identifiable intangible assets all give credence to the need for incorporating Intellectual Capital in financial reporting(Vafei, Taylor & Ahmed, 2011). To further buttress this point, Berzkalne & Zelgalve(2014) argue that though intellectual capital and knowledge assets are difficult to discern and quantify, their results will none the less be reflected in the company's greater productivity, efficiency and overall profitability. Further to the above submissions,Chen, Chen & Yuchang(2005) opine that the limitations of financial statements in explaining company value underline the fact that the source of economic value is not only in production of material goods but also in the creation of intellectual capital. IC's ability to enhace value creation is further argued to be evident in blue chip companies with high share prices that are known to have relatively less investments in tangibles when compared to their intellectual investments(Ngari, Gichira, Aduda & Waititu, 2013).

Again the concept of hidden value as propounded by Roos & Ross(1998) concerning valuation of companies is evident and symbolized by Microsoft and Intel Corporations where intangible assets constituted 94% and 85% respectively of their market value. IC is also evident in the outcome of a cross-sectional study of pharmaceutical companies which indicate that the difference between market value and book value is 30-fold in which intellectual capital has a significant role in company valuation(Brookings,1996).

Some studies have also argued that the maximization of firms' value is often attributable to firms' ability to manage its key resources namely: people, material and process which are denoted in 'Intellectual capital' (Sofian, Rasid & Mehri, 2011; Mojtahedi, 2013; Vafei, Taylor & Ahmed, 2011; Banimahd, et al., 2012; Berzkalne & Zelgalve, 2014; Saeed, Farahmand & Khorasani, 2013). Intellectual Capital has been identified as key to the growth of firms as it is an asset of the company and any increase in intellectual capital may enhance the value of company as well (Henry, 2013; Ahangar,2011; Pulic, 1998; Maditinos, Chatzoudes, Tsairidis & Theriou, 2011).

Extant literature on Intellectual capital and its value creation capacities has led to the development of methods for its measurement, since traditional financial tools are not able to capture all of its

Pulic(1998) developed a model considered very popular among scholars for the measurement of value added of intellectual assets known as Value Added Intellectual Coefficient(VAIC). The model uses value added as a symptom of value creation through its components (Human Capital, Structural Capital and Relational Capital (Anuonye, 2015; Berzkalne & Zelgalve, 2014; Pouraghajan, Ramezani & Mohammadzadeh, 2013; Salman, Mansor, Babatunde & Tayib,2012; Asadi,2012;). VAIC measures how much new value has been created per invested monetary unit of resources. The VAIC model monitors and measures the extent to which a company produces added values based on intellectual capital efficiency or intellectual resources (Chiucchi, 2013; Chang, 2013; Epetimehin & Ekundayo, 2011; Ekwe, 2012; Ahangar, 2011). This model is also adopted in this study.

The rest of this study will empirically examine the extent to which intellectual capital affects the corporate valuation of quoted firms in Nigeria.

1.2 Statement of the Problem

Some scholars have identified intellectual capital as being a key driver of corporate value enhancement (Henry, 2013; Vafei, et al., 2011; Banimahd, et al., 2012; Berzkalne & Zelgalve, 2014). Others further submit that intellectual capital provides a platform through which firms enjoy competitive advantage, well and above their contemporaries (Sofian, Rasid & Mehri, 2011; Mojtahedi, 2013; Boda & Szlavik, 2012; Saeed, et al. 2013).

According to Naidenova & Oskolkova(2013), intellectual capital plays an important role in several business sectors which rely heavily on research and development or human capital for their survival(Onafalujo, Eke & Akinlabi, 2011; Asadi, 2012;Berzkalne,2013). Okpala & Odogwu(2010) submit that Human Capital Efficiency is significantly correlated with stock prices. Samilogu(2006) and Tan, Plowman, & Hancock(2007) submit that an increase in intellectual capital will increase the value of firms and financial performance. Berzklane & Zelgalve(2014) indicate a statistically significant and positive relationship between IC and company value. Banihahd, et al.(2012) argue that IC has a positive relationship with firm's size but that there is no relationship between market valuation and intellectual capital. Ekwe(2012) found out a statistically strong relationship between the components of intellectual capital and Market to Book Value (M/BV) Ratio.

Opposing the above submissions, Jensen(1998) found no statistical significant relationship between Intellectual Capital and organizational market values. Firer & Stainbank (2003) used the Value Added Intellectual Coefficient (VAIC) in South Africa and submit that there is no significant relationship between IC and profitability, productivity and market value. Kamath(2008) avers that IC has positive influence on profitability and productivity but not with market values. Maditinos, et al.(2011) argue that IC is negatively and significantly related with Market to Book Value(M/BV). Puntilo (2009) indicate an inverse relationship between intellectual capital as defined by structural capital and M/BV ratio. Zou & Huan(2011) opine that Capital Employed Efficiency and Structural Capital Efficiency(SCE) have a negative correlation with Technical Efficiency while Human Capital Efficiency(HCE) has a positive correlation with Technical Efficiency. Besharati, Mazhari & Mahdavi (2012) found no relationship between IC and innovative capital with financial performance and values of firms in Tehran Stock Exchange

Anuonye (2015) argues that IC components are positively but insignificantly related with Earnings per Share (EPS) in Nigeria. Saeed, et al. (2013) submit that only IC (Human Capital and Capital Employed) is positively and significantly related with Growth in Revenue. Pouraghajan, Ramezani & Mohammadzadeh (2013) argue that there is no significant relationship between Value Added of Human Capital and market to book ratio but is positively and significantly related to revenue growth. Tanideh(2013) found out that there is no relationship between Intellectual Capital and firms' value.

The above submissions clearly indicate that the task of reaching a consensus on the effect of Intellectual Capital and corporate valuation is yet to be rested. A study of this nature becomes expedient also in the face of prevailing economic downturn faced by firms and as the accounting profession through the IFRS standards seeks to properly integrate the intangible assets in financial reporting and the justification for this study.

1.3 Objectives of the Study:

The general objective of this study is to evaluate the effect of intellectual capital on corporate valuation of quoted firms in Nigeria. The specific objectives of the study are:
(1)   To assess the effect of Intellectual Capital on the Gross Revenue per Share(GRPS) of firms in Nigeria.
(2)   To examine the effect of Intellectual Capital on the Market Price Share Prices (MPS) of firms in Nigeria.

1.4 Research Questions:

In order to achieve the afore-stated objectives, the following research questions will be addressed in this study:
(1)   How does Intellectual Capital affect the Gross Revenue per Share (GRPS) of firms in Nigeria?
(2)   To what extent can Intellectual Capital affect the Share Price (SP) of firms in Nigeria?

1.5   Statement of Hypotheses:
In view of the research questions, the following null hypotheses are formulated to guide   this study:
1.   Intellectual Capital has no significant effect on Gross Revenue per Share (GRPS) of firms in Nigeria.
2.   Intellectual Capital does not significantly affect Share Price (SP) of firms in Nigeria.

1.7 Scope of the Study
          This study assesses the effect of Intellectual Capital(IC) on revenues and market valuation of quoted Information and Communication Technology Firms in Nigeria. Three of firms within the industry were used for this study. The study is in line with classification of industries by how technologically and knowledge-based they are as noted by previous studies (Francis & Schipper, 1999; Vafei, Taylor & Ahmed, 2011; Banimahd, et al. 2012; Sofian, et al, 2011; Boujelbene & Affes, 2013).
          This study covered a ten-year period(2004 to 2013). The choice of 2004 as base year is that it marked a period that heralded the information/knowledge revolution era through Information and Communication Technology(ICT) in Nigeria. Nigerian having liberalized its communication industry by registering other carriers apart from NITEL such as MTN, ECONET now Airtel and even Glo among others under the government of   Gen. Obasanjo. Again, the period marked the pre and post global financial meltdown era and globalization. This was a period when many firms had a conscious rethink on how to ensure corporate survival, a move that saw many firms making very bold and deliberate investments on Intellectual capital by encouraging knowledge development as a way of ensuring competitive advantage and enhanced value creation in the face of fierce competition and recession.
          The study also covered a period when information and communication technology virtually took over and moderated how business are run through ICT which is evident in a knowledge economy.
          The study covered only firms listed on the Nigerian Stock Exchange (NSE) and did not consider companies from other countries.

II. Review Of Related Literature
2.1   Conceptual Framework
          2.1.1 Intellectual Capital: Intellectual Capital(IC) has been widely acknowledged as that innate attribute usually acquired by a firm, which drives it on the wheel of value creation, value addition and value sustainability. To this end, different scholars and researchers have postulated many definitions.
          The concept of Intellectual Capital generally can be said to have emanated from description of the
          dynamic effect of individuals: the 'Intellect' (Sveiby, 2000). The very first of such definitions is the one credited to Thomas Stewart, a pioneer of the concept, who in 1997 in an article captioned 'Brain Power: How Intellectual Capital is Becoming America's Most Valuable Asset' defined Intellectual Capital(IC) as the sum of everything everybody in a company know that gives that company competitive edge in the market place'. He further described IC as that knowledge that transforms raw materials and makes them more valuable noting that for any knowledge to be tagged 'IC', the knowledge must be capable of being used to create wealth.

2.1.2 Components of Intellectual Capital:
2.1.3 Human Capital (HC): Human Capital consists of the skills, competencies and abilities of individuals and groups in a given organization(Stewart, 1997;Firer & Stainbank, 2003; Rahman, 2012; Henry, 2013; Deep & Narwal,2014; Ekundayo, Agbo, & Ozele, 2015; Anuonye, 2015). Human Capital is interpreted as employee value-creating potentials depicted in the knowledge, competencies, skills, experiences, abilities, talents and innovativeness of firm's employees and managers(Boujelbene & Affes, 2013; Banimahd, et. al. 2012; Uadiale & Uwuigbe, 2011; Okpala & Odogwu, 2010). Human Capital is developed through training and education(Edvinsson & Sullivan, 1999).
Human Capital for the purposes of this study is defined and measured by the expenditure on Human Resources in terms of salaries, wages, training and other related benefits.

2.1.4 Structural Capital: Structural capital is defined as knowledge assets that are indeed companys' property and includes intellectual property such as patents, copyright and trademarks; processes, methodologies,models; documents and other knowledge artifacts, computer networks and software; administrative systems among others(Stewart, 1997). It comprises of the knowledge, organizational culture, intellectual procedure, process, philosophy, systems, databases and contracts and explains the structures and processes employees develop and deploy in order to be productive, effective and innovative(Boujelbene & Affes, 2013).

Swartz, Swartz & Firer(2006) describes structural capital as the backbone of an organisation. Structural Capital may be divided into two categories namely infrastructure of an organisation (strategies, processes and policies) and the intellectual property of an organisation which consist of copyright, patents and legal rights. An effective interaction between human capital and structural capital leads a firm to enjoy positive relational capital between a firm and its stakeholders (Deep & Narwal, 2014).

Structural capital is the supportive infrastructure, processes and databases of the organization that enable human capital to function(Dumay,2013; Maditionis, et.al. 2011). Structural Capital is the firm's infrastructure that support the value creation potentials(employees' ideas, innovations and creations) into valuable monetary form (Djamil, Razafindranbina & Tandeans(2013). Structural capital comprises of firm's information systems, organisational structure and policies, strategies and databases.
Thus: SC= VA-HC

2.1.4 Relational Capital: Relational capital encompasses the external intangible assets of an organization because external forces play a part in determining the market position and strength of an organization which customers are the principal determinants of this position (Anuonye, 2015).
It is the ability of a company to protect its relationship with customers and other stakeholders and advantage on it to create value for the firm and maintain competitive advantage. Relational capital, consisting of potentials such as customer relationships, supplier relationships, trademarks and trade names (which have value only by virtue of customer relationships) licenses, and franchises. The notion that customer capital is separate from human and structural capital indicates its central importance to an organization's worth (Dumay, 2012). Relational capital is the knowledge embedded in the relationship between an organization and its customers, stakeholders and strategic alliance partners(Anuonye, 2015; Aroh, 2014). The exchanges across these groups are strategic and are developed with a view to strenghtening the competitive advantage of the role players, Moolman (2011) in Maditionis, et al.(2011)

2.1.5 Gross Revenue per Share: This index explains the total revenue that is attributable to a unit of ordinary share of a firm at a particular time. The proxy will be used to assess the extent of effect that IC can have on firms' corporate valuation index of Gross Revenue per Share.

2.1.6 Share Price: The Share Price is the value at which the share of a firm is traded at any particular time in the Stock Exchange. It is also refered to as the Market Price per Share. The effect of IC on corporate valuation will be appraised using the firms Share Price .

2.2 Theoretical Framework
The Knowledge-Based View of the Firm Theory and The Resource-Based View of the firm Theory are very pertinent to this study. However, The Knowledge-Based View of the Firm Theory underpins this study.

2.2.2 The Resource-Based View of the Firm (RBV) Theory: Resource-Based View Theory is also related to this study. RBV is attributed to Penrose (1959) and later modified by Rumelt, 1984; Barney, 1991 and 1995; Dierick & Cool, 1989 as cited by Stiles & Kulviachana (undated). RBV establishes the importance of organisation to build valuable resources, bundle them together in unique and dynamic way to achieve firms' success. The theory also emphasize that competitive advantage is dependent not only on traditionally resources such as natural resources, technology or economies of scale because they are increasingly being easily imitated. Rather, the theory assumes that competitive advantage is dependent on the valuable, rare and hard to imitate resources which reside within an organisation noting that intellectual capital is an 'invisible asset'(Itami, 1987).

Hamel & Prahalad (1990) opine that human capital also supports the emphasis in strategy research which is anchored on 'core competencies' where economic rents are attributed to 'people- embodied skills'. Wright, Dunford and Snell(2001) however note that the increasing importance of Resource-Based View (RBV) Theory as it promotes human resource management in general and human capital management in particular. This efforts has brought about the convergence between of the strategy with human resource management. The resource based view of firm theory gave rise to the "Knowledge-Based View of the Firm Theory"(Grant, 1991).

However, we consider The Knowledge-Based View of the Firm Theory more apt for this study as it is particular about the relationship between firms' knowledge abilities, competitive advantage and value creation which is the thrust of this study.

2.3 Empirical Literature

While some scholars strongly believe that intellectual capital positively impact corporate values, some studies have found no relationships between IC and firms' values while some post that there is negative correlation between the two. This section reviews the divergent views as articulated by these previous authors. The reviews is done in line with the hypotheses of the study:

2.3.1. Effect of Intellectual Capital on Gross Revenue per Share of Firms:

Kujansivu & Lonnqvist (2007) investigated the value efficiency of Intellectual Capital but could not establish clear evidence on the relationship between Intellectual Capital and company performance among Finland companies. Volkov & Garanina (2007) examine the importance of intangible assets in knowledge-based economy. Their study made use of forty-three(43) Russian companies and covered five year period(2001-2005). The study used econometric models to test the relationship between the explanatory variable and dependent variable. Findings confirms the assertion that the workforce is the main asset of a company and more so in knowledge-based companies.

El-Bannany(2008) investigated the determinants of intellectual capital performance in UK banks over the period 1999-2005. The findings reveal that the standard variables of bank's performance. The results also show that investment in a information technology systems, bank efficiency, barriers to entry and efficiency of investment in intellectual capital variables which have not been considered in previous studies have a significant impact on intellectual capital performance.

Gan & Saleh(2008) examined the relationship between Intellectual Capital and corporate performance of technology-intensive firms listed on Bursa (Malaysia) Stock Exchange by investigating whether value creation efficiency when measured by VAIC can be explained by market valuation, profitability and productivity. The study concludes that VAIC can explain productivity as explained by revenue of firms.

Rehman, Rehman & Zahid (2011) appraise IC and its impact on corporate performance among companies in Pakistan using VAIC components of human capital, capital employed and structural capital. The result showed that one of the most important components of IC is Human Capital Efficiency which helps to boost financial performance of firms.

Maditinos, Chatzoudes, Tsairidis and Theriou(2011) studied the impact of Intellectual Capital on firms' market value and financial performance. Using 96 firms listed under 4 economic sectors at the Athen(Greece) Stock Exchange covering a period of 3 years 2006-2008 and employed VAIC model of Pulic, 2000. Bridging and structural capital have positive and significant relationship with Revenue Growth while human Capital has reverse and significant relationship with Revenue Growth.

Abdulai, Kwon & Moon (2012) investigated the factors instrumental to the success of Software 2015 industries in India, Ireland and Isreal in relation to the performance of Software 2015 firms in West Africa. The study proposed a second level model on the Software, 2015 industry and conducted a field survey comprising 83 Software, 2015 firms. The result of their study show that IC of the countries had contributed significantly to the success in the Software, 2015 industry while the result show a significant relationship between the elements of IC and competitive capabilities and firm performance.

El-Alfy(2012) examined direct and moderating effect of firm specific human capital on the relationship between both efficiency and innovative capabilities on one hand and operational performance on the other hand. The result indicates a positive and significant and direct relationship between efficiency and operational firm performance. The result did not however indicate that HC and has moderating effect on firm performance as indicated by efficiency and innovative capabilities.

Javornik, Tekavcic & Marc(2012) studied more than 12,000 Slovenian companies between 1995 and 2008 and found a high degree of correspondence between the improvement in the rank of a company's Intellectual Capital investment efficiency and the improvement in the rank of its financial performance in the peer group.

Pouraghajan, Ramezani & Mohammadzadeh(2013) studied the impact of IC on Market Value and Firm's Financial Performance: Evidence from Tehran Stock Exchange. A total of 140 firms belonging to eight(8)economic sectors in Tehran Stock Exchange were used for the study. Data were collected for the period of 2006-2010 and sourced from the database of Tehran Stock Exchange. Analysis was done using the Pearson's Correlation and Multiple Regression. The study submits that IC component has positive and significant relationship with market value and revenue growth.

Saeed, Shekoofeh & Mahnaz(2013) appraised the impact of Intellectual Capital on Financial Performance. The study made use of empirical data drawn from a panel consisting forty nine Iranian Companies listed in the Tehran Stock Exchange(TSE), classified in different into three different industrial sectors for ten years period(2001-2010). Three hypotheses were formulated with the dependent variables as Return on Equity (ROE), Growth in Revenue (GR) and Return on Assets (ROA). The study was based on the VAIC Methodology. the result of the study support most of the proposed hypotheses which means that the there is a significant and positive relationship between IC and ROE, ROA and GR. However the result submits that only

the relationship between Value added efficiency of capital employed and value added efficiency of human capital with growth revenue is insignificant. It therefore submits that organizations can sustainable value with concerted investment in Intellectual capital, and that in the business context, organizations can achieve sustainable value with investment in Intellectual capital and by focusing on IC they can move from economy based on the tangible assets towards economy based on intangible assets.

Mojtahedi(2013) studied Intellectual Capital Accounting and its Impact on Organizational Financial Performance: Evidence from Malaysian Firms. The study which explored the relationship between intellectual capitals and financial performance in one hundred and fifty Malaysian Firms over a period of 12 years (2000-2011) was based on the concept of Value Added Intellectual capital. Three hypotheses were formulated based on three proxies namely: Earnings Per share (EPS); Return on Capital Equity (ROCE) and Growth of Annual Sales(GS). Intellectual capital were calculated and analyzed. Data were collated from the financial statements of the afore mentioned years. Multiple Regression and panel data analysis were used to predict the impact of IC on financial performance. The study indicates that the relationships between IC and financial performance of Malaysian companies Growth in Sales) are positive, significant and informative.

2.3.2 Effect of Intellectual Capital on Share Price of Firms:

Samilogu(2006) studied the relationship between value added intellectual coefficient(VAIC) and Market to Book Value Ratio in the Turkish banking sector. Data were sourced from the financial statements of banks listed in the Istanbul Stock Market from 1998-2001. The results showed that there was no significant relationship between the dependent variable(M/BV) and independent variables, HCE, SCE and CEE. The study submits that there is significant correlation between dependent variable ratio of market value to book value and the independent variable (VAIC) three components namely, human capital, structural and relational capital. The study used a sample of 75 South Africa public traded companies, but empirical results failed to support any relationship between the three values added efficiency components and three dependent variables market value).The findings however suggests that physical capital(tangible assets) remains the most significant underlying resource of corporate performance, firms pay the least importance to structural capital. On the other hand, market reacts negatively to firms that concentrate solely on the enhancement of human assets.

Tseng & Goo (2005) adopted the VAIC model, using structural equation modeling to test the influence of Intellectual Capital on company performance. The study examined the relationship between IC components and corporate value of Taiwanese manufacturing companies. The result revealed that there is positive relationship between intellectual capital and corporate value.

Tan, Plowman & Hancock(2007), using Value Added Intellectual Coefficient Model examined the relationship between Intellectual Capital and firms' performance. 150 listed companies in Singapore Stock Exchange were used for the study. Findings reveal that there is a positive relationship between intellectual capital and companies' performance. Result submit that IC is correlated to future company's performance while the rate of growth of a company's intellectual capital has positive relationship with company's performance . However the contribution of IC to company performance differ from industry to industry.

Appauhami (2007) investigated the influence of Intellectual capital(IC) components efficiency on capital gain of financial companies (banking, finance and insurance) in Thailand. The findings provide that there is a significant positive relationship between intellectual capital and capital gain of the financial companies.

Renita(2007) in Salman, Mansor & Babatunde (2012) studied 'Value of Research and Development(R&D) reporting' among US and UK firms. The report noted that in the US GAAP, all R & D costs were immediately recognized as expenses and the UK and in almost all other countries. The report further revealed that in almost all other countries, capitalizes development costs and expensed off as research cost. The study submits that research and development costs increase the value relevance of market price of share.

Gan & Saleh(2008) examined the relationship between Intellectual Capital and corporate performance of technology-intensive firms listed on Bursa (Malaysia) Stock Exchange by investigating whether value creation efficiency when measured by VAIC can be explained by market valuation, profitability and productivity. The study concludes that VAIC can explain failed to explain market valuation.

Puntilo(2009) used Value Added Intellectual Coefficient Model to study the relationship between value creation efficiency, firms' market valuation and financial performance on the Traditional Western Economy. Data were drawn from banks enlisted in tha Milan Stock Exchange, Italy. Result failed to show any positive significant association between IC and the dependent variables. The study further however revealed a positive relationship between capital employed efficiency and the dependent variables studied.

Muhammad & Ismail(2009) studied the relationship between Intellectual Capital and traditional economic measures of Malaysian banks. The result show that banks with satisfactory performance had low Intellectual Capital coefficients.

Okpala & Odogwu(2010) did a study on Human Capital Accounting and its relevance on stock investment decisions in Nigeria. The work used a 5-point Likert Scale questionnaire. Questionnaires were administered to a

sample size of 65 but had a return of 44 representing a 67.7% response rate. Data analysis were done with the aid of SPSS 16. Chi-square statistical tool was used to test the hypotheses at 5% alpha level. The study reveals that the quality of human capital is a major factor in determining the value of a firm's stock and investment decisions. Again, quality of management and employees are factors in investment decisions while stocks of companies with poor quality manpower and high staff turnover are high risk investments. The study concludes that the inclusion of human capital value in the balance sheet of organizations does help investors make more rational investment decisions.

Iranmahd(2010), studied the Effect of Intellectual Capital on Financing Costs and market value of firms in Tehran Stock Exchange. The studied covered a period of eight years. Value Added Intellectual Coefficient Model was used to measure IC. Value added of Intellectual Capital and value added of capital added applied were used in the calculation. Pearson Correlation, Univariate, Multivariate regressions and Z Wang were performed on the data. Result shows that the value added of capital applied , value added of intellectual capital and the value of capital coefficient negatively influenced weighted average average of capital, yet they have no effect on enterprise value.

Vafaei,Taylor & Ahmed (2011) in their article "The value relevance of intellectual capital disclosure". The study sought to examine whether or not listed company disclosure of intellectual capital is value-relevant in share market and to assess its moderating role in the value relevance of reported earnings and equity following the adoption of IFRS. The study adopted a content analysis based on annual reports sampled from listed companies in Britain, Australia, Hong Kong and Singapore were incorporated to a model to examine the direct and moderating roles ICD in a firms valuation. The study reveals that ICD is positively associated with the market price (has value relevance) in companies in two of four countries and in non-traditional industry.

Ferraro & Veltri, (2011) in Anuonye (2015) concluded in his study that intellectual capital variables do not have meaningful relationship with market value.

Mehralian, Rasekh, Akhavan & Sadeh(2012) study the impact of Intellectual Capital Efficiency on on Market Value: An empirical study from Iranian Pharmaceutical Companies. The study adopted the Pulic VAIC Model, Six- year cross-sectional time-series data were obtained from the audited financial reports in Iranian Stock Exchange. Analyses were done using correlation and multiple regression analytical tools. Analyses indicate that IC can explain profitability but not productivity and market valuation in Iran.

Maditinos, Chatzoudes, Tsairidiset & Theriou(2011) examined in 'The impact of Intellectual capital(IC) market value and financial performance of public listed companies in Greece'. The study reveals that Intellectual Capital components are significantly correlated with companies' financial performance. Banimahd, Mohammadrezeai and Mohammadrezeai(2012) in a study titled "The impact of Intellectual Capital on Profitability, Productivity and Market valuation: Evidence from Iranian High Knowledge - Based industries." The research made use of data obtained from a sample size of 69 firms in high knowledge based industries listed in Tehram Stock Exchange from 2001 to 2008.

Rafei, Ghaffari and Parsapur (2012) examined the role of intellectual capital in the improvement of the performance of social and technological economy of Iranian hospitals. The study submits that there are some correlations between intellectual capital and performance. Value Added Intellectual Coefficient (VAIC) Model was used to measure the intellectual capital index. Multiple linear regressions were applied to analyze ant test the research hypotheses. The findings suggest that the performance of a firm's intellectual capital can explain its profitability and productivity, but not market valuation. Further, the study established a positive relationship between firm size, leverage and physical capital intensity and their profitability and productivity. However, the results submit that except for firm size, there are not significant associations of these factors with market valuation. The researchers recommend that managers can raise firms' performance by designing a plan to enhance IC, such as the plan of improving human capital performance by training and educating or employing new intellectual capital.

Dumay(2012) submits that empirical cases evidence is in intellectual capital and firm's performance is inconclusive and far from achieving a solid scientific consensus. The result of their studies show there is significant positive correlation among Intellectual components, Return on Assets and market value.

Ferchichi & Paturel(2013) examined the effect of intellectual capital disclosure on the value creation using Tunisian annual reports. The study examined the information value of intellectual capital on Tunisian financial market. The study did a content analysis of annual reports of 50 companies listed on the Tunisian Stock Exchange selected for the period 2006-2009. The study developed a weighted disclosure index based on the users' needs and expectation in order to estimate the relationship between Intellectual Capital and value creation. The result indicate that the intellectual capital information is positively and significant correlated with firm value creation. The analysis also show that reporting on intellectual capital allows resolving uncertainty about the firm thereby improving an increase in value. The result confirms the pivotal role of intellectual capital in valuation of firms listed on the Tunisian Stock Exchange.

Besharati, Kamali, Mazhari & Mahdavi(2012) studied the relationship between Intellectual Capital and Innovation Capital with financial performance and value of companies in Tehran Stock Exchange. The study reveals that there is no significant relationship between Intellectual Capital and firm's value.

Chiucchi(2013) examines the role of those who design and implement intellectual capital practices. He employed Kolb's Experimental Learning Theory Model and opines that actors must complete an experimental learning cycle so as to enable them appreciate fully the contribution of intellectual capital in their organizations.

Mojtahedi(2013) studied Intellectual Capital Accounting and its Impact on Organizational Financial Performance: Evidence from Malaysian Firms. The study which explored the relationship between intellectual capitals and financial performance in one hundred and fifty Malaysian Firms over a period of 12 years (2000-2011) was based on the concept of Value Added Intellectual capital. Three hypotheses were formulated based on three proxies namely: Earnings Per share (EPS); Return on Capital Equity (ROCE) and Growth of Annual Sales(GS). Intellectual capital were calculated and analyzed. Data were collated from the financial statements of the afore mentioned years. Multiple Regression and panel data analysis were used to predict the impact of IC on financial performance. The study indicates that managing and reporting of intellectual capital assets will create value to the organization.

Tanideh(2013) study on ability of IC to create corporate values submits that there is no significant relationship between IC and corporate value.

Boujelbene & Affes (2013) in "The impact of intellectual capital disclosure on cost of equity capital: A case of French Firms". The study was based on companies listed in the French SBF 120 Stock Market Index. Two main hypotheses and three sub-hypotheses were formulated to guide the study. Annual reports for the year 2009 of French companies in the SBF 120 French Index: These companies have the most significant stock exchange capitalization, while elimination was done for foreign companies. The process got the sample size to 102 French companies.

Data relating to the Intellectual capital disclosure data were collected from the annual reports (reference documents) of 2009 of the companies found on the SBF 120 index for the year 2009. The study depicts support the hypotheses that stipulates the existence of a significant and negative association between intellectual capital disclosure with its two components (human capital and structural capital) and the cost of equity. However, the negative impact of the relational capital disclosure is not validated. The result therefore shows that managers of firms, the result show the benefits of enhanced IC disclosure regarding the reduction in their cost of capital.

Berzkalne and Zelgave(2014) examined Intellectual Capital and Company Value' . The study involved 65 Baltic listed companies over the period from 2005 to 2011. The study used correlation analysis to provide empirical investigation on the topic. Tobin's Q was used as a proxy for intellectual capital while the VAIC model was employed. The study finds that an increase in IC should increase the value of the company but empirically obtained mixed result. The result submits that there is statistically significant and positive relationship between IC and company value for enterprises in Latvia and Lithuania where as such correlation were not observed for companies in Estonia. It also finds that human capital efficiency can be used to calculate the IC , however, structural capital efficiency is not significant in the case of intellectual capital and company value.(Note that Baltic Listed companies represent different companies) .

Sumedrea(2013) show that in crisis the development of companies is influenced by the human and structural capital.

Kamath(2015) examined the impact of intellectual capital on financial performance and market valuation of firms in India. The investigation was carried out using thirty(30) firms S & P BSE selected across various manufacturing and service sectors. The analysis was carried for a period from 2008-2009 and 2012 – 2013 financial year. The Value Added Intellectual Coefficient Model was adopted for the study. Multi Linear Regression analysis was done on the data collected. Results reveal that financial performance and market value are influenced by the the intellectual capital of the firms.

Tripathy, Sar & Sahoo(2015) in their study entitled 'The effect of intellectual capital on firm's valuation: An Empirical Investigation with Reference to India'. Data for the study was sourced from Indian listed companies and Pulic's Value Added Intellectual Coefficient(VAIC) measure. A panel research design was adopted for the study while a ten year data cutting across seven industrial categories was used to test the relationship between intellectual capital efficiency(physical capital efficiency, human capital efficiency and structural capital efficiency).

Analysis indicate that the aggcregate impact has more influence on the firm's valuation using Market to Book Value ratio. Result also show that expenditure on innovative capital and relational capital captures additional information on structural capital and have a positive effect on firm's value contemporaneously. Result further reveals that in the presence of all the intellectual capital components, firms with greater innovative capital and relational capital in the ensuing year tend to have higher M/BV in the subsequent year. The study however fail to support the fact that after controlling for structural capital efficiency, the firm with

greater innovative capital tend to have higher M/BV during pre and post 2008 financial crisis in general and across the indian industries.

III. Methodology

3.1 Research Design: This study has adopted Ex-post Facto Research Design using Panel Data. Ex-post Facto Research Design was adopted because the data for the study were drawn from past economic events. The Panel Data was used because the study involves both Time-Series and Cross-Setional study. Again, a Cross-Sectional research enables data drawn from different sectors to be analysed and compared on sector by sector basis (Ryan, Scapens & Theobald, 2002 as cited in Chukwu, 2015) . The Time Series Data design nature is because the data for the study relates to different years of the operations of diverse economic sectors in Nigeria, (Aneke, 1998 as cited by Onyekwelu, 2015).

3.2. Sampling Method and sample size: Random sampling method was adopted in selecting three firms used for this study.

3.3 Method of Data Collection: This study made use of secondary data sourced from the annual financial statements of the firms and the database of the Nigeria Stock Exchange(NSE, Factbook). These data were considered credible since they have been audited and filed with the Securities and Exchange Commission.

The choice of data was also in line with studies of scholars such as Pulic(1998) on measurement firms' IC, the Value Added Intellectual Model(VAIC)which were adopted in the studies conducted on IC and firms performance by previous researchers {Anuonye, 2015; Firer & Stainbank, 2003; Banimahd, et. al.2012; Berzklane & Zelgalve,2014; Rahman,2012;Darabi, et. al.2012;Henry,2013; }.

3.3 Procedure for Data Analysis and Model Qualification:

3.3.1 Tools for Data Analysis: The data collected were analyzed using basic statistical tool that will provide the descriptive analogies such as mean, median, standard deviation and so on. Multiple Linear Regression was also used to test the hypotheses. Data analyses were done with the aid of E-Views Statistical Software.

3.3.2 Model Specification

Multiple Linear Regressions

Model specification indicates the model mathematical or econometric which a research adopted. According to Kousoyiannis(2003) as cited in Ike-Ekweremmadu(2014) notes that model specification involves the determination of the dependent and explanatory variables included in the model, the theoretical expectations about the sign and the size of the parameters of the functions.

The study used Multiple Regression and Correlation Coefficient done with the aid of E-Views 8.0 Software, 2015 to analyse the data. The multiple regression is adopted because according to Mroverview (2012) in Ike-Ekweremmadu(2014), it is known to estimate how well the set of independent variable predicts the dependent variable, ascertain the relative contribution of each independent in predicting the dependent variable, determine the best subset of the predictor variable from the overall set and reveal the incremental validity of each predictor over every and is applied for robustness check. To determine the effects of Intellectual Capital on corporate valuation, the researcher regressed the intellectual capital efficiency coefficients on selected corporate valuation indices Gross Revenue per Share(GRPS) and Share Price(SP). The Multiple Linear Regression statistical tool was used to analyse the data collected.

The Value Added Intellectual Coefficient model is adopted for this study as earlier stated. The choice of this model is in consonance with previous studies in IC (Salman, et. al, 2012; Uadiale & Uwuigbe, 2011; Berzklane & Zelgalve, 2014).

The following model was employed in testing the hypotheses 1-2:

Intellectual Capital has no significant effect on Gross Revenue per Share (GRPS) of firms in Nigeria.

$$H_{05}: \beta_O + \beta_1 HCE_{it} + \beta_2 SCE_{it} + \beta_3 CEE_{it} + \mu = GRPS_{it} \dots\dots\dots\dots\dots\dots\dots\dots(1)$$

Intellectual Capital does not significantly affect Share Price (SP) of firms in Nigeria.

$$\beta_O + \beta_1 HCE_{it} + \beta_2 SCE_{it} + \beta_3 CEE_{it} + \mu = SP_{it} \dots\dots\dots\dots\dots\dots\dots\dots(2)$$

Where:

$GRPS_{it}$: Gross Revenue per Share (Turnover) divided by firm i in year t.

SP_{it}: Share Price of firm i in year t.

HCE_{it}: Human Capital Efficiency of firm i in year t.

SCE_{it}: Structural Capital Efficiency of firm i in year t.

CEE_{it}: Capital Employed Efficiency of firm i in year t.

β_O:Constant Term (intercept)

β_1: coefficient of human capital

β_2: coefficient of structural capital
β_3: coefficient of capital employed
μ: Error term.

3.4 Description of Research Variables:
The research variables were structured into dependent and independent variables for the purpose of analysis. The dependent variables are proxies measuring revenue and market values are Gross Revenue per Share (GRPS) and Share Price(SP).

3.4.1 Dependent Variables: The dependent variables are proxies measuring corporate valuation. These variables are Gross Revenue per Share (GRPS) and Share Price(SP).

(a)Gross Revenue per Share(GRPS): this defines the firms Turnover/sales that is attributable to one unit if share in i firm in t year.
GRPS= Sales
 No of ordinary shares in issue …………….…………………………………………..(1)

(b)Share Price(SP): Share price is the value of market price or worth of a unit of share in the company. It is the worth of trading a unit of a company's share as listed in the Nigeria Stock Exchange. This study adopted the end of year share price as carried by the NSE. This variable was used to ascertain the relationship between the market price of the firm that is accounted for by variations in Intellectual Capital.

Share Price=Total Market Capitalization
     No of ordinary shares in issue……………………………………….**(2)**

Model 1 and 2 was used to test hypotheses 1 & 2 accordingly.

3.4.2 Independent Variables: The independent variable of this study is the value of Intellectual Capital as depicted by Human Capital Efficiency(HCE), Structural Capital Efficiency(SCE) and Capital Employed Efficiency (CEE). These sum of this three variables is the Value Added Intellectual Coefficient(VAIC).
Decision Rule: The decision was based on the outcome of VAIC(Value Added Intellectual Coefficient). If the coefficient is high, it indicates the management has used the firm's resources
(HC,SC and CE) efficiently and if it is low it means that management has been inefficient in the use of resources. Inference was based on the significant level at 5%. As such null hypotheses was rejected if the computed value of the statistics exceeds the crirtical or table value. Otherwise do not reject the null hypothesis.(Uzoagulu, 2011).

IV. Data Presentation, Analysis And Interpretation Of Results

4.1 Presentation of Empirical Results: This section presents the empirical results as generated from the hypotheses tested. Hypotheses 1 and 2 earlier stated in chapter one were tested using Models 1- 2 as stated in Chapter 3 using the data in Appendices   Thus:
4.1.1 Test of Hypotheses One :
Research Question: How does Intellectual Capital influence Gross Revenue per Share(GPRS) of firms in Nigeria?
Hypothesis One
Ho: Intellectual Capital has no significant effect on Gross Revenue per Share(GPRS) of firms in Nigeria.
H_1: Intellectual Capital has significant effect on Gross Revenue per Share(GPRS) of firms in Nigeria.
Decision Rule:
1**.** Reject Ho if the P-Value cal < 0.05 at 5% level of significance.
2**.** Otherwise accept the null hypothesis (Ho).
Model 1 as stated in Chapter was used in testing hypothesis 4 thus:
$GRPS_{it} = \beta_O + \beta_1(HCE_{it}) + \beta_2(SCE_{it}) + \beta_3(CEE_{it}) + \mu$...(1)

Table 4.1: Regression Results showing the effect of Intellectual Capital on Gross Revenue per Share(GPRS) of ICT firms in Nigeria.

DV: GRPS	Coefficient	t-statistics	P-Value

(Constant)	4.676727	0.903630	0.3745
HCE	1.283107	1.790164	0.0851
SCE	0.520233	0.260683	0.7964
CEE	0.170296	0.068240	0.9461

Source: Firms' Financial Statements/ Researcher's Computations, 2017; * significant at 5% level of significance

Interpretation of Regression Results:
Table 4.1 shows the result of regression between Intellectual Capital and GRPS in the ICT sector. Results show that a unit/one naira change in the explanatory variables, IC{Human Capital(HC), Structural Capital(SC) and Capital Employed(CE)}respectively will lead to an increase of 1.283107, 0.520233 and 0.170296 respectively in GRPS of the ICT sector. This relationship is represented by the equation:

$GRPS_{it} = 4.676727 + 1.283107 + 0.520233 + 0.170296$

Table 4.1 reveals the cumulative effect of IC{ HCE, SCE and CEE} affects GRPS in the ICT sector is positive and insignificant at 0.05 level with a p-value of 0.0459, 0.7964 and 0.9461(CE) respectively.

Decision: Since P-Value of $x_{1=}$ 0.0459(HC), $x_2=$ 0.7964(SC) and $x_3=$ 0.9461(CE) is greater than α-value of 0.05, null hypothesis is accepted while alternate hypothesis is rejected for all the explanatory variables.
The findings means that any increase in HCE, SCE and CEE will lead to an increase in the GRPS of the firms in the ICT industry. This result supports the hypothesis that IC does not significantly affect GRPS.

Test of Hypothesis Two :
Research Question 2: How does Intellectual Capital affect Share Price(SP) of firms?
Hypothesis Two
Ho: Intellectual Capital does not significantly affect Share Price(SP) of firms in Nigeria.
Ho: Intellectual Capital have significant effect Share Price(SP) of firms in Nigeria.
Decision Rule:
1**.** Reject Ho if the P-Value cal < 0.05 at 5% level of significance.
2**.** Otherwise accept the null hypothesis (Ho).
Model 2 as earlier stated in Chapter 3 will be used in testing the hypothesis thus:
$SP_{it} = \beta_O + \beta_1(HCE_{it}) + \beta_2(SCE_{it}) + \beta_3(CEE_{it}) + \mu$**...(2)**

Table 4.2 Regression results showing the effect of Intellectual Capital on Share Price of Firms in Nigeria

DV: SP	Coefficient	t-statistics	P-Value
(Constant)	2.389360	10.29740	0.0000
HCE	0.047328	1.472811	0.1528
SCE	-0.098367	-1.099419	0.2817
CEE	-0.013441	-0.120131	0.9053

Source: Researcher's Computations using E-Views 8.0 Software, 2017; * significant at 5% level of significance
Interpretation of Regression Results:
Table 4.2 presents the regression result between IC and share price in the ICT sector. The result indicate that a unit/one naira change in the explanatory variables, IC{Human Capital(HC), Structural Capital(SC) and Capital Employed(CE)}respectively will lead to an increase of 0.047328, -0.098367 and -0.013441 respectively in SP in the ICT sector. This relationship is represented by the equation:
$SP_{it} = 2.389360 + 0.047328 - 0.098367 - 0.013441$
Analysis also reveal that the cumulative effect of IC on the ICT of sector. The result shows that HCE had a positive and insignificant influence on SP in the sector with a p-value of $x_{1=}$0.1528. SCE and CEE caused a negative and insignificant change in the SP with P- Value of 0.2817 and 0.9053.
Decision: The P-Value of $x_{1=}$ 0.1528(HCE), $x_2=$ 0.2817(SCE) and $x_3=$ 0.9053(CEE) respectively are greater than α-value of 0.05, null hypothesis is accepted while alternate hypothesis is rejected for all the explanatory variables.
The implication of these findings is that any increase in HCE will lead to an insignificant increase in the SP of the firms in the ICT industry. Increases in SCE and CEE will trigger an insignificant decrease in Share Price of firms in the ICT sector in Nigeria.

V. Discussion Of Results
Results on the test of hypothesis 1 indicates that, SCE had negative and significant effect on GRPS, for this Ho was accepted and Hi rejected. This view is in line with the view of Maditionis, et al.(2011) who

avers that IC is negatively and significantly related with market value indices. CEE had a negative and insignificant effect on CEE. Ho was accepted and Hi rejected.

The result for HCE and GRPS is supported by findings of previous scholars namely {Namazi & Ebrahims, 2009 in Anuonye, 2015, Asadi(2013); Rahman, 2012; Ekwe,2012)} who are of the view that IC contribute positively to financial performance and value of companies. The findings is opposed to the views of Besharati, (2012) who is of the view that IC positively but insignificantly effect corporate valuation indices. Result on the effect of CEE on GRPS is negative and insignificant. This is in consonance with Banimadh, et.al(2012) and Ekwe(2012) but opposed to authors such as (Namazi and Ebrahims(2009), Asadi(2013), Rahman,2012, Henry,2013) who are of the view that IC contribute positively to financial performance and value of companies. That the relationships are insignificant could be traced to financial reporting that has not incorporated in full the intangible assets that can enhance revenue growth and sustainability in Nigeria. Firms with complex intangibles are gradually making accounting numbers less useful and therefore imperative for integration of Intellectual Capital in valuing firms(Vafei & Zelgalve, 2014; Ahangar, 2011) and hence needed to reflect the true impact IC has on firms' revenue.

The findings on the effect of CEE This view is against widely held views and in consonance with submission of Maditionis, et al.(2011) who avers that IC is negatively and significantly related with market value indices. It therefore contradicts the views of scholars such as {Vafei & Zelgalve, 2014; Ahangar, 2011; Djhamil,2013 and Pulic,1998} that IC affect sales revenue positively and significantly.

Results further show that SCE had a negative and significant effect on SP and that CEE had a negative and insignificant effect on SP. This view is against widely held views and in consonance with submission of Maditionis, et al.(2011) who avers that IC is negatively and significantly related with market value indices. It therefore contradicts the views of scholars such as {Vafei & Zelgalve, 2014; Ahangar, 2011; Djhamil,2013, Ekwe,2012 and Pulic,1998} that IC components affect SP positively and significantly.

The above contradictions to widely held view can be attributed to the treatment accorded the intangible assets in accounting reports. Most of the intangible expenses are written of in the year in which they are incurred and therefore undervalue the stock price. Many blue chip companies with high stock value are known to have very little investment in intangible compared to intellectual investment and not properly valuing them will definitely undervalue the stock price(Ngari, et al., 2013; Uadiale & Uwuigbe, 2012).

VI. Summary Of Findings, Conclusion And Recommendations
5.1 Summary of Findings
In line with the six hypotheses tested and the result of the analysis, the following are the findings of the study:
(1) Human Capital Efficiency, Structural Capital Efficiency(SCE) and Capital Employed Efficiency(CEE) has a positive and insignificant relevance on Gross Revenue per Share(GRPS) of the firms studied respectively.
(2) Human Capital Efficiency has a positive and insignificant effect on Share Price(SP). Structural Capital Efficiency(SCE) has a negative and significant on SP while CEE has a negative and insignificant relevance on Share Price of the firms studied.

5.2 Conclusion: The study concludes that Intellectual capital as measured by Human Capital Efficiency, Structural Capital Efficiency(SCE) and Capital Employed Efficiency(CEE) has positive and insignificant relevance on revenue of ICT firms in Nigeria. However, Human Capital Efficiency has positive and insignificant relevance on share price of ICT firms in Nigeria but Structural Capital Efficiency(SCE) and Capital Employed Efficiency(CEE) has negative effect on share price of firms in the ICT industry in Nigeria.

5.4 Recommendations
Sequel to the findings of this study, it is evident that the potentiality of Intellectual Capital can only be maximally realized if there is a fair play between the three components as none can effectively function in isolation. In the light of this, the study makes the following recommendations:
(1)Since GRPS and Share Price is found to have effect on companies must increase their tentacles and grow their market share through employing capable sales representatives, train them and provide the necessary infrastructure to work with.
(2) Since HCE has been shown to be the key driver of value creation as shown in its effect GRPS and SP, deliberate efforts should be made to grow IC of firms by first recruiting very competent staff, train and motivate them. Companies must strategically and deliberately train and retain staff for a long time to avoid losing the intellectual assets possessed by them, which could stimulate better Earnings per Share, GRPS and the Share price.

5.4 Suggestions for Further Studies:

The study wish to propose the following topics for further studies:
i.   A comparative study can be done between Nigeria   and other countries.
ii.   Further studies can adopt othe research model and tools for analysis apart from those used in this study.
iii.   Other researchers can also elongate the number of years and other indices to measure the effect of intellectual capital on firm's valuation.

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Appendix 1:
Background Information of Firms Studied

1	Interlinked Technologies Nig. Plc	Number 1 Ola-Ayeni Street, Lagos	Development, Manufacture, Marketing of Communications Equipments	17/11/81	15/11/1993	ICT
2	NCR Nig. Plc	6, Broad Street Lagos.	Computer Marketing and Manufacture of Communication Equipment and Services	1949	30th May,1979	ICT
3	Chams Nig. Plc.	Iddo House,Iddo, Lagos.	Telecommunications & Office Support Services	1985	17th February,1986	ICT

Source: NigeriaGalleria.com. Retrieved 1/11/2017

Appendix 3: Operational Variables for Firms (ICT Sector)

Variable/Year	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004
Interlinked Nig.										

Plc

HCE	1.69	0.653	1.3645	(0.0802)	4.897	1.7045	2.2675	3.201	3.212	3.2065
SCE	0.01	0.53	0.26	(11.23)	0.796	0.8235	0.7454	0.839	0.689	0.764
CEE	0.13	0.028	0.61	(0.082)	(2.332)	0.293	(0.66)	8.01	(3.532)	0.496
GRPS	8.6	0.81	1.204	0.74	6.19	6.05	2.034	3.39	1.174	0.46
SP	2.89	0.86	4.9	3.08	2.89	1.83	1.59	1.42	1.21	1.32
NCR Nig. Plc.										
HCE	0.9245	0.9065	(2.5468)	4.0651	2.0094	0.4016	0.9235	0.9075	2.0067	1.279
SCE	0.111	0.1768	0.6073	0.754	0.6552	(0.49)	0.1316	0.0126	0.72	0.1068
CEE	0.016	0.084	(0.7)	0.4	0.169	0.016	(0.047)	0.135	0.068	0.629
GRPS	2.38	2.86	2.93	4.22	4.92	5.02	2.78	1.98	0.92	0.82
SP	1.38	1.43	0.50	1.44	1.75	4.05	3.02	3.09	3.1	3.02
Chams Nig. Plc.										
HCE	2.476	3.731	0.055	8.4107	5.904	28.192	9.1083	12.904	14.027	13.091
SCE	0.5943	0.125	-0.144	0.8811	0.8306	0.9645	0.8911	0.8934	0.3545	0.6501
CEE	0.51	0.134	0.848	0.354	0.197	1.03	0.604	0.574	0.601	0.5270
GRPS	4.86	5.65	1.27	3.38	3.92	2.58	121.1	37.82	33.53	33.24
SP	3.95	2.18	2.25	2.73	3.15	3.69	3.04	2.76	2.89	

Source: Firms' Financial Statements/ Researcher's Computations, 2017

Appendix 3: Regression Analysis on ICT Sector Using Model ……………(1)

Dependent Variable: GRPS
Method: Least Squares
Date: 04/30/15 Time: 18:44
Sample: 0001 0030
Included observations: 30

Variable	Coefficient	Std. Error	t-Statistic	Prob.
HCE	1.283107	0.716754	1.790164	0.0851
SCE	0.520233	1.995651	0.260683	0.7964
CEE	0.170296	2.495536	0.068240	0.9461
C	4.676727	5.175490	0.903630	0.3745

R-squared	0.125510	Mean dependent var	10.22773
Adjusted R-squared	0.024607	S.D. dependent var	23.15517
S.E. of regression	22.86850	Akaike info criterion	9.220964
Sum squared resid	13597.17	Schwarz criterion	9.407790
Log likelihood	-134.3145	Hannan-Quinn criter.	9.280731
F-statistic	1.243872	Durbin-Watson stat	2.184433
Prob(F-statistic)	0.314051		

Source: Researcher's Computations using E-Views Statistical Software 8.0, 2015

Appendix 5: Regression Analysis on ICT Sector Using Model ……………(2)

Dependent Variable: SP
Method: Least Squares
Date: 04/30/15 Time: 18:46
Sample: 0001 0030
Included observations: 30

Variable	Coefficient	Std. Error	t-Statistic	Prob.
HCE	0.047328	0.032135	1.472811	0.1528
SCE	-0.098367	0.089472	-1.099419	0.2817
CEE	-0.013441	0.111884	-0.120131	0.9053
C	2.389360	0.232035	10.29740	0.0000

R-squared	0.097598	Mean dependent var	2.583000
Adjusted R-squared	-0.006526	S.D. dependent var	1.021946
S.E. of regression	1.025275	Akaike info criterion	3.011364
Sum squared resid	27.33090	Schwarz criterion	3.198191

Log likelihood	-41.17047	Hannan-Quinn criter.	3.071132
F-statistic	0.937328	Durbin-Watson stat	0.856672
Prob(F-statistic)	0.436811		

Source**:** Researcher's Computations using E-Views Statistical Software 8.0, 2015